Appendix 3 – Other relevant Canadian and non-Canadian research

(ordered alphabetically, by author)

Aboelata, Manal J. (2004)
The built environment and health: 11 profiles of neighborhood transformation

Subject: general

Abstract or Excerpt:
[from the Introduction]
There is growing recognition that the built environment —the physical structures and infrastructure of communities—plays a significant role in shaping our health. To a great extent,the connection between environment and health has centered on the results of human exposure to contaminated air, water, and soil. Decisions about land use, zoning, and community design influence the degree of human exposure to toxins, but also have implications for neighborhood access to healthy foods, and the level of safety and attractiveness of neighborhoods for activities such as walking and biking. The designated use, layout, and design of a community's physical structures including its housing, businesses, transportation systems, and recreational resources affect patterns of living (behaviors) that, in turn, influence health.
With support from the Centers for Disease Control and Prevention's National Center for Environmental Health, Prevention Institute crafted 11 profiles about communities across the country that reveal how the built environment can positively influence the health of community residents. These profiles were written to:
1. Describe the important connections between the built environment and health for practitioners in public health, city and regional planning, community economic development, and other related fields;
2. Support public health practitioners in looking beyond the traditional bounds of the healthcare system to address social and environmental determinants of health;
3. Suggest potential expanded roles for practitioners from diverse fields to promote health-enhancing improvements to the built environment;
4. Highlight a range of opportunities to create community- level change to the built environment through multi-sector partnerships with community residents, businesses, community organizations, and local government; and,
5. Provide concrete examples that demonstrate the importance of the built environment in promoting health.

Active Healthy Kids Canada (2007)
Older But Not Wiser Canada's Future At Risk: Report Card on Physical Activity for Children and Youth

Subject: physical activity
Location: Canadian

Abstract or Excerpt:
The 2007 Canada's Report Card on Physical Activity for Children and Youth is the third annual overview of physical activity levels of Canada's young people conducted by Active Healthy Kids Canada.
For the third straight year, Canada has received a failing grade (D), indicating that overall progress on improving physical activity among children and youth has stalled. Three consecutive years of poor grades is disappointing; however, some progress has been made and there are opportunities for further improvement in several areas.

Addy, C. L., Wilson, D. K., Kirtland, K. A., Ainsworth, B. E., Sharpe, P., & Kimsey, D. (2004)
Associations of perceived social and physical environmental supports with physical activity and walking behavior.

American Journal of Public Health 94(3): 440-443

Subject: physical activity, perceptions
Location: US

Abstract or Excerpt:
BACKGROUND: Physical inactivity is associated with multiple adverse health outcomes. Results from the transportation literature suggest that aspects of the urban environment may influence walking for transportation. In this paper we examine the association between a proxy measure of the urban environment and walking behavior.

METHODS: We analyzed the association between home age and walking behavior in U.S. adults using data from the Third National Health and Nutrition Examination Survey. Logistic regression was used to estimate odds ratios and 95% confidence intervals and to control for the effects of gender, race/ethnicity, age, education level, household income, and activity limitations.
RESULTS: Adults who lived in homes built before 1946 and from 1946 to 1973 were significantly more likely to walk 1+ miles > or =20 times per month than those who lived in homes built after 1973. This association was present among people living in urban and suburban counties, but absent among those living in rural counties. The association was also found in models that controlled for gender, race/ethnicity, age, education, income, and any health-related activity limitation. Other forms of leisure-time physical activity were not independently associated with home age.
CONCLUSIONS: These results support the hypothesis that environmental variables influence walking frequency and suggest that home age may be a useful proxy for features of the urban environment that influence physical activity in the form of walking. Such proxy measures could facilitate testing ecologic models of health behavior using survey data.

Aicher, Joseph (n.d.)
Design Determinants of Health

Subject: general; discussion
Location: Canadian

Alexander, Don ; Ray Tomalty, Mark Anielski (2004)
BC Sprawl Report: Economic Vitality and Livable Communities

Location: Canadian

Anonymous (2007)
Operating Grant: Built Environment, Obesity and Health

Subject: grant info
Location: Canadian

Abstract or Excerpt:
The primary objective of this strategic initiative is to support policy-relevant collaborative projects that advance knowledge and its translation on how the built environment (defined as the outcome of community planning, design and implementation)-in the context of contributing to obesity- is influenced by, and/or impacts on, the following factors:

* obesity and well-being
* policies and standards for community planning, design and implementation
* physical activity levels and/or nutrition
* social, economic, and policy environment
* socioeconomic status, gender, ethnicity and age
* individual choices and behavior

Anonymous (n.d.)
Opportunity to Study Built Environment

Subject: grant info; call for proposals
Location: Canadian

Abstract or Excerpt:
The Heart and Stroke Foundation of Canada (HSFC) and its partners the Canadian Institutes of Health Research's Institute of Nutrition, Metabolism and Diabetes and the Institute of Aging are pleased to announce the upcoming Request for Applications (RFA) on the Relationship of the Built Environment on Nutrition, Physical Activity and Obesity. The RFA will be launched on December 1, 2006.

The HSFC believes that increased obesity rates in Canada over the past two decades are threatening population health. In response to this concern, the HSFC wishes to fund policy-relevant research that will improve understanding of how the built environments in which Canadians live shape their patterns of physical activity and nutrition, and impact obesity.

The primary objectives of the RFA will be to fund research that:

* Examines how past, present and proposed policy relating to community planning, design and implementation impact physical activity levels, nutrition and obesity.
* Examines how individual, social and environmental factors influence community planning, design and implementation.
* Investigates the relationship between individual choices, environmental factors and socioeconomic determinants on community planning, design and implementation, as well as their resulting impact on physical activity, nutrition and obesity.
* Explores how the way we design, finance, build and operate communities affects health, particularly obesity.

This RFA also aims to build capacity for research in this area by encouraging "horizontal" networks and collaboration among different partners, such as, urban planners, researchers, and non-governmental organizations.

Anonymous (n.d.)
CIHR - Institute of Aging (IA) E-newsletter - January 2007

Subject: grant info
Location: Canadian

Abstract or Excerpt:
IA, in partnership with the Heart and Stroke Foundation and other CIHR Institutes, announce the Operating Grant: Built Environment, Obesity and Health funding opportunity. The primary objective of this strategic initiative is to support policy-relevant collaborative projects that advance knowledge and its translation on how the built environment is influenced by, and/or impacts on: obesity and well-being; policies and standards for community planning, design and implementation; physical activity levels and/or nutrition; social, economic, and policy environment; socioeconomic status, gender, ethnicity and age; and individual choices and behavior. The deadline for submitting a letter of intent for this funding opportunity is March 1st, 2007.

Anonymous (2006)
Integrating Planning and Public Health: Tools and Strategies to Create Healthy Places

Planning Advisory Service Report. 539/540: I
http://proquest.umi.com/pqdweb?did=1158644941&Fmt=7&clientId=16746&RQT=309&VName=PQD

Subject: collaboration; tools, challenges, approaches
Location: US

Abstract or Excerpt:
[excerpt]
The survey revealed that the two disciplines do routinely work together on wastewater treatment and septic system regulations-two areas in which they have long shared responsibility. But as far as the emerging areas where APA and NACCHO see clear

benefits for increased collaboration, such as housing conditions, pedestrian safety, air quality, walkability, and transportation, only a fraction of jurisdictions reported having worked together.

Anonymous (n.d.)
Operating Grant: Built Environment, Obesity and Health

Subject: grant info; call for research
Location: Canadian

Anonymous (2007)
Active Aging and the Built Environment: Health for All- 2007-06-08

Subject: general
Location: Canadian

Abstract or Excerpt:
17th John K. Friesen Conference June 8 & 9, 2007 Simon Fraser University at Harbour Centre, Vancouver The theme of this 1.5 day symposium recognizes the importance of taking an active approach in meeting the challenges of population aging. It also recognizes the important role that the built environment can play in enhancing the health and well being of today's and tomorrow's older population. The Friesen conference is part of the pre-conference events program for the 19th World Conference of the International Union of Health Promotion and Health Education, taking place in Vancouver June 10-15, 2007. On-line registration and further details are available at: http://www.sfu.ca/grc/Friesen/Friesen2007/Friesen_2007_index.html.

The Friesen conference is part of the pre-conference events program for the 19th World Conference of the International Union of Health Promotion and Health Education, taking place in Vancouver June 10-15, 2007. For a listing of all aging-related sessions taking place before and during the IUHPE conference

Anonymous (2006)
Planning's Role in Building Healthy Cities

Journal of the American Planning Association 72(1): 5-23
http://proquest.umi.com/pqdlink?vinst=PROD&fmt=6&startpage=-1&ver=1&vname=PQD&RQT=309&did=987425041&exp=07-16-2012&scaling=FULL&vtype=PQD&rqt=309&TS=1184797731&clientId=16746

Subject: general
Location: US
Keywords: Public health -- United States; City planning

Araya,R.; Dunstan,F.; Playle,R.; Thomas,H.; Palmer,S.; Lewis,G. (2006)
Perceptions of social capital and the built environment and mental health

Social science and medicine 62(12): 3072-3083

Subject: mental health, perceptions
Location: South Wales
Keywords: Adult; Attitude;Consumer Participation;Environment Design;Family Characteristics;Female;Health Status Indicators;Humans;Male;Mental Health/statistics & numerical data;Questionnaires;Residence Characteristics;Social Control, Informal;Social Environment;Social Facilitation;Social Support;Socioeconomic Factors;Trust;Wales

Abstract or Excerpt:
There has been much speculation about a possible association between the social and built environment and health, but the empirical evidence is still elusive. The social and built environments are best seen as contextual concepts but they are usually estimated as an aggregation of individual compositional measures, such as perceptions on trust or the desirability to live in an area. If these aggregated compositional measures were valid measures, one would expect that they would evince correlations at higher levels of data collection (e.g., neighbourhood). The aims of this paper are: (1) to investigate the factor structure of a self-administered questionnaire measuring individual perceptions of trust, social participation, social cohesion, social control, and the built environment; (2) to investigate variation in these factors at higher than the individual level (households and postcodes) in order to assess if these constructs reflect some contextual effect; and (3) to study the association between mental health, as measured by the General Health Questionnaire-12 (GHQ-12), and these derived factors. A cross-sectional household survey was undertaken during May-August 2001 in a district of South Wales with a population of 140,000. We found that factor analysis grouped our questions in factors similar to the theoretical ones we had previously envisaged. We also found that approximately one-third of the variance for neighbourhood quality and 10% for social control was explained at postcode (neighbourhood) level after adjusting for individual variables, thus suggesting that some of our compositional measures capture contextual characteristics of the built and social environment. After adjusting for individual variables, trust and social cohesion, two key social capital components were the only factors to show statistically significant associations with GHQ-12 scores. However, these factors also showed little variation at postcode levels, suggesting a stronger individual determination. We conclude that our results provide some evidence in support of an association between mental health (GHQ-12 scores) and perceptions of social capital, but less support for the contextual nature of social capital.

Barnard,D. K.; Hu,W. (2005)
The Population Health Approach: health GIS as a bridge from theory to practice

International Journal of Health Geographics 4: 23

Subject: general, methodology; Health GIS, population health
Location: Canadian

Abstract or Excerpt:
BACKGROUND: The Population Health Approach, proposed by Health Canada, is the articulation of a long advocated model of human health. This approach strives to ensure that the health system is appropriately oriented to improve health status by applying evidence based practices across the continuum from health determinants to service interventions. Although conceptually appealing, it has been difficult to implement widely in the existing program-based health care system. The Population Health Surveillance Unit (PHSU) of the Vancouver Island Health Authority (VIHA) has developed a health geographical information system (HGIS), where GIS is used as both platform for information integration and as an analytical tool supporting comprehensive data analysis. With the assistance of the HGIS, the theory of the population health approach can be transformed into a practical, stepwise process supporting health services and program planning.
RESULTS: Three important components of a health service planning and evaluation framework grounded in population health theory are described in this article. In particular, a stepwise methodological process to enable the incorporation of the principles of a population health into practical applications is presented; the technical functionality to integrate multiple sources of information, with different levels and scales is discussed; and sources of information about the health of the population at the appropriate level to populate this frame are proposed. An application of the methodology in the planning of health services for a high needs neighbourhood is presented as an illustrative example.
CONCLUSION: The population health approach incorporates the consideration of health determinants and the context within which the health conditions arise in communities. The complexity of these relationships requires the application of innovative methodologies such as Health GIS to frame the issues practically. A population health based foundation for the planning and evaluation of health services can now move from theory to practice.

Bartling,Hugh (2006)
Suburbia, Mobility, and Urban Calamities

Space And Culture 9(1): 60-62

Subject: social justice
Location: US

Abstract or Excerpt:
Recent urban calamities in the United States glaringly exhibit a “mobility deficit” that is the culmination of inequitable planning decisions made in North American metropolitan areas over the past several decades. The power of an ideology that situates urban mobility overwhelmingly as a privatized practice remains one of the most pressing obstacles to urban social justice.

Berke,E. M.; Koepsell,T. D.;Moudon,A. V.;Hoskins,R. E.;Larson,E. B. (2007)
Association of the built environment with physical activity and obesity in older persons

American Journal of Public Health 97(3): 486-492

Subject: physical activity
Location: Non-Canadian
Keywords: Aged; Aged, 80 and over;Body Mass Index;Cross-Sectional Studies;Environment Design/statistics & numerical data;Female;Geographic Information Systems;Health Behavior;Health Maintenance Organizations;Humans;Logistic Models;Male;Motor Activity/physiology;Obesity/epidemiology/prevention & control;Probability;Prospective Studies;Residence Characteristics/classification;Walking/physiology/psychology/statistics & numerical data;Washington/epidemiology

Abstract or Excerpt:
OBJECTIVE: We examined whether older persons who live in areas that are conducive to walking are more active or less obese than those living in areas where walking is more difficult.
METHODS: We used data from the Adult Changes in Thought cohort study for a cross-sectional analysis of 936 participants aged 65 to 97 years. The Walkable and Bikable Communities Project previously formulated a walkability score to predict the probability of walking in King County, Washington. Data from the cohort study were linked to the walkability score at the participant level using a geographic information system. Analyses tested for associations between walkability score and activity and body mass index.
RESULTS: Higher walkability scores were associated with significantly more walking for exercise across buffers (circular zones around each respondent's home) of varying radii (for men, odds ratio [OR]=5.86; 95% confidence interval [CI]=1.01, 34.17 to OR=9.14; CI=1.23, 68.11; for women, OR=1.63; CI=0.94, 2.83 to OR=1.77; CI=1.03, 3.04). A trend toward lower body mass index in men living in more walkable neighborhoods did not reach statistical significance.
CONCLUSIONS: Findings suggest that neighborhood characteristics are associated with the frequency of walking for physical activity in older people. Whether frequency of walking reduces obesity prevalence is less clear.

Berrigan,D.; Troiano,R. P. (2002)
The association between urban form and physical activity in U.S. adults

American Journal of Preventive Medicine 23(2 Suppl): 74-79

Subject: physical activity; walking, home age (built form)
Location: US
Keywords: Adult; Female;Health Behavior;Humans;Leisure Activities;Logistic Models;Male;Middle Aged;Nutrition Surveys;Residence Characteristics;Socioeconomic Factors;United States;Urban Population;Walking

Abstract or Excerpt:
BACKGROUND: Physical inactivity is associated with multiple adverse health outcomes. Results from the transportation literature suggest that aspects of the urban environment may influence walking for transportation. In this paper we examine the association between a proxy measure of the urban environment and walking behavior.
METHODS: We analyzed the association between home age and walking behavior in U.S. adults using data from the Third National Health and Nutrition Examination Survey. Logistic regression was used to estimate odds ratios and 95% confidence intervals and to control for the effects of gender, race/ethnicity, age, education level, household income, and activity limitations.
RESULTS: Adults who lived in homes built before 1946 and from 1946 to 1973 were significantly more likely to walk 1+ miles > or =20 times per month than those who lived in homes built after 1973. This association was present among people living in urban and suburban counties, but absent among those living in rural counties. The association was also found in models that controlled for gender, race/ethnicity, age, education, income, and any health-related activity limitation. Other forms of leisure-

time physical activity were not independently associated with home age.
CONCLUSIONS: These results support the hypothesis that environmental variables influence walking frequency and suggest that home age may be a useful proxy for features of the urban environment that influence physical activity in the form of walking. Such proxy measures could facilitate testing ecologic models of health behavior using survey data.

Blackman,Tim; Mitchell,Lynne; Burton,Elizabeth; Jenks,Mike; Parsons,Maria; Raman,Shibu; Williams,Katie (2003)
The Accessibility of Public Spaces for People with Dementia: A New Priority for the 'Open City'

Disability and Society 18(3): 357-371

Subject: mental health
Keywords: Senility; Environmental Design;City Planning;Public Space;Access;Elderly

Abstract or Excerpt:
The social model of disability de-medicalizes disability & politicizes it as an issue of universal rights. However, the rights of people with dementia have been less strongly advocated than those of people with physical disabilities. This is particularly the case with environmental planning & design. The needs of people with dementia are now informing the design of residential homes & day centers, but the issue of accessibility to public spaces & amenities has been almost completely neglected. Many outdoor environments such as shopping centers or parks may be inhospitable for people with dementia because they are disorientating, difficult to interpret & navigate, threatening, or distressing. The article reviews the literature on indoor design for dementia, reports on research investigating the accessibility of outdoor environments, & describes a new approach using virtual reality technology to enable people with dementia to identify & test outdoor design & planning improvements themselves. 71 References. Adapted from the source document.

Boarnet,M. G.; K Day;M Alfonzo;A Forsyth;M Oakes (2006)
The Irvine-Minnesota inventory to measure built environments: reliability tests

American Journal of Preventive Medicine 30(2): 153-159

Subject: physical activity, methodology
Location: n/a

Abstract or Excerpt:
BACKGROUND: Inter-rater reliability is an important element of environmental audit tools. This paper presents results of reliability tests of the Irvine-Minnesota Inventory, an extensive audit tool aimed at measuring a broad range of built environment features that may be linked to active living.
METHODS: Inter-rater reliability was measured by percentage agreement between observers. Reliability was tested on a broad range of sites in both California and Minnesota.
RESULTS: For the variables that remained in the inventory, in tests conducted at the University of California-Irvine, 76.8% of the variables had >80% agreement among the three raters. In tests conducted at the University of Minnesota, 99.2% of the variables had >80% agreement among the two raters.
CONCLUSIONS: Reliability was high for most items. The inventory was modified to eliminate items with low reliability. Differences in the use of the inventory and the goals of the research led to generally higher reliability in Minnesota. Those differences, limitations, and directions for future research are discussed.

Booth, Sarah, James Sallis, Cheryl Ritenbaugh, James Hill, Leann Birch, Larry Frank, Karen Glanz, David Himmelgreen, Michael Mudd, Bary Popkin, karl Pickard, Satchiko St. Jeor, Nicholas Hays (2001)
How and Why do Environmental and Societal Factors Affect Food and Physical Activity Choices?

Nutrition Reviews 59(3): 21-39

Subject: food access/nutrition, physical activity

Bragg,B.; Galloway,T.; Spohn,D. B.; Trotter,D. E. (2003)
Land use and zoning for the public's health

Journal of law, medicine and ethics 31(4 Suppl): 78-80

Subject: planning
Location: Non-Canadian
Keywords: City Planning/organization & administration; Environment Design;Health Policy;Humans;Public Health;United States

Abstract or Excerpt:
not available

Brennan Ramirez,L. K.; Hoehner,C. M.; Brownson,R. C.; Cook,R.; Orleans,C. T.; Hollander,M.; Barker,D. C.; Bors,P.; Ewing,R.; Killingsworth,R.; Petersmarck,K.; Schmid,T.; Wilkinson,W. (2006)
Indicators of activity-friendly communities: an evidence-based consensus process

American Journal of Preventive Medicine 31(6): 515-524

Subject: physical activity, methodology; indicators of activity-friendly communities
Location: Non-Canadian/na
Keywords: Consensus; Delphi Technique;Health Behavior;Humans;Motor Activity;Population Density;Residence Characteristics;Social Environment;Transportation;Travel

Abstract or Excerpt:
BACKGROUND: Regular physical activity, even at modest intensities, is associated with many health benefits. Most Americans, however, do not engage in the recommended levels. As practitioners seek ways to increase population rates of physical activity, interventions and advocacy efforts are being targeted to the community level. Yet, advocates, community leaders, and researchers lack the tools needed to assess local barriers to and opportunities for more active, healthy lifestyles. Investigators used a systematic review process to identify key indicators of activity-friendly communities that can assess and improve opportunities for regular physical activity.
METHODS: Investigators conducted a comprehensive literature review of both peer-reviewed literature and fugitive information (e.g., reports and websites) to generate an initial list of indicators for review (n=230). The review included a three-tiered, modified Delphi consensus-development process that incorporated input of international, national, state, and local researchers and practitioners from academic institutions, federal and state government agencies, nonprofit organizations, and funding agencies in public health, transportation, urban planning, parks and recreation, and public policy.
RESULTS: Ten promising indicators of activity-friendly communities were identified: land use environment, access to exercise facilities, transportation environment, aesthetics, travel patterns, social environment, land use economics, transportation economics, institutional and organizational policies, and promotion.
CONCLUSIONS: Collaborative, multidisciplinary approaches are underway to test, refine, and expand this initial list of indicators and to develop measures that communities, community leaders, and policymakers can use to design more activity-friendly community environments.

Brisbon,N.; Plumb,J.;Brawer,R.;Paxman,D. (2005)
The asthma and obesity epidemics: the role played by the built environment--a public health perspective

The Journal of allergy and clinical immunology 115(5): 1024-1028

Subject: general
Location: US
Keywords: Asthma/epidemiology/etiology; Community Networks;Financial Management;Financing, Organized;Health Knowledge, Attitudes, Practice;Humans;Obesity/complications/epidemiology/prevention & control;Social Welfare;United States/epidemiology

Abstract or Excerpt:
Obesity and asthma have reached epidemic proportions in the United States. The reasons for these epidemics are complex, and the solutions to address them are many. This article explores the epidemics, their causes and consequences, associations

and relationships, an expansion of the definition of the environment, and current national initiatives that address the components of the built and social environments that promote obesity and precipitate asthma.

Brownell,M.; Friesen,D.; Mayer,T. (2002)
Childhood injury rates in Manitoba: socioeconomic influences

Canadian journal of public health 93(Suppl 2): S50-S55

Subject: injury, social justice; injury and SES, income of individual and group
Location: Canadian
Keywords: Accidents, Traffic/mortality/statistics & numerical data; Adolescent;Adult;Child;Child Welfare/ethnology/statistics & numerical data;Child, Preschool;Female;Hospitalization/statistics & numerical data;Humans;Infant;Male;Manitoba/epidemiology;Population Surveillance;Regional Health Planning;Residence Characteristics;Rural Population/statistics & numerical data;Socioeconomic Factors;Suicide/statistics & numerical data;Urban Population/statistics & numerical data;Violence/statistics & numerical data;Wounds and Injuries/epidemiology/etiology/mortality

Abstract or Excerpt:
BACKGROUND: Injury is the leading cause of death among Canadian children between 1 and 19 years, and accounts for one sixth of all hospitalizations of children between 0 and 19 years. We examined the causes of injury in Manitoba children, and the relationship between injury rates and region of residence, premature mortality rate (PMR), and income.
METHODS: Regional differences in injury death and hospitalization rates, and causes of injury were derived from the Population Health Research Data Repository. The relationship between injury rates and area income levels was assessed and correlations between regional premature mortality rates (PMR) and injury rates were calculated.
RESULTS: Motor vehicle crashes were the leading cause of injury mortality. Falls were the leading cause of injury hospitalization. Regional differences were substantial. Rural-urban differences in injury rates were pronounced; northern Manitoba's rates were very high compared to the rest of the province. Regional PMR values correlated significantly with injury mortality and hospitalization rates. Both types of injury rates correlated significantly with income; higher injury rates were associated with lower income levels.
CONCLUSION: Injuries are not random events, but are related to social factors.

Brownson, R.C.; D. Haire-Joshu &. D.A.Luke (2006)
Shaping the context of health: A review of environmental and policy approaches in the prevention of chronic diseases

Annual Review of Public Health 27: 341-370
http://arjournals.annualreviews.org/doi/abs/10.1146/annurev.publhealth.27.021405.102137

Subject: planning
Location: Canadian

Abstract or Excerpt:
Given the growing attention on how environmental and policy interventions can affect chronic disease burden, our objectives are to describe (a) effective and promising interventions to address tobacco use, physical activity, and healthy eating and (b) lessons learned from the literature and practice experience in applying environmental and policy approaches. A total of 17 interventions were reviewed, organized across 3 domains affecting the physical environment/access, economic environment, and communication environment. Many of these interventions are effective. Several lessons are important to consider, such as the need to start with environmental and policy approaches, intervene comprehensively and across multiple levels, make use of economic evaluations, make better use of existing analytic tools, understand the politics and local context, address health disparities, and conduct sound policy research.

Buckeridge,D. L.; Glazier,R.; Harvey,B. J.; Escobar,M.; Amrhein,C.; Frank,J. (2002)
Effect of motor vehicle emissions on respiratory health in an urban area

Environmental health perspectives 110(3): 293-300

Subject: air quality, environmental determinants; air quality and respiratory disease or stress
Location: Canadian
Keywords: Adolescent; Adult;Aged;Child;Child, Preschool;Environmental Exposure;Female;Geography;Humans;Incidence;Infant;Infant, Newborn;Information Systems;Male;Middle Aged;Models, Theoretical;Ontario;Patient Admission;Respiratory Tract Diseases/epidemiology/etiology;Urban Population;Vehicle Emissions/adverse effects

Abstract or Excerpt:
Motor vehicles emit particulate matter < 2.5 microm in diameter (PM(2.5)), and as a result, PM(2.5) concentrations tend to be elevated near busy streets. Studies of the relationship between motor vehicle emissions and respiratory health are generally limited by difficulties in exposure assessment. We developed a refined exposure model and implemented it using a geographic information system to estimate the average daily census enumeration area (EA) exposure to PM(2.5). Southeast Toronto, the study area, includes 334 EAs and covers 16 km(2) of urban area. We used hospital admission diagnostic codes from 1990 to 1992 to measure respiratory and genitourinary conditions. We assessed the effect of EA exposure on hospital admissions using a Poisson mixed-effects model and examined the spatial distributions of variables. Exposure to PM(2.5) has a significant effect on admission rates for a subset of respiratory diagnoses (asthma, bronchitis, chronic obstructive pulmonary disease, pneumonia, upper respiratory tract infection), with a relative risk of 1.24 (95% confidence interval, 1.05-1.45) for a log(10) increase in exposure. We noted a weaker effect of exposure on hospitalization for all respiratory conditions, and no effect on hospitalization for nonrespiratory conditions.

Buckeridge,D. L.; Mason,R.; Robertson,A.; Frank,J.; Glazier,R.; Purdon,L.; Amrhein,C. G.; Chaudhuri,N.; Fuller-Thomson,E.; Gozdyra,P.; Hulchanski,D.; Moldofsky,B.; Thompson,M.; Wright,R. (2002)
Making health data maps: a case study of a community/university research collaboration

Social science and medicine 55(7): 1189-1206

Subject: collaboration, knowledge transfer/sharing, methodology; civic engagement, partnership
Location: Canadian
Keywords: Access to Information; Community Health Planning/organization & administration;Cooperative Behavior;Geography;Health Services Research;Health Surveys;Humans;Maps;Medical Informatics;Needs Assessment;Ontario;Organizational Case Studies;Organizational Culture;Time;Universities/organization & administration;Urban Health

Abstract or Excerpt:
This paper presents the main findings from a collaborative community/university research project in Canada. The goal of the project was to improve access to community health information, and in so doing, enhance our knowledge of the development of community health information resources and community/university collaboration. The project built on a rich history of community/university collaboration in Southeast Toronto (SETO), and employed an interdisciplinary applied research and action design. Specific project objectives were to: (1) develop via active community/university collaboration a geographic information system (GIS) for ready access to routinely collected health data, and to study logistical, conceptual and technical problems encountered during system development; and (2) to document and analyze issues that can emerge in the process of community/university research collaboration. System development involved iteration through community user assessment of need, development or refinement of the GIS, and assessment of the GIS by community users. Collaborative process assessment entailed analysis of archival material, interviews with investigators and participant observation. Over the course of the project, a system was successfully developed, and favorably assessed by users. System development problems fell into four main areas: maintaining user involvement in system development, understanding and integrating data, bringing disparate data sources together, and making use of assembled data. Major themes emerging from the community/university collaborative research process included separate community and university cultures, time as an important issue for all involved, and the impact of uncertainty and ambiguity on the collaborative process.

Burdette, H. L., & Whitaker, R. C. (2004)
Neighborhood playgrounds, fast food restaurants, and crime: Relationships to overweight in low-income preschool children

Preventive medicine 38(1): 57-63

Subject: physical activity, food access/nutrition, social justice
Location: US

Abstract or Excerpt:
BACKGROUND: We examined the relationship between overweight in preschool children and three environmental factors--the proximity of the children's residences to playgrounds and to fast food restaurants and the safety of the children's neighborhoods. We hypothesized that children who lived farther from playgrounds, closer to fast food restaurants, and in unsafe neighborhoods were more likely to be overweight.

METHODS: This was a cross-sectional study of 7,020 low-income children, 36 through 59 months of age living in Cincinnati, OH. Overweight was defined as a measured body mass index > or =95th percentile. The distance between each child's residence and the nearest public playground and fast food restaurant was determined with geographic information systems. Neighborhood safety was defined by the number of police-reported crimes per 1,000 residents per year in each of 46 city neighborhoods.

RESULTS: Overall, 9.2% of the children were overweight, 76% black, and 23% white. The mean (+/- SD) distances from a child's home to the nearest playground and fast food restaurant were 0.31 (+/- 0.22) and 0.70 (+/- 0.38) miles, respectively. There was no association between child overweight and proximity to playgrounds, proximity to fast food restaurants, or level of neighborhood crime. The association between child overweight and playground proximity did not differ by neighborhood crime level.

CONCLUSIONS: Within a population of urban low-income preschoolers, overweight was not associated with proximity to playgrounds and fast food restaurants or with the level of neighborhood crime.

Buzzelli,M.; Jerrett,M.;R. Burnett;N.Finkelstein. (2003)
Spatiotemporal perspectives on environmental justices in air pollution exposure.

Annals of the Association of American Geographers 93: 557-573

Subject: air quality, social justice
Location: Canadian
Keywords: air pollution, environmental justice, GIS, Hamilton, kriging.

Abstract or Excerpt:
This article addresses two questions: (1) How do spatiotemporal changes in air pollution levels—specifically, total suspended particulates (TSP)—rise or fall with socioeconomic status? (2) A critical equity interpretation of environmental policy then motivates this question: does the pursuit of average regional reductions in pollution benefit those who need improvements least, benefit those who need improvements most, or maintain the status quo? TSP data are drawn from networks of monitoring stations operated in 1985, 1990, and 1995. The monitoring data are interpolated with a kriging algorithm to produce estimates of likely pollution distribution throughout Hamilton. Exposure is related to socioeconomic status (SES) variables at the census tract level for corresponding years—1986, 1991, and 1996—and associations are tested with ordinary least squares (OLS) and spatial regression models. The results show that whether TSP rises or falls, injustice persists but becomes less pronounced over time.
Among all SES indicators, dwelling value consistently predicts TSP levels for all years, suggestive of a land-rent/spatial-externalities dynamic. As we move forward in time, it becomes increasingly difficult to differentiate airpollution exposure among Hamilton neighborhoods, as industrial TSPsources become more dispersed in the region and transportation pollution becomes relatively more important.We conjecture that more equitable distributions of air pollution have resulted more from post-Fordist industrial and spatial restructuring than from environmental policy intervention. Injustice in Hamilton and its apparent relationship with changing industrial structure appear similar to results in the United States and speak to a continental, intraurban environmental-justice experience.

Cameron,C.; Craig,C. L.; Paolin,S. (2004)
A municipal perspective for physical activity: Trends from 2000 – 2004

Subject: physical activity, planning; strategy, policies and environments
Location: Canadian

Abstract or Excerpt:
[from "Scope of the Report"]
This report provides a synopsis of the current situation for physical activity opportunities in Canadian municipalities and changes over time. This information is relevant to policy and decision-makers in designing initiatives to reduce physical inactivity among the residents of municipalities of all sizes.
The findings are presented and discussed in the following five sections:
- Accessing and distributing physical activity information
- Supportive social environment for physical activity programming
- Supportive policies and physical environment encouraging physical activity
- Barriers to walking and bicycling
- The current situation and looking ahead

Canadian Institutes for Health Research (CIHR) (2007)
Operating Grant: Built Environment, Obesity and Health

Subject: grant info
Location: Canadian

Cardinal, B.J.; K. Day, eds. (2007)
Active Living Research (Special Issue)

American Journal of Health Promotion 21(4Suppl)

Location: n/a

Abstract or Excerpt:
no abstract (special issue of journal)

Carver,A.; Salmon,J.;Campbell,K.;Baur,L.;Garnett,S.;Crawford,D. (2005)
How do perceptions of local neighborhood relate to adolescents' walking and cycling?

American Journal of Health Promotion 20(2): 139-147

Subject: physical activity, perceptions; walking
Location: US
Keywords: physical activity; adolescent;neighborhood perception;social interaction;prevention research;manuscript format : research;research purpose : modeling/ relationship testing;study design : on-experimental;outcome measures : behavioral;setting : local community;health focus : fitness/physical activity;strategy : built environment;target population age : youth;CARDIOVASCULAR RISK-FACTORS;PHYSICAL-ACTIVITY;CHILDREN;VALIDITY;ADULTS;HEALTH;SCHOOL;FAT

Abstract or Excerpt:
Purpose. To examine how perceptions of the local to neighborhood adolescents' walking and cycling.
Design. Exploratory cross-sectional study.

Setting. Birth cohort from the Nepean Hospital, Sydney, Australia.
Subjects. Three hundred forty-seven adolescents (79.1% response rate; 49.6% boys, mean age = 13.0 +/- 0.2 years) and their parents.
Measures. Self-report and parental-report questionnaires.
Results. Multiple linear regressions, adjusted for level of maternal education, revealed that boys who reported having many Peers to hang out with locally, cycled for recreation. (P = 0.242, p = .006) or for transport (beta = 0.141, p = .046) more often, and walked for transport for longer (beta = 0.129, p =.024) on weekdays. For girls this variable was related to cycling for recreation on weekends (beta = 0.164, p = .006) and walking to school (beta = 0.118, p = .002). Adolescents who waved/talked to neighbors walked for transport more often (boys, beta = 0.149, p = .037; girls, beta = 0.119, p = .012). Girls who perceived local roads to be safe spent more time walking for transport on weekdays (beta = 0.183, p = .007) and for exercise on weekends (beta = 0.184, p = .034). Parents' perception, of heavy traffic was negatively associated with boys' walking for transport (beta = -0.138, p = .037) and many aspects of girls' walking and cycling.

Chief Medical Officer of Ontario (2004)
Healthy Weights, Healthy Lives

Subject: physical activity, food access/nutrition, interventions
Location: Canadian

Abstract or Excerpt:
[from "A Message from Ontario's Chief Medical Officer of Health"]
An epidemic of overweight and obesity is threatening Ontario's health.
I am alarmed to report that, in 2003, almost one out of every two adults in Ontario was overweight or obese. Between, 1981 and 1996, the number of obese children in Canada between the ages of seven and 13 tripled. This is contributing to a dramatic rise in illnesses such as type 2 diabetes, heart disease, stroke, hypertension and some cancers.
Why this epidemic? In part, it is caused by our genes or our lack of willpower. Yet, in the 21st century, our environments increasingly are responsible for tipping us into overweight and obesity. We are now living in 'obesogenic' environments, communities, workplaces, schools and homes that actually promote or encourage obesity:
• many young people do not have the opportunity to be physically active every day and are surrounded by ads promoting soft drinks and snack foods
• more adults work in sedentary jobs and drive long distances to work
• 'super-sized' food portions are the norm
• more communities lack sidewalks, park space, bike lanes and recreation programs
• some people do not have enough income to make healthy food choices
As a society we have lost the balance between the energy we take in and the energy we expend, which is key to a healthy weight. Just when Ontarians are faced with more food choices, more processed foods, and larger food portions, we have engineered physical activity out of our lives, replacing it with remote controls, computers and video games.
We have made our generation the most sedentary in history.
In this report, I set out a plan to promote healthy weights in Ontario. The goal is to help all Ontarians understand the factors that affect their weight and find the right balance between the food they eat (energy in) and how physically active they are (energy out), and to create environments – day care centres, schools, workplaces, recreation centres, communities – that promote physical activity and healthy eating.
The province's health system is committed to reversing the trend to overweight and obesity, but it cannot solve the problem on its own. Because physical, social, cultural and environmental factors have such a strong influence on weight, Ontario needs a broad, multi-sectoral, community-wide response to this epidemic.
I call on all levels of government, the health sector, the food industries, workplaces, schools, families and individuals to become part of a comprehensive province-wide effort to change all the factors that contribute to unhealthy weight. We must act now to create communities that promote healthy eating and regular physical activity.
Healthy weights mean healthy lives.

Clarke,P.; George,L. K. (2005)
Understanding and addressing the challenges of disability. The role of the built environment in the disablement process

American Journal of Public Health 95(11): 1933-1939
http://www.cinahl.com/cgi-bin/refsvc?jid=114&accno=2009068239

Subject: other
Location: US
Keywords: Activities of Daily Living; Aged;Chronic Disease;Disabled Persons;Disease Progression;Female;Geriatric Assessment;Health Status;Humans;Lower Extremity/physiopathology;Male;North Carolina;Regression Analysis;Residence Characteristics;Self Care;Social SupportActivities of Daily Living; Aged;Chronic Disease;Disabled Persons;Disease Progression;Female;Geriatric Assessment;Health Status;Humans;Lower Extremity/physiopathology;Male;North Carolina;Regression Analysis;Residence Characteristics;Self Care;Social SupportActivities of Daily Living; Aged;Chronic Disease;Disabled Persons;Disease Progression;Female;Geriatric Assessment;Health Status;Humans;Lower Extremity/physiopathology;Male;North Carolina;Regression Analysis;Residence Characteristics;Self Care;Social SupportActivities of Daily Living; Aged;Chronic Disease;Disabled Persons;Disease Progression;Female;Geriatric Assessment;Health Status;Humans;Lower Extremity/physiopathology;Male;North Carolina;Regression Analysis;Residence Characteristics;Self Care;Social Support

Abstract or Excerpt:
The Disablement Process model explicates the transition from health conditions to disability and specifically emphasizes the role of intervening factors that speed up or slow down the pathway between pathology and disability. We used hierarchical Poisson regression analyses with data on older adults from central North Carolina to examine the role of the built environment as a modifying factor in the pathway between lower extremity functional limitations and activities of daily living. We found that, despite declining physical function, older adults report greater independence in instrumental activities when they live in environments with more land-use diversity. Independence in self-care activities is modified by housing density, in part through the effect of substandard and inadequate housing.

Collins,Damian C. A.; Kearns,Robin A. (2005)
Geographies of Inequalities: Child Pedestrian Injury and Walking School Buses in Auckland, New Zealand

Social science and medicine 60(1): 61-69

Subject: injury, physical activity, social justice
Location: NZ
Keywords: Traffic; Injuries;Public Health;Safety;Metropolitan Areas;Socioeconomic Status;New Zealand;Automobiles;Community Services

Abstract or Excerpt:
In the face of mounting concern at traffic congestion in the vicinity of schools & the associated risks of child pedestrian injury, the 'walking school bus' (WSB) idea has been rapidly adopted within metropolitan Auckland. WSBs involve volunteers guiding children to & from school in an orderly manner following established walking routes. This paper reports on a survey of the 34 Auckland primary schools which had adopted the scheme by November 2002. Despite rates of child pedestrian injury being highest in areas of socio-economic deprivation, our survey found WSB developments highly concentrated in low deprivation neighbourhoods. The inequitable socio-spatial distribution of WSBs in Auckland suggests that the ability to respond to road safety issues is closely correlated with socio-economic privilege. While our respondents identified a number of individual & community health benefits accruing from WSBs, we conclude that the initiative has a limited ability to address public health challenges originating within an inequitable & car-dominated urban political system. 2 Figures, 43 References. [Copyright 2005 Elsevier Ltd.]

Community & Environment Design, Dr. Reid Ewing, Lawrence Frank and Company, Inc, Dr. Richard Kreutzer (2006)
Understanding the Relationship Between Public Health And The Built Environment: A Report Prepared For The LEED-ND Core Committee

Subject: general
Location: Non-Canadian

Abstract or Excerpt:
This report presents an appraisal of the current state of the research regarding the links between public health and neighborhood design and provides recommendations about how this knowledge can be integrated into the LEED-ND rating system to improve public health. The report was prepared for the US Green Building Council (USGBC), Congress for the New Urbanism (CNU), the Natural Resources Defense Council (NRDC) and the participants in the Leadership in Energy and Environmental Design for Neighborhood Development (LEED-ND) Core Committee. LEED-ND is a rating system for neighborhood location and design based on the combined principles of smart growth, urbanism, and green building. The purpose of this report is to better understand the specific development patterns and changes to the built environment will have a significant impact on public health.
The report is comprised of nine chapters, including this introduction. Apart from this first chapter and the chapter on special populations, the research findings sections are primarily organized by major health outcomes. The summary conclusions, on the other hand, are organized by characteristics of urban form that can be addressed in the LEED-ND rating system. The chapters include:
Introduction
Respiratory and Cardiovascular Health
Fatal and Non-fatal Injuries
Physical Fitness
Social Capital
Mental Health
Special Populations
Summary Conclusions
List of Preparers

Connolly,Philip (2005)
Looks could kill

regeneration and renewal : 20
http://proquest.umi.com/pqdweb?did=791450971&Fmt=7&clientId=16746&RQT=309&Vname=PQD
http://www.regen.net/

Subject: mental health; outdoor living, gardens
Location: UK (Eng)/na
Keywords: Outdoors; Mental depression;Area planning & development;Housing;Effects

Abstract or Excerpt:
In 2002, the British Journal of Psychiatry published research demonstrating a relationship between independently-rated features of the built environment and the prevalence of depression. People suffer higher levels of depression if, for example, they live in housing areas characterised by dwellings with deck access, abundant graffiti, newer properties, communal public spaces and few private gardens. The study, by six British researchers funded by the Wellcome Trust, unfavourably highlighted the impact of housing schemes built since 1969. It found that, whatever people's age, employment or socio-economic status, and whatever the internal condition of their dwellings, that association still holds. The authors concluded that efforts to reduce depression should, therefore, extend beyond improvements at an individual or household level to the context in which people live. The good news is that these efforts don't always require huge teams or vast budgets. If the physical environment can be made attractive enough to tempt people back outdoors, there can be big benefits for people's general health and wellbeing. Starting with public spaces and the encouragement of walking, regeneration professionals must take the opportunity to improve both the quality of our urban areas, and the vitality and strength of our communities.

Coogan,P. F.; Coogan,M. A. (2004)
When worlds collide: observations on the integration of epidemiology and transportation behavioral analysis in the study of walking

American Journal of Health Promotion 19(1): 39-44

Subject: physical activity; 'utilitarian' walking, epidemiology, transportation
Location: Non-Canadian
Keywords: Epidemiologic Studies; Exercise;Health Behavior;Humans;Obesity/epidemiology/prevention & control;Public Health;Transportation;United States/epidemiology;Walking

Abstract or Excerpt:
Since obesity has emerged as a public health crisis in the United States, the factors that influence physical activity are of interest to both epidemiologists and transportation researchers. This article describes different approaches taken by the two disciplines to this issue. "Utilitarian" walking to accomplish a task, as opposed to structured exercise, could be a highly sustainable way for people to achieve recommended levels of physical activity. Transportation planners have begun to investigate factors of urban form and transportation services that influence the choice to walk. Epidemiologists have become more aware of the importance of factors in the built and social environment that could influence health behaviors like walking. Few transportation studies focus on the generation of the utilitarian walk trip as the key variable; rather, they include it in more general discussions of urban form. Likewise, most epidemiologic studies have not focused on utilitarian walking, but have folded it into an overall measure of physical activity that emphasizes structured exercise. Further transportation research should examine the effects of improved mobility services in addition to alterations of the built environment. Integration of epidemiologic and transportation behavioral research could enhance our understanding of the role of urban and transportation factors on physical activity.

Corburn,Jason (2004)
Confronting the challenges in reconnecting urban planning and public health

American Journal of Public Health 94(4): 541-546

Subject: planning; public health, history, connections
Location: n/a
Keywords: City Planning/history; Communicable Disease Control/history;Community Health Planning/history;Consumer Participation/history;Cooperative Behavior;Environment Design;History, 19th Century;History, 20th Century;History, 21st Century;Humans;Industry/history;Interinstitutional Relations;Philosophy, Medical/history;Public Health/history;Social Justice/history;United States;Urbanization/history

Abstract or Excerpt:
Although public health and urban planning emerged with the common goal of preventing urban outbreaks of infectious disease, there is little overlap between the fields today. The separation of the fields has contributed to uncoordinated efforts to address the health of urban populations and a general failure to recognize the links between, for example, the built environment and health disparities facing low-income populations and people of color. I review the historic connections and lack thereof between urban planning and public health, highlight some challenges facing efforts to recouple the fields, and suggest that insights from ecosocial theory and environmental justice offer a preliminary framework for reconnecting the fields around a social justice agenda.

Cummins,S. K.; Jackson,R. J. (2001)
The built environment and children's health

Pediatric clinics of North America 48(5): 1241

Subject: general
Location: Non-Canadian
Keywords: Child; Child Welfare;Environment Design;Environmental Exposure/adverse effects;Environmental Health;Facility Design and Construction;Humans;Risk Factors

Abstract or Excerpt:
The built environment embraces a wide range of concepts, from the design and integrity of housing, to land-use urban planning. A high-quality environment is essential for children to achieve optimal health and development. Building and land-use policies, including the quality and design of a child's physical environment, can cause or prevent illness, disability, and injury, and can degrade or preserve natural resources. Though many common pediatric conditions such as obesity, asthma, and lead

poisoning, as well as injuries, are associated with risk factors within a child's built environment, this issue has received little attention from researchers or policymakers. This new field is ripe for etiologic and prevention research, and we need pediatric advocates to speak out for children's needs within this arena.

Cunningham,G. O.; Michael,Y. L.; Farquhar,S. A.; Lapidus,J. (2005)
Developing a reliable Senior Walking Environmental Assessment Tool

American Journal of Preventive Medicine 29(3): 215-217

Subject: physical activity, methodology; senior walkability, built env. measurement tool
Location: Non-Canadian
Keywords: Aged; City Planning;Environment Design;Evaluation Studies;Female;Humans;Male;Oregon;Walking

Abstract or Excerpt:
BACKGROUND: Research of the effects of the built environment on physical activity often excludes certain segments of the population. The senior population, one segment perhaps most influenced by the physical features of an environment, has been understudied. Developing reliable measures of the environment is important to increase our understanding of the environmental effects on physical activity among seniors.
METHODS: A review of urban planning and health literature helped identify important concepts and theories that were used to inform the development of the Senior Walking Environmental Assessment Tool (SWEAT). Urban planning and health research professionals were consulted and provided feedback on the tool. A total of 355 neighborhood segments were assessed using SWEAT. Thirty-six neighborhood segments were assessed for inter-rater reliability.
RESULTS: Overall, raters exhibited good-to-excellent agreement on most items included in SWEAT. Items assessing buildings and destinations were less reliable than other categories.
CONCLUSIONS: The development of a reliable senior-specific environmental measurement of detailed street level environmental features that may influence walking among seniors is important to advance this research and engage communities to consider simple environmental changes that encourage walking among seniors.

Curran,Andrew; Jill Grant; Mary Ellen Wood (2006)
Taking the Pulse of Active Transportation: Measuring the Built Environment for Healthy Communities

Journal of Rural and Community Development 2: 59-74
http://preventionresearch.dal.ca/Curran.pdf

Subject: physical activity, methodology; indicators
Location: Canadian

Abstract or Excerpt:
Recently a collaborative project between a university, a provincial statistical agency, and a non-profit service organization worked to identify built environment indicators for local action and planning around community health. The research involved developing appropriate built environment indicators for active recreation and transportation, and testing them for community usefulness and data availability in several communities in Nova Scotia, Canada. The indicators will be added to an online community database managed by the provincial government. By making province-wide indicator data easily and publicly available, governments have the potential to facilitate local initiatives to improve community health and well-being. This paper describes a process of identifying indicators that would let communities identify whether their built environment promotes active recreation and active transportation.

Day, Kristin (2007)
Urban Planning For Active Living: Who Benefits?

Subject: physical activity

Abstract or Excerpt:
The US population is heavier than ever, with obesity and overweight reaching alarming levels. Inadequate physical activity explains at least part of this trend. As Thomas Halton explains elsewhere (see "Obesity Epidemic" in this issue), 22 percent of US adults today do not participate in regular leisure-time physical activity. The health implications of this are grave, though insufficient physical activity does not affect all groups equally.
According to Pratt, Maceral and Blanton (see "Resources for Active Living" in this issue), low-income communities and some communities of color are especially at-risk. Among high school students, for example, participation in vigorous physical activity is lower among black (54%) and Hispanic (60%) students than among white students (67%). Black and Hispanic adults are also more likely to be inactive than are white adults. People with lower family incomes and lower levels of education are more likely to get too little physical activity. In fact, nearly half of those individuals with less than a high school education report no regular leisure-time physical activity; by comparison, less than 20 percent of college graduates are similarly inactive. US patterns of physical activity are similar to those in other developed countries. . .
The last decade has seen growing interest among planners and public health professionals in how the physical environment supports or impedes physical activity. Prompted by researchers, advocacy groups and public health institutions, the resultant "active living" agenda blames contemporary US urban design for limiting our opportunities to walk, bicycle and conduct physical activity as part of our everyday lives. Until now this agenda has been developed largely in the context of middle-class, suburban communities, where large blocks, separated land uses, low densities and absent sidewalks make it nearly impossible to walk or bicycle to school, shopping or jobs. These features do not, however, characterize the neighborhoods where many low-income and black and Hispanic residents dwell. The pressing need to increase physical activity among these communities suggests that a refocusing of the active living agenda is necessary to ensure that its considerable energies and resources directly benefit these groups.

To help the active living agenda assess its focus, I offer three questions for consideration and further research: 1) is the physical environment the problem in low-income communities and communities of color?; 2) are we looking at the right aspects of the physical environment?; and 3) how can we understand physical activity and active living from the perspectives of low-income communities and communities of color?

Day,K.; M Boarnet;M Alfonzo;A Forsyth (2006)
The Irvine-Minnesota inventory to measure built environments: development

American Journal of Preventive Medicine 30(2): 144-152
http://www.activelivingresearch.org/node/10173

Subject: physical activity, methodology
Location: n/a

Abstract or Excerpt:
BACKGROUND: Researchers and policymakers increasingly identify active living—including walking and bicycling for travel and recreation—as a potential strategy to increase rates of physical activity in the United States. Understanding the impact of the built environment on physical activity levels requires reliable methods to measure potentially relevant built environment features. This paper presents an audit tool—the Irvine Minnesota Inventory—that was designed to measure a wide range of built environment features that are potentially linked to active living, especially walking.
METHODS: The inventory was created through a literature review, focus group interviews, a panel of experts, and field testing in 27 settings. The inventory was developed in 2003–2004.
RESULTS: The Irvine Minnesota Inventory includes 162 items, organized into four domains: accessibility (62 items), pleasurability (56 items), perceived safety from traffic (31 items), and perceived safety from crime (15 items). (Some items are in multiple domains.) The inventory includes both a paper version and a version in Microsoft Access, to allow data to be input directly into the computer.
CONCLUSIONS: Limitations of methods used to develop the inventory are discussed. Strategies are offered for using the Irvine Minnesota Inventory to systematically and reliably measure characteristics of the built environment that are potentially linked to active living.

de Vries,S. I.; Bakker,I.;van Mechelen,W.;Hopman-Rock,M. (2007)
Determinants of activity-friendly neighborhoods for children: Results from the SPACE study

American Journal of Health Promotion 21(4): 312-316

Subject: children's activity - the buillt environment
Location: Netherlands
Keywords: physical activity; environment design;children;prevention research;PHYSICAL-ACTIVITY;URBAN FORM;SCHOOL;NETHERLANDS;OVERWEIGHT;OBESITY;WALKING;YOUTH

Abstract or Excerpt:
Purpose. To examine the association between children's physical activity and factors of the built environment.
Design. Cross-sectional study.
Setting. Ten neighborhoods in six cities in the Netherlands.
Subjects. Four hundred twenty-two children (age range, 6-11 years; 49% male).
Measures. Physical activity diary, neighborhood observations, and anthropometric measures. Analysis. Univariate and multivariate linear regression analyses.
Results. According to univariale analyses adjusted for age, sex, body mass index, and highest level of maternal education, physical activity (! 3 metabolic equivalents) was significantly (p <.05) associated with the proportion of green space, with the residential density, with the general impression of activity-friendliness of the neighborhood, and with the frequency of certain types of residences (e.g., terraced houses), sports fields, water, dog waste, heavy traffic, and safe walking and cycling conditions (e.g., cycle tracks and 30-km speed zones) in the neighborhood. According to adjusted multivariate analyses, physical activity was best predicted by the frequency) of parallel parking spaces in the neighborhood and by the general impression of activity-friendliness of the neighborhood (R-2 = 0. 193).
Conclusions. Children's physical activity is associated with certain modifiable.,factors of the built environment. Longitudinal studies should examine whether there is a causal-relationship.

Dearry,A. (2004)
Impacts of our built environment on public health

Environmental health perspectives 112(11): A600-A601

Subject: general
Location: US
Keywords: PSYCHOLOGICAL SENSE; PHYSICAL-ACTIVITY;URBAN SPRAWL;NEIGHBORHOOD;COMMUNITIES;LOCATION

Abstract or Excerpt:
We spend more than 90% of our lives indoors (National Research Council 1981), yet we know much more about ambient environmental factors and health than we do about the “built environment” and health. Conceptually, the built environment includes all of the physical structures engineered and built by people—the places where we live, work, and play. These edifices include our homes, workplaces, schools, parks, and transit arrangements. How we design and build where we live has changed dramatically over the past century.
In the early 1900s, urban areas tended to be compact and communities were walkable, with a central business district and a mix of housing and services. Then, connections between urban design and health and disease were more clearly recognized, and planners and public health practitioners often worked together to deal with problems related to poor sanitation and housing conditions. Increasing movement away from such urban locales over the last 50 years led to lowerdensity developments, segregation of land uses, and extensive roadway construction. Today, this trend, sometimes referred to as “urban sprawl,” is characterized by huge increases in urbanized land area and vehicle miles traveled [U.S. Environmental Protection Agency (EPA) 2001a]. These changes have both direct and indirect impacts on our environment and on public health.

Dobrow, M.J., Goel, V., & Black,N.A. (2006)
The impact of context on evidence utilization: A framework for expert groups developing health policy recommendations

Social science and medicine 63(7): 1811-1824

Subject: other
Location: Canadian
Keywords: Evidence; Context; Utilization; Health policy; Decision-making; Expert groups; Knowledge translation

Abstract or Excerpt:
Should the same evidence lead to the same decision outcomes in different decision-making contexts? In order to improve comprehension of this issue, this study considers how context influences evidence utilization in the development of health policy recommendations. We used an embedded multiple case study design to study how four expert groups formulated policy recommendations for breast, cervical, colorectal, and prostate cancer screening in Ontario, Canada. We interviewed expert group members and analysed meeting agendas/minutes, interim/final reports and other case-related documents.

Our analyses revealed varying policy objectives; the use, neglect, or overextended consideration of three key decision support tools; the varying skills/abilities of expert group members in using different decision support tools; the varying impact of effect modifiers, resource constraints and political interests; and the differing development/consideration of context-specific evidence to address uncertainty in the external decision-making context.

While more work is needed to determine if these findings are generalizable beyond cancer screening policy, we believe the central challenge for evidence-based policy is not to develop international evidence, but rather to develop more systematic, rigorous, and global methods for identifying, interpreting, and applying evidence in different decision-making contexts. Our analyses suggest that identification of evidence must distinguish between different policy objectives in order to link a broad conceptualization of evidence to appropriate policy questions. Interpretation of evidence must acknowledge the varying nature of evidence for different policy objectives, balancing existing emphasis on evidentiary quality with more sophisticated methods for assessing the generalizability of evidence. The application of evidence must also acknowledge different policy objectives, appropriately employing rule-based grading schemes and agreement-based consensus methods that are sensitive to the nature of the evidence and contexts involved.

Dube,P. (2000)
Urban health: an urban planning perspective

Reviews on environmental health (Isreal) 15(39084): 249-265

Subject: planning; planning practice, strategic environmental assessment
Location: Canadian
Keywords: Canada; City Planning/organization & administration;Consumer Participation;Decision Making, Organizational;Environmental Health;Humans;Models, Organizational;Urban Health

Abstract or Excerpt:
Urban planning processes and practices, and their impacts on the health and well being of citizens, are numerous and take many forms. Creating living urban environments that are conducive to health and well being requires an integrated approach between urban planners and health professionals. This article focuses on the almost 100 years of experience of Canada's National Capital Commission (NCC) in developing urban plans (policy plans, master plans) for planning and building Canada's Capital. To address the continuous growing public interest in environmental concerns, the NCC developed in the 1990s an integrated approach using a strategic environmental assessment (SEA). This approach could be easily transferred to various urban-planning contexts worldwide. This paper aims to describe the NCC approach, in order to stimulate discussion on growing environmental health concerns and urban planning.

Duhl,L. (2005)
Healthy cities and the built environment

Built Environment (London) 31(4): 356-361

Subject: general
Location: n/a

Abstract or Excerpt:
Here, the effective founding father of the Healthy Cities Programme provides an overview of its twenty-year history. As he explains too often health has been equated with the absence of illness, and hence with medicine and medical care. But today, health is being redefined as quality of life and general well-being. In this approach, health is a multi-disciplinary phenomenon: we must begin to look at everything that impinges on the human being. The total physical and social environment affects human development, as does a particular culture, and even the weather – and the constant interactions between all the parts.

Dunlop,J. M.; Holosko,M. J. (2004)
The story behind the story of collaborative networks -- relationships do matter!

Journal of health and social policy 19(3): 1-18

Subject: collaboration
Location: Canadian
Keywords: Community-Institutional Relations; Cooperative Behavior;Humans;Interinstitutional Relations;Interprofessional Relations;Mandatory Programs;Maternal-Child Health Centers/organization & administration/standards;Models, Organizational;Ontario;Personnel Management;Problem Solving;Public Health Administration;Social Work/organization & administration

Abstract or Excerpt:
This study reports data about the real story behind the current trend of mandated interorganizational collaboration of health and human service agencies. By means of qualitative design (N-22), public health managers were interviewed about the extent and nature of their collaborative efforts in the Healthy Babies, Healthy Children (HBHC) Program in Ontario, Canada. Using a conceptual framework of resource exchange theory, this study found that relational processes specifically: (a) previous relationships with other agencies and (b) interpersonal relations namely: informality, local community, open communication and resolving conflicts were the reasons for successful collaborations. Implications are directed toward: health and social planners, administrators, board members, funding bodies and policy-makers. The study offers new knowledge about a subject which has received minimal attention in the literature.

Evans,G. W. (2003)
The built environment and mental health

Journal of Urban Health 80(4): 536-555
http://www.springerlink.com/content/119977/?k=built+environment

Subject: mental health, methodology; evidence, conceptualization, and research challenges
Location: Non-Canadian
Keywords: Air Pollution; Crowding;Environment Design;Housing;Humans;Light;Mental Health;Noise;Social Support;Urban Health

Abstract or Excerpt:
The built environment has direct and indirect effects on mental health. High-rise housing is inimical to the psychological well-being of women with young children. Poor-quality housing appears to increase psychological distress, but methodological issues make it difficult to draw clear conclusions. Mental health of psychiatric patients has been linked to design elements that affect their ability to regulate social interaction (e.g., furniture configuration, privacy). Alzheimer's patients adjust better to small-scale, homier facilities that also have lower levels of stimulation. They are also better adjusted in buildings that accommodate physical wandering. Residential crowding (number of people per room) and loud exterior noise sources (e.g., airports) elevate psychological distress but do not produce serious mental illness. Malodorous air pollutants heighten negative affect, and some toxins (e.g., lead, solvents) cause behavioral disturbances (e.g., self-regulatory ability, aggression). Insufficient daylight is reliably associated with increased depressive symptoms. Indirectly, the physical environment may influence mental health by altering psychosocial processes with known mental health sequelae. Personal control, socially supportive relationships, and restoration from stress and fatigue are all affected by properties of the built environment. More prospective, longitudinal studies and, where feasible, randomized experiments are needed to examine the potential role of the physical environment in mental

health. Even more challenging is the task of developing underlying models of how the built environment can affect mental health. It is also likely that some individuals may be more vulnerable to mental health impacts of the built environment. Because exposure to poor environmental conditions is not randomly distributed and tends to concentrate among the poor and ethnic minorities, we also need to focus more attention on the health implications of multiple environmental risk exposure.

Ewing, R., Schroeer, W., & Greene,W. (2004)
School Location and Student Travel: Analysis of Factors Affecting Mode Choice

Transportation Research Record

Subject: physical activity; schools and student mode of travel
Location: US

Abstract or Excerpt:
This study is the first to examine the relationship between mode of travel to school and the full range of factors that might affect mode choice. With data from Gainesville, Florida, a multinomial logit model was estimated to explain school mode choice for a sample of K–12 students. Students with shorter walk or bike times to school proved significantly more likely to walk or bike. If confirmed through subsequent research, this finding argues for neighborhood schools serving nearby residential areas. Students traveling through areas with sidewalks on main roads were also more likely to walk. If confirmed, this finding argues for “safe routes to school” sidewalk improvements. As noteworthy as the significant factors are those that did not prove significant. School enrollment was not significant after controlling for travel time between home and school. Larger schools may draw students from larger areas and thereby indirectly affect mode choices. But school size does not appear to have a direct effect on mode choices. Land use variables such as density and mix also were not significant. The travel behavior literature emphasizes the importance of such variables in travel decision making. Apparently, school trips are different. They tend to be unlinked to other activities, and thus reduce the need for proximity to other land uses. They are mandatory; thus the walking environment may be less important than it is with discretionary travel. And school trips involve children, who may be less sensitive to walking conditions than are their adult counterparts.

According to the recently released 2001 National Household Travel Survey (NHTS), fewer than 15% of students between the ages of 5 and 15 walked to or from school, and a mere 1% biked (1). In 1969, at the time of the first Nationwide Personal Transportation Survey (predecessor to NHTS), 48% of students walked or biked to school (2, derived from table on p. 9 that applies to students in elementary and intermediate grades, the closest counterparts to the 5 to 15 age range reported for 2001). A survey by the Centers for Disease Control and Prevention (CDC) found that even children living close to school were not walking or biking in large numbers; only 31% of children ages 5 to 15 who lived within a mile of school walked or biked (3). In 1969, the comparable figure was close to 90% (2, derived from table on p. 9 that applies to students in elementary and intermediate grades, the closest counterparts to the 5 to 15 age range reported for 2001). Why the decline in walking and biking to school? In the CDC survey, parents cited long distances as a primary barrier to their children walking or biking to school. Schools have been increasing in size and drawing students from ever-larger areas. Between 1940 and 1990, the total number of elementary and secondary public schools fell by 69% despite a 70% increase in the U.S. population (4). School campuses have been increasing in size as well, partly because of minimum acreage requirements adopted by state and local school authorities. So-called mega schools are typically placed in outlying areas, where large sites are available and land prices are low (5–14). This means relatively few students live within comfortable walking or biking distance of these schools, which may account for much of the decline in walk and bike mode shares.
Yet, as already noted, even short school trips are now made primarily by automobile, indicating that other factors are at work. A poor walking environment has been linked to automobile dependence in the general population and would be expected to discourage walking and biking to school. “Poor walking environment” means a built environment of low densities, little mixing of land uses, long blocks, incomplete sidewalks, and other hallmarks of sprawl (15–17).

Ewing,R.; Brownson,R. C.; Berrigan,D. (2006)
Relationship between urban sprawl and weight of United States youth

American Journal of Preventive Medicine 31(6): 464-474

Subject: other (obesity); built env/sprawl
Location: US
Keywords: Adolescent; Body Mass Index;Child;Cross-Sectional Studies;Female;Health Behavior;Humans;Male;Obesity/epidemiology;Population Density;Socioeconomic Factors;United States;Urban Population/statistics & numerical data

Abstract or Excerpt:
BACKGROUND: Among United States youth there is an obesity epidemic with potential life-long health implications. To date, relationships between the built environment and body mass index (BMI) have not been evaluated for youth, and have not been evaluated longitudinally.
OBJECTIVES: To determine if urban sprawl is associated with BMI for U.S. youth.
METHODS: Using data from the 1997 National Longitudinal Survey of Youth (NLSY97), both cross-sectional and longitudinal analyses were conducted. Hierarchical modeling was used to relate characteristics of individuals, households, and places to BMI. Individual and household data were extracted from the NLSY97. The independent variable of interest was the county sprawl index, which was derived with principal components analyses from census and other data.
RESULTS: In a cross-sectional analysis, the likelihood of U.S. adolescents (aged 12-17 years) being overweight or at risk of overweight (> or =85th percentile relative to the Centers for Disease Control growth charts) was associated with county sprawl (p=0.022). In another cross-sectional analysis, after controlling for sociodemographic and behavioral covariates, the likelihood of young adults (aged 18-23 years) being obese was also associated with county sprawl (p=0.048). By contrast, in longitudinal analyses, BMI growth curves for individual youth over the 7 years of NLSY97, and BMI changes for individual youth who moved between counties, were not related to county sprawl (although coefficient signs were as expected).
CONCLUSIONS: Cross-sectional analyses suggest that urban form is associated with being overweight among U.S. youth. The strength of these relationships proved comparable to those previously reported for adults. Longitudinal analyses show no such relationship. It is unclear why these approaches give different results, but sample sizes, latent effects, and confounders may contribute.

Eyles,John; Susan Elliott, Jacques Grondin, Karen Smoyer, Ralph Matthews,Dan Krewski, (1999)
New Directions - New Dimensions for Environmental Health Research in Canada
Position paper for the Social Sciences and Humanities Research Council and the Canadian Health Services Research Foundation Health Institutes Design Grant, 35 pp.

Subject: general, interventions
Location: Canadian

Abstract or Excerpt:
Capsule Summary
This position paper recommends the establishment of a Canadian Institute of Environmental Health Research (CIEHR) with significant social sciences and humanities involvement and leadership. A CIEHR would permit a direct, integrated and transformative response to identified needs of Canadians. Canadians are concerned about the threats posed by human activities to ecosystem resilience and integrity. They are further concerned about the potentially adverse impacts of environment on their health and that of their children. Yet the environment is one of the major determinants of health over which Canadians exercise little control.
Technological systems, e.g. nuclear power and agribusiness, isolate us from the environment. Yet the physical environment can bring intense danger and generate much anxiety and worry. It is a source of many involuntary often unequal exposures which are added to by industrial and daily activities e.g. chemical production, energy consumption, emissions. Environment is the determinant of risk society with its effects being regarded as hazards and its consequences as risks. In this it shares many features with the occupational environment and we further suggest that consideration be given to a joint Canadian Institute of Environmental and Occupational Health Research.
The existing science to examine the relationships between environmental exposure and health outcomes is strong but many of its findings are tentative and inconclusive. As the subject matter is complex, this may well remain the case. In our view, this strengthens the case for a CIEHR which as part of its mandate will commission innovative research that encompasses the basic biomedical, applied chemical, social and human, and policy sciences. Only through a concerned, transformative approach can the problems that concern and adversely affect the health of Canadians be tackled.
A CIEHR will build on strong partnerships that already exist in the environment and health community. It will have a permeable structure to allow the to-and-fro of researchers and research-users. Based on wide consultation, it will have researchdirection,

partnership-creating and collaborative functions. In this manner, it will pursue its objectives of integrating and building on existing research and practice to understand the linkage between health and environment more fully in terms of both health enhancement and disease burden. It will identify and develop solutions for reducing or preventing harmful environmental exposures and practices and for enhancing the health-promoting characteristics of the environment.

Fisher, K. J., Li, F., Michael, Y., & Cleveland, M. (2004)
Neighborhood-level influences on physical activity among older adults: A multilevel analysis.

Journal of Aging and Physical Activity 12(1): 45-63

Subject: physical activity

Abstract or Excerpt:
There is a need for greater understanding of setting-specific influences on physical activity to complement the predominant research paradigm of individual-centered influences on physical activity. In this study, the authors used a cross-sectional multilevel analysis to examine a range of neighborhood-level characteristics and the extent to which they were associated with variation in self-reported physical activity among older adults. The sample consisted of 582 community-dwelling residents age 65 years and older (M = 73.99 years, SD = 6.25) recruited from 56 neighborhoods in Portland, OR. Information collected from participants and neighborhood data from objective sources formed a two-level data structure. These hierarchical data (i.e., individuals nested within neighborhoods) were subjected to multilevel structural-equation-modeling analyses. Results showed that neighborhood social cohesion, in conjunction with other neighborhood-level factors, was significantly associated with increased levels of neighborhood physical activity. Overall, neighborhood-level variables jointly accounted for a substantial variation in neighborhood physical activity when controlling for individual-level variables.

Flournoy, Rebecca, Irene Yen (2004)
The Influence of Community Factors on Health: An Annotated Bibliography

Subject: general

Abstract or Excerpt:
[from the preface]
For many years, foundations, practitioners, researchers, community-based organizations and policymakers have worked to reduce the higher rates of certain diseases and health conditions among low-income communities of color. We are making progress, but we are still far from reaching the goal of good health for all.
The California Endowment recognizes the need for new strategies to address this issue. In 2002, the foundation undertook an in-depth investigation of how the places where people live can affect their health. PolicyLink, a national nonprofit research, communications, capacity building and advocacy organization dedicated to advancing policies to achieve economic and social equity, has been an important partner in these efforts. PolicyLink interviewed community leaders, researchers and policymakers as well as compiled a comprehensive literature review to draft an important report-Reducing Health Disparities Through a Focus on Communities-that lays out a new community framework to address the challenges of health disparities. The California Endowment has moved forward with innovative grantmaking strategies that invest in strengthening communities to improve health.
The following annotated bibliography emerged from this first stage of our partnership. Developed by PolicyLink, the bibliography highlights groundbreaking research on how community factors affect health.

Fox,Daniel M.; Richard J. Jackson and Jeremiah A. Barondess (2003)
Health and the built environment

Journal of Urban Health 80(4): 534-535
http://www.springerlink.com/content/119977/?k=built+environment

Subject: general
Location: US

Abstract or Excerpt:
[excerpt]
The 4 articles that follow summarize the consequences for the health of populations, especially in cities and their metropolitan regions, of public- and private-sector decisions about characteristics of the built environment. . .
Each of the four articles addresses a different aspect of the complicated analytical and political relationships between the built environment and health status. In “Residential Environments and Cardiovascular Risk,” Ana V. Diez Roux arrays and assesses evidence about the effects of the varying characteristics of different neighborhoods on the current epidemic of cardiovascular disease. . . Similarly, Gary W. Evans, in “The Built Environment and Mental Health,” describes the effects on mental health of housing quality, crowding, noise, indoor air, and daylight exposure. Both authors document their findings from a rich literature to which each of them has contributed.
Two other articles discuss the people and organizations that plan, make policy for, finance, and build our environment. In “How Urban Sprawl Shapes Human Well- Being,” Harold V. Savitch summarizes an extensive literature on the relevant politics of policymaking and public financing. . .
Mary Northridge, Elliot Sclar, and Padmini Biswas propose a conceptual framework for planning healthy cities. In “Sorting Out the Connections Between the Built Environment and Health,” they propose ways to integrate research findings from the literatures of planning, the policy sciences, and the sciences of public health with a commitment to policy that improves the quality of life for vulnerable people. . .

France,C. (2004)
Health contribution to local government planning

Environmental Impact Assessment Review 24(2): 189-198

Subject: collaboration, planning; communication and partnership
Location: UK (Eng)
Keywords: health impact assessment; structure plan;partnership working;health impact review;health improvement modernisation plan

Abstract or Excerpt:
When local government considers future land-use plans, the local health authorities are not always included as a key partner. In Cambridgeshire, England, the former Cambridgeshire Health Authority formed a partnership with local government to address this issue. The relationship that developed and the subsequent health impact review provided an opportunity to influence strategic policy and ensure that health objectives are taken into account. Through partnership working, lessons were learned about how to incorporate health issues into a strategic land-use planning document to the overall benefit of the community.

Frank, L., J. Niece, P.J. Naylor, H. McKay (n.d.)
Children's Travel to School: The influence of the built form and perceptions of safety

Subject: physical activity
Location: Canadian

Abstract or Excerpt:
This project examined the relationship between children’s mode of travel to school and demographics, micro-scale built form, and parental perceptions of safety at 7 elementary schools in the Lower Mainland region. Funded by Act Now BC.

Frank, L.D. Sallis, J.F., Conway, T., Chapman, J., Saelens, B. Bachman, W. (2006)
Multiple Pathways from Land Use to Health: Walkability Associations With Active Transportation, Body Mass Index, and Air Quality

Journal of the American Planning Association. 72(1): 75-89

Subject: physical activity, air quality
Location: US

Abstract or Excerpt:
The literature shows single-use, lowdensity land development and disconnected street networks to be positively associated with auto dependence and negatively associated with walking and transit use. These factors in turn appear to affect health by influencing physical activity, obesity, and emissions of air pollutants. We evaluated the association between a single index of walkability that incorporated land use mix, street connectivity, net residential density, and retail floor area ratios, with health-related outcomes in King County, Washington.
We found a 5% increase in walkability to be associated with a per capita 32.1% increase in time spent in physically active travel, a o.23-point reduction in body mass index, 6.5% fewer vehicle miles traveled, 5.6% fewer grams of oxides of nitrogen (Nox) emitted, and 5.5% fewer grams of volatile organic compounds (VOC) emitted. These results connect development patterns with factors that affect several prevalent chronic diseases.

Frank, Lawrence D., Engelke, Peter and Schmid, Tom. (2003)
Health and Community Design: The Impacts of the Built Environment on Physical Activity

Subject: general, physical activity
Location: US

Abstract or Excerpt:
[from the back cover]
Health and Community Design is a comprehensive examination of how the built environment encourages or discourages physical activity, drawing together insights from a range of research on the relationships between urban form and public health. It provides important information about the factors that influence decisioins about physical activity and modes of travel, and about how land use patterns can be changed to help overcome barriers to physical activity.
Chapters examine:
- the historical relationships between health and urban form in the United States
- why urban and suburban development should be designed to promote moderate types of physical activity
- the divergent needs and requirements of different groups of people
- how different settings make it easier or more difficult to incorporate walking and bicycling into everyday activities
A concluding chapter reviews the arguments presented and sketches a research agenda for the future.
Table of Contents

Frank, Lawrence D., Mr. Peter Engelke, Daniel Hourigan, Thomas L Schmid, Richard Killingsworth (2000)
How Land Use & Transportation Systems Impact Public Health: An Annotated Bibliography (Working Paper #2)

Subject: physical activity; effects of transportation systems on physical activity, especially
Location: n/a **walking and bicycling**
Keywords: Physical activity, urban form, urban design, barriers, pedestrian, walking, fitness, exercise, health promotion, active living, sedentary lifestyle, traffic safety

Abstract or Excerpt:
Article Review Structure
II. Transportation, Travel and Safety Statistics
III. Urban Form and Transportation
A. Literature on transportation system characteristics (street design, street networks, street users, traffic calming, design for pedestrian/bicycle zones)
B. Literature on land development patterns (neotraditional design principles, density, land use mix, regional location, site design)
C. Empirical literature on relationships between urban form and travel behavior

Frank, Lawrence D., Peter Engelke (2000)
How Land Use and Transportation Systems Impact Public Health: A Literature Review of the Relationship Between
Physical Activity and Built Form

Subject: general, physical activity' summary, LU, transport systems on public health
Location: US

Abstract or Excerpt:
[from the Executive Summary]
This review discusses how urban form affects public health, specifically through the ways in which the built environment encourages or discourages physical activity levels. The questions raised illuminate fundamental quality of life considerations including residential preferences, time use, space requirements, security, and convenience, which collectively shape the built environment. The relative costs and benefits of the locational and travel choices that are currently available have resulted in a built environment designed to accommodate the car -- at the measurable expense of the ability to move about under human power. Although the institutional and attitudinal changes that need to take place to enable, let alone promote, physical activity in our towns and cities today appear to be daunting, we can take some comfort from Benjamin Franklin, who stated in
1791:
“To get the bad customs of a country changed and the new ones, though better introduced, it is necessary first to remove the prejudices of the people, enlighten their ignorance, and convince them that their interests will be promoted by the proposed changes; and this is not the work of a day.”
This report is organized around an urban form - public health model, as conveyed in Figure X-1. Land development and transportation investments are interactive processes that collectively have a tremendous influence in shaping the built environment. The location of transportation investments impact where growth occurs, and the mode in which the investment is made (e.g., highway, transit, sidewalks, and bikeways) impacts the form of the growth that follows. Conversely, the location of new development impacts the location of transportation investments, while the character of that development (transit- and pedestrian-friendly versus auto-oriented) determines the viability of alternative transportation scenarios. These two urban form processes, land development and transportation investments, are ypothesized to influence public health by affecting the relative convenience and viability of pedestrian travel and biking for both recreational and utilitarian (trip) purposes, and thus they influence the levels of physical activity.2 Figure X-1, therefore, shows that the built environment influences activity patterns, which impact health. However, one's culture, age, income, genetics, and even health influence activity patterns. Consequently, activity patterns serve as a bridge that interfaces the built environment with public health. Our review employs a classification of studies that emphasizes the interfaces between
1. physical activity and health;
2. transportation systems and physical activity; and
3. land development patterns and physical activity.

Frank, Lawrence, D., Schmid, Tom, Sallis, James F., Chapman, James, Saelens, Brian (2005)
Linking Objective Physical Activity Data with Objective Measures of Urban Form

American Journal of Preventive Medicine 28(2Suppl 2): 117-125

Subject: physical activity, methoology
Keywords: Adult; Aged; Environment Design/statistics & numerical data; Exercise; Female; Georgia; Humans; Linear Models; Male; Middle Aged; Urban Population/statistics & numerical data; Walking/statistics & numerical data

Abstract or Excerpt:
BACKGROUND: To date, nearly all research on physical activity and the built environment is based on self-reported physical activity and perceived assessment of the built environment.
OBJECTIVE: To assess how objectively measured levels of physical activity are related with objectively measured aspects of the physical environment around each participant's home while controlling for sociodemographic covariates.
METHODS: Objective measures of the built environment unique to each household's physical location were developed within a geographic information system to assess land-use mix, residential density, and street connectivity. These measures were then combined into a walkability index. Accelerometers were deployed over a 2-day period to capture objective levels of physical activity in 357 adults.
RESULTS: Measures of land-use mix, residential density, and intersection density were positively related with number of minutes of moderate physical activity per day. A combined walkability index of these urban form factors was significant (p =0.002) and explained additional variation in the number of minutes of moderate activity per day over sociodemographic covariates. Thirty-seven percent of individuals in the highest walkability index quartile met the > or =30 minutes of physical activity recommended, compared to only 18% of individuals in the lowest walkability quartile. Individuals in the highest walkability quartile were 2.4 times more likely (confidence interval=1.18-4.88) than individuals in the lowest walkability quartile to meet the recommended > or =30 minutes of moderate physical activity per day. CONCLUSIONS: This research supports the hypothesis that community design is significantly associated with moderate levels of physical activity. These results support the rationale for the development of policy that promotes increased levels of land-use mix, street connectivity, and residential density as interventions that can have lasting public health benefits.

Frank,L. D. (2004)
Public Health and the Built Environment: Emerging Evidence and Complexity

Canadian Journal of Dietetic Practice and Research 65(2): P1
http://proquest.umi.com/pqdweb?did=650962301&Fmt=7&clientId=16746&RQT=309&VName=PQD

Subject: general; issues on research
Location: US
Keywords: Urban planning; Exercise;Obesity;Causes

Abstract or Excerpt:
Current research suggests that transportation related physical activity explains some of the variation between urban form and body mass index 4. However, a recent study of relationships between the built environment and obesity in Atlanta shows a very strong inverse association between the level of land use mix and obesity - with a strength of association exceeding income and educational attainment4. Other urban form factors including street connectivity and density were not as strongly associated with obesity. Therefore, some aspect of mixed use is highly correlated with obesity where other urban form predictors of walkability are not. Mixed use captures the presence of non-residential uses within a walkable distance of participants' households. Observations with more mixed use have more commercial floor area and more restaurants, more grocery stores, and more eateries overall. Therefore, increased levels of mixed use associated with lower BMI and obesity aligns with increased access to a variety of food outlets. Recent interest in the linkage between the built environment and public health has primarily surrounded the emerging obesity pandemic. Increases in the rates of obesity since the 1980s in many westernized nations are alarming and cause for considerable concerns. While increased walkability has been found to be associated with reduced odds of obesity in two separate studies3,4; the majority of the variation in the odds of being obese remains unexplained. Moreover, recent results suggest that the aspect of urban form most closely associated with obesity is land use mix, which captures the presence of various types of food establishments within a walkable distance to area residents. Research has demonstrated an inverse relationship between income and obesity25,26. It is therefore postulated here that higher odds of obesity and associated health risks in lower income communities may be a function of a higher prevalence of fast food and convenience stores, and lower prevalence of outlets offering fresh fruit and produce. To date, no research has collectively assessed the effect of walkability and food environments on obesity. One study, the U.S. National Institutes of Health (NIH) funded Neighborhood Quality of Life Study (NQLS) is underway within 32 communities within the Seattle and Baltimore regions to compare physical activity and obesity levels across walkable and unwalkable environments. Recent initiatives by the Canadian Institutes for Health Research (CIHR) and the Robert Wood Johnson Foundation are

beginning to move the research agenda towards a more interactive set of studies that crosswalk between physical activity and nutrition. Through an emerging awareness of the collective impacts of diet and activity patterns, it is now becoming possible to assess this interface between the built environment, physical activity, and nutrition. Anecdotal evidence would suggest that both food environments and walkability collectively impact obesity. When objectively measured, systematic variations between the make up of food environments in higher and lower income areas will likely reveal important information for public health.

Frank,L. D.; Engelke,P. (2005)
Multiple impacts of the built environment on public health: Walkable places and the exposure to air pollution

International Regional Science Review 28(2): 193-216

Subject: physical activity, intervention
Keywords: physical activity; air quality;built environment;travel behavior;PHYSICAL-ACTIVITY;URBAN FORM;LAND-USE;MYOCARDIAL-INFARCTION;CHILDHOOD ASTHMA;TRANSPORTATION;QUALITY;MORTALITY;WALKING;ATLANTA

Abstract or Excerpt:
While considerable attention has been paid to the public-health-related impacts of air pollution, relatively little research has been done to understand how other aspects of the built environment impact health. Americans are increasingly sedentary; erstwhile the rate of increase in obesity is alarming. New research suggests that increased auto dependence, and limited opportunities to walk for utilitarian purposes, has contributed to this emerging obesity, epidemic. Within socio-demographic strata, land use patterns and transportation investments collectively shape the desire to walk, drive, or to travel via other means. Mixed use and more compact community designs show significant promise for the promotion of physical activity and the reduction of regional air pollution levels. Opportunities exist to increase physical activity and improve regional air quality through more compact development. However, increased compactness, or density, often exacerbates traffic congestion and can increase exposure of harmful emissions within central areas. Therefore, strategies to reduce localized air pollution in existing and developing centers are required to enable larger health benefits from smart growth to be realized.

Frank,L. D.; Kerr,J.;Chapman,J.;Sallis,J. F. (2007)
Urban form relationships with walk trip frequency and distance among youth

American Journal of Health Promotion 21(4): 305-311

Subject: physical activity
Location: US
Keywords: physical activity; built environment;walking;children;prevention research;PHYSICAL-ACTIVITY;ACTIVE TRANSPORTATION;LOCAL NEIGHBORHOOD;ELEMENTARY-SCHOOL;ADOLESCENTS;OBESITY;ASSOCIATIONS;PERCEPTIONS;ENVIRONMENT

Abstract or Excerpt:
Conclusions. Access to recreation or open space was the most important urban form variable related to walking for all age groups. Children aged 12 to 15 years old may be particularly influenced by urban form.

Frankish,C. J.; Moulton,G. E.; Quantz,D.; Carson,A. J.; Casebeer,A. L.; Eyles,J. D.; Labonte,R.; Evoy,B. E. (2007)
Addressing the non-medical determinants of health: a survey of Canada's health regions

Canadian journal of public health 98(1): 41-47

Subject: collaboration; intersectoral collaboration in health sectors, and additonal sectors
Location: Canadian
Keywords: Canada; Cooperative Behavior;Health Care Reform/organization & administration;Health Priorities/organization & administration;Health Status Indicators;Humans;Interinstitutional Relations;Public Health Administration;Regional Health Planning/organization & administration;Rural Health;Socioeconomic Factors;Sociology, Medical;Urban Health

Abstract or Excerpt:
BACKGROUND: The Canadian health system is undergoing reform. Over the past decade a prominent trend has been

creation of health regions. This structural shift is concurrent with a greater emphasis on population health and the broad determinants of health. In parallel, there is a movement toward more intersectoral collaboration (i.e., collaboration between diverse segments of the health system, and between the health system and other sectors of society). The purpose of this exploratory study is to determine the self-reported level of internal action (within regional health authorities) and intersectoral collaboration around 10 determinants of health by regional health authorities across Canada.
METHODS: From September 2003 to February 2004, we undertook a survey of regional health authorities in Canadian provinces (N = 69). Using SPSS 12.0, we generated frequencies for the self-reported level of internal and intersectoral action for each determinant. Other analyses were done to compare rural/suburban and urban regions, and to compare Western, Central and Eastern Canada.
RESULTS: Of the 10 determinants of health surveyed, child development and personal health practices were self-reported by the majority of health regions to receive greatest attention, both internally and through intersectoral activities. Culture, gender and employment/working conditions received least attention in most regions.
CONCLUSION: The exploratory survey results give us the first Canadian snapshot of health regions' activities in relation to the broad range of non-medical determinants of health. They provide a starting data set for baselining future progress, and for beginning deeper analyses of specific areas of action and intersectoral collaboration.

Frumkin, Howard; Lawrence Frank, and Richard Jackson (2004)
Urban Sprawl and Public Health: Designing, Planning, and Building for Healthy Communities

Subject: general
Location: n/a/US
Keywords: Green Living , Land Use Planning , Architecture & Sustainable Design , Environmental Health & Justice

Abstract or Excerpt:
[from the publisher's website]
In Urban Sprawl and Public Health, Howard Frumkin, Lawrence Frank, and Richard Jackson, three of the nation's leading public health and urban planning experts explore an intriguing question: How does the physical environment in which we live affect our health? For decades, growth and development in our communities has been of the low-density, automobile-dependent type known as sprawl. The authors examine the direct and indirect impacts of sprawl on human health and well-being, and discuss the prospects for improving public health through alternative approaches to design, land use, and transportation.

Urban Sprawl and Public Health offers a comprehensive look at the interface of urban planning, architecture, transportation, community design, and public health. It summarizes the evidence linking adverse health outcomes with sprawling development, and outlines the complex challenges of developing policy that promotes and protects public health. Anyone concerned with issues of public health, urban planning, transportation, architecture, or the environment will want to read Urban Sprawl and Public Health.

Table of Contents

Frumkin,H. (2003)
Healthy places: exploring the evidence

American Journal of Public Health 93(9): 1451-1456

Subject: other; sense of place, public health
Location: Non-Canadian/na
Keywords: City Planning; Community Health Planning;Empirical Research;Environment Design;Humans;Interdisciplinary Communication;Public Health;Recreation;Social Environment;Transportation;United States

Abstract or Excerpt:
Sense of place is a widely discussed concept in fields as diverse as geography, environmental psychology, and art, but it has little traction in the field of public health. The health impact of place includes physical, psychological, social, spiritual, and aesthetic outcomes. In this article, the author introduces sense of place as a public health construct. While many recommendations for "good places" are available, few are based on empirical evidence, and thus they are incompatible with current public health practice. Evidence-based recommendations for healthy place making could have important public health implications. Four aspects of the built environment, at different spatial scales-nature contact, buildings, public spaces, and urban form-are identified as offering promising opportunities for public health research, and potential research agendas for each are discussed.

Frumkin,H. (2005)
Health, equity, and the built environment

Environmental health perspectives 113(5): A290

Subject: social justice, general
Location: Non-Canadian
Keywords: Civil Rights; Conservation of Natural Resources;Environment Design;Environmental Health;Food Supply;Housing;Humans;Poverty;Social Conditions;Transportation

Abstract or Excerpt:
no abstract (editorial)

Galea,S.; Ahern,J.; Rudenstine,S.; Wallace,Z.; Vlahov,D. (2005)
Urban built environment and depression: a multilevel analysis

Journal of epidemiology and community health 59(10): 822-827

Subject: mental health; depression, neighbourhood/built env.
Location: US (NY)
Keywords: Adolescent; Adult;Aged;Cross-Sectional Studies;Depressive Disorder/epidemiology/etiology;Environment;Female;Humans;Logistic Models;Male;Middle Aged;New York City/epidemiology;Residence Characteristics/statistics & numerical data;Risk Factors;Socioeconomic Factors;Urban Health/statistics & numerical data

Abstract or Excerpt:
STUDY OBJECTIVE: To assess the relations between characteristics of the neighbourhood internal and external built environment and past six month and lifetime depression.
DESIGN AND SETTING: Depression and sociodemographic information were assessed in a cross sectional survey of residents of New York City (NYC). All respondents were geocoded to neighbourhood of residence. Data on the quality of the built environment in 59 NYC neighbourhoods were collected from the United Status census, the New York City housing and vacancy survey, and the fiscal 2002 New York City mayor's management report.
MAIN RESULTS: Among 1355 respondents, residence in neighbourhoods characterised by a poor quality built environment was associated with greater individual likelihood of past six month and lifetime depression in multilevel models adjusting for individual age, race/ethnicity, sex, and income and for neighbourhood level income. In adjusted models, persons living in neighbourhoods characterised by poorer features of the built environment were 29%-58% more likely to report past six month depression and 36%-64% more likely to report lifetime depression than respondents living in neighbourhoods characterised by better features of the built environment.
CONCLUSIONS: Living in neighbourhoods characterised by a poor quality built environment is associated with a greater likelihood of depression. Future prospective work designed to assess potential mechanisms underlying these associations may guide public health and urban planning efforts aimed at improving population mental health.

Galea,S.; Rudenstine,S.; Vlahov,D. (2005)
Drug use, misuse, and the urban environment

Drug and Alcohol Review 24(2): 127-136

Subject: other; drug use, built env.
Location: Non-Canadian
Keywords: Health Services Accessibility/standards; Humans;Population Density;Risk Factors;Risk-Taking;Social Class;Social Environment;Social Support;Substance-Related Disorders/epidemiology/psychology;United States/epidemiology;Urban Population/statistics & numerical data;Urbanization

Abstract or Excerpt:
Urbanization is probably the single most important demographic shift world-wide throughout the past and the new century and represents a sentinel change from how most of the world's population has lived for the past several thousand years. As urban living becomes the predominant social context for the majority of the world's population, the very ubiquity of urban living promises to shape health directly and to indirectly affect what we typically consider risk factors or determinants of population health. Although a growing body of research is exploring how characteristics of the urban environment may be associated with health (e.g. depression) and risk behaviours (e.g. exercise patterns), relatively little research has systematically assessed how the urban environment may affect drug use and misuse. In this paper we will propose a conceptual framework for considering how different characteristics of the urban environment (e.g. collective efficacy, the built environment) may be associated with drug use and misuse, summarize the existing empiric literature that substantiates elements of this framework, and identify potential directions for future research.

Galea,Sandro; Freudenberg,Nicholas; Vlahov,David (2005)
Cities and Population Health

Social science and medicine 60(5): 1017-1033

Subject: general, methodology; research design
Location: n/a
Keywords: Public Health; Urban Population;Urbanism;Urban;Urbanization;Cities;Model;Framework

Abstract or Excerpt:
A majority of the world's population will live in urban areas by 2007 & cities are exerting growing influence on the health of both urban & non-urban residents. Although there long has been substantial interest in the associations between city living & health, relatively little work has tried to understand how & why cities affect population health. This reflects both the number & complexity of determinants & of the absence of a unified framework that integrates the multiple factors that influence the health of urban populations. This paper presents a conceptual framework for studying how urban living affects population health. The framework rests on the assumption that urban populations are defined by size, density, diversity, & complexity, & that health in urban populations is a function of living conditions that are in turn shaped by municipal determinants & global & national trends. The framework builds on previous urban health research & incorporates multiple determinants at different levels. It is intended to serve as a model to guide public health research & intervention.

Gilbert, R., & O'Brien,C. (2007)
Child- and youth-friendly land-use and transport planning guidelines for Ontario

Subject: physical activity; recommendations
Location: Canadian

Abstract or Excerpt:
[from the Summary]
This document is in three parts. The first part provides reasons as to why land-use and transport planning should be made more child- and youth-friendly. The second part sets out 27 guidelines that could be applied in the course of a municipality or other agency becoming more child- and youth-friendly in its transport and land-use planning. The third part provides some discussion of implementation issues.

The guidelines are prompted by disturbing trends in young people's transport activity and related matters. They appear to be travelling much more by car, taking time that could be dedicated to exercise, including walking or bicycling to the destinations of the car journeys. As well as exercising less, and weighing more, other effects may be associated with the lost exercise associated with the increased automobile use. They include reduced academic performance and compromised emotional development. . .
The transport needs of young people differ from those of adults, partly because their destinations are different and partly because they travel differently. . .
Overall, about 20 per cent of all local trips may be made by young people, a significant share that impels attention to their transport needs.
The proposed guidelines concern land use as well as transport because land use is a key factor in determining the transport patterns of young people as it is for adults.
The 27 guidelines are grouped into six categories: concerning putting young people first in land-use and transport planning; providing for them as pedestrians, as cyclists, and as transit users, concerning school buses and young people's travel in utomobiles, and concerning how to reduce the impacts of all transport activity on young people.
Several barriers to addressing concerns about young people and transport are noted, and how they might be overcome.
Opportunities for including young people in decisionmaking about transport and land use are noted, and further pointers towards application of the guidelines are elaborated.
Use of the guidelines could result in communities that are not only more child- and youth-friendly but are more agreeable for persons of all ages.

Giles-Corti, B., & Donovan, R. J. (2002)
Socioeconomic status differences in recreational physical activity levels and real and perceived access to a supportive physical environment.

Preventive medicine 35(6): 601-611

Subject: physical activity, perceptions, social justice

Abstract or Excerpt:
BACKGROUND: Spatial access to recreational facilities and perceptions of the neighborhood environment and physical activity levels were examined by the socioeconomic status of area of residence (SES).
METHODS: A cross-sectional survey of adults (18-59 years) (n = 1,803) stratified by SES using a geographic-based index was conducted.
RESULTS: Respondents in low SES areas had superior spatial access to many recreational facilities, but were less likely to use them compared with those living in high SES areas. They were more likely to perceive that they had access to sidewalks and shops, but also perceived that their neighborhood was busier with traffic, less attractive, and less supportive of walking. After adjustment, respondents living in low SES areas were 36% less likely to undertake vigorous activity. While they were more likely to walk for transport, this was not statistically significant (OR, 1.27; 95% CI, 0.98-1.64), nor were other SES differences in walking for recreation and walking as recommended. Modifiable environmental factors were associated with walking and vigorous activity, especially perceived access to sidewalks and neighborhood attractiveness. Spatial access to attractive, public open space was associated with walking.
CONCLUSIONS: Creating supportive environments--particularly sidewalks in attractive neighborhoods--has the potential to increase walking and vigorous activity.

Giles-Corti, B., Timperio, A., Bull, F., Pikora,T. (n.d.)
Understanding physical activity environmental correlates: Increased specificity for ecological models

Exercise and Sport Sciences Reviews 33

Subject: physical activity, methodology
Location: Canadian
Keywords: built environment; walking; physical activity; ecological models; environment; environmental attributes; review.

Abstract or Excerpt:
Ecological models are now used to understand the complex array of factors that influence physical activity, resulting in a greater emphasis on environmental correlates. This selective review examines whether the predictive capacity of these models could be improved if behavior-specific measures of the environment were used to predict context-specific behaviors.

Giles-Corti,B. (2006)
People or places: What should be the target?

Journal of Science and Medicine in Sport 9(5): 357-366

Subject: physical activity, planning
Location: Australia
Keywords: built environment; walking;physical activity;ecological models;environment;PHYSICAL-ACTIVITY;PUBLIC-HEALTH;ENVIRONMENTAL-FACTORS;ADULTS PARTICIPATION;RAIL-TRAIL;IMPACT;TRANSPORTATION;OPPORTUNITIES;INTERVENTION

Abstract or Excerpt:
In the last decade, interest in the impact of the built environment on physical activity has grown. Policies and community and neighbourhood infrastructure provide opportunities to be active, and facilitate incidental physical activity, such as walking for transport or use of stairs. Theoretical ecological models provide a basis for physical activity research and practice, focussing attention on multiple levels of influence on behaviour (i.e., individual, social-environmental and physical environmental). However, few studies have quantified the relative contribution of these correlates on behaviour, leaving policy-makers and practitioners wondering about where to target their efforts: people or places? This paper draws on theory, evidence to date and case studies to argue that comprehensive interventions targeting both people and places are required to increase physical activity. The joint influence of place and people is discussed in the context of data showing that the likelihood of walking at recommended levels is nearly eight times higher (OR 7.84; 95% CI 4.41-13.91) in people with both a supportive environment and positive cognitions compared with those low on both. To increase physical activity requires multi-sector partnerships and comprehensive long-term multi-pronged interventions that include short-, medium- and long-term strategies aimed at bringing about cultural shifts favouring physical activity over sedentary alternatives, and the creation of a supportive built environment. The health sector can contribute by implementing public education programs, workforce development, building the evidence-base and advocating for change. However, to improve policies and infrastructure in places the commitment of sectors outside of health is critical.

Glanz, K., Salllis, J.F., Saelens, B. E., Frank, L.D. (2005)
Healthy Nutrition Environments: Concepts and Measures

American Journal of Health Promotion 19(5): 330-333

Subject: food access/nutrition, methodology
Keywords: Adult; Advertising; Child; Eating; Environment; Health Policy; Health Promotion/methods; Humans; Nutrition Physiology; Obesity/etiology/prevention & control/psychology

Abstract or Excerpt:
The authors provide a conceptual model of a healthy nutrition environment, then review the types of measures required to assess various aspects of this environment. Measures fall into priority categories of consumer and community environments.

Glazier,R. H.; Creatore,M. I.; Gozdyra,P.; Matheson,F. I.; Steele,L. S.; Boyle,E.; Moineddin,R. (2004)
Geographic methods for understanding and responding to disparities in mammography use in Toronto, Canada

Journal of general internal medicine 19(9): 952-961

Subject: other, social justice; mammography use and ses and outreach, and doctor visits
Location: Canadian
Keywords: Cluster Analysis; Emigration and Immigration;Female;Humans;Income;Mammography/utilization;Middle Aged;Ontario;Socioeconomic Factors;Urban Population/statistics & numerical data

Abstract or Excerpt:
OBJECTIVE: To use spatial and epidemiologic analyses to understand disparities in mammography use and to formulate interventions to increase its uptake in low-income, high-recent immigration areas in Toronto, Canada.
DESIGN: We compared mammography rates in four income-immigration census tract groups. Data were obtained from the 1996 Canadian census and 2000 physician billing claims. Risk ratios, linear regression, multilayer maps, and spatial analysis were used to examine utilization by area for women age 45 to 64 years.
SETTING: Residential population of inner city Toronto, Canada, with a 1996 population of 780,000.

PARTICIPANTS: Women age 45 to 64 residing in Toronto's inner city in the year 2000.
MEASUREMENTS AND MAIN RESULTS: Among 113,762 women age 45 to 64, 27,435 (24%) had received a mammogram during 2000 and 91,542 (80%) had seen a physician. Only 21% of women had a mammogram in the least advantaged group (low income--high immigration), compared with 27% in the most advantaged group (high income--low immigration) (risk ratio, 0.79; 95% confidence interval, 0.75 to 0.84). Multilayer maps demonstrated a low income-high immigration band running through Toronto's inner city and low mammography rates within that band. There was substantial geographic clustering of study variables.
CONCLUSIONS: We found marked variation in mammography rates by area, with the lowest rates associated with low income and high immigration. Spatial patterns identified areas with low mammography and low physician visit rates appropriate for outreach and public education interventions. We also identified areas with low mammography and high physician visit rates appropriate for interventions targeted at physicians.

Glouberman,S.; Gemar,M.; Campsie,P.; Miller,G.; Armstrong,J.; Newman,C.; Siotis,A.; Groff,P. (2006)
A framework for improving health in cities: a discussion paper

Journal of Urban Health 83(2): 325-338

Subject: general, methodology; complexity theory, systems, healthy communities approach
Location: Canadian
Keywords: Attitude to Health; Community Health Planning;Health Policy;Healthy People Programs;Humans;Residence Characteristics;Social Environment;Socioeconomic Factors;Urban Health

Abstract or Excerpt:
This paper considers health in cities from the perspective of complex adaptive systems. This approach has a number of important implications for intervention that do not emerge in traditional accounts of cities and health. The paper reviews various accounts of the nature of cities and of health as well as the traditional urban health and Healthy Cities movements. It then provides a framework for intervention and tests it against an actual case study. It concludes that a complex adaptive systems framework opens up fresh possibilities for improving health in urban contexts.

Goodell, Sarah and Claudia H. Williams (2007)
The built environment and physical activity: What is the relationship? Policy Brief No 11

Subject: physical activity
Location: US

Abstract or Excerpt:
[from "Summary of Key Findings"}
> Many cross-sectional studies show that certain built environment features are associated with activity. These features include: proximity to destinations, sidewalks, aesthetics, access to parks and open spaces and the “walkability” of the community.
> The current body of evidence is relatively weak in showing that changes to the built environment will promote activity. Many studies show an association between the two factors, but few studies are able to show that changes to the built environment will directly lead to improvements in activity.
> Many communities are undertaking efforts to improve the built environment. These efforts provide important research opportunities to examine the impact of built environment changes on activity.
Also see companion report available at www.policysynthesis.org

Gordon-Larsen P, Nelson MC, Page P, and Popkin, BM (2006)
Inequality in the built environment underlies key health disparities in physical activity and obesity

Pediatrics 117(2): 417-426

Subject: physical activity, social justice
Location: US
Keywords: environment, health disparities, adolescence, environmental health, population-based studies

Abstract or Excerpt:
CONTEXT Environmental factors are suggested to play a major role in physical activity (PA) and other obesity-related behaviors, yet there is no national research on the relationship between disparity in access to recreational facilities and additional impact on PA and overweight patterns in US adolescents.

OBJECTIVE In a nationally representative cohort, we sought to assess the geographic and social distribution of PA facilities and how disparity in access might underlie population-level PA and overweight patterns.

DESIGN, SETTING, AND PARTICIPANTS Residential locations of US adolescents in wave I (1994–1995) of the National Longitudinal Study of Adolescent Health (N = 20745) were geocoded, and a 8.05-km buffer around each residence was drawn (N = 42857 census-block groups [19% of US block groups]). PA facilities, measured by national databases and satellite data, were linked with Geographic Information Systems technology to each respondent. Logistic-regression analyses tested the relationship of PA-related facilities with block-group socioeconomic status (SES) (at the community level) and the subsequent association of facilities with overweight and PA (at the individual level), controlling for population density.

MAIN OUTCOME MEASURES Outcome measures were overweight (BMI ≥ 95th percentile of the Centers for Disease Control and Prevention/National Center for Health Statistics growth curves) and achievement of ≥5 bouts per week of moderate-vigorous PA.

RESULTS Higher-SES block groups had a significantly greater relative odds of having 1 or more facilities. Low-SES and high-minority block groups were less likely to have facilities. Relative to zero facilities per block group, an increasing number of facilities was associated with decreased overweight and increased relative odds of achieving ≥5 bouts per week of moderate-vigorous PA.

CONCLUSIONS Lower-SES and high-minority block groups had reduced access to facilities, which in turn was associated with decreased PA and increased overweight. Inequality in availability of PA facilities may contribute to ethnic and SES disparities in PA and overweight patterns.

Greenberg,M.; Mayer,H.;Miller,K. T.;Hordon,R.;Knee,D. (2003)
Reestablishing public health and land use planning to protect public water supplies

American Journal of Public Health 93(9): 1522-1526

Subject: other, planning; water pollution, development design
Location: US (NJ)
Keywords: Benchmarking; Community Health Planning/standards;Environmental Monitoring;Geographic Information Systems;Housing/standards/statistics & numerical data;Humans;New Jersey;Population Density;Public Health;Residence Characteristics;Rural Health;Social Planning;Urban Health;Urbanization;Water Pollutants/analysis;Water Pollution/analysis/prevention & control;Water Supply/analysis/standards

Abstract or Excerpt:
OBJECTIVES: This study measured the extent to which land use, design, and engineering practices could reduce contamination of major public water supplies.
METHODS: Key parcels of land were identified in New Jersey, and the potential uncontrolled loading of contaminants was estimated with the US Environmental Protection Agency's Long-Term Hydrologic Impact Assessment model for a variety of land use, design, and engineering scenarios.
RESULTS: High-density per-acre development and engineering controls, along with housing and light commercial activity near main railroads, would substantially reduce runoff.
CONCLUSIONS: In New Jersey, government and purveyor action is being taken as a result of, and in support of, these findings.

Groenewegen,P. P.; van den Berg,A. E.;de Vries,S.;Verheij,R. A. (2006)
Vitamin G: effects of green space on health, well-being, and social safety

BMC Public Health 6: 149

Subject: other; green space, well-being
Location: Non-Canadian
Keywords: Attention; City Planning;Conservation of Natural Resources;Environment Design;Environmental Health/organization & administration;Fatigue/prevention & control/psychology;Holistic Health;Humans;Mental Health;Netherlands;Plants;Program Evaluation;Safety;Social Perception;Stress, Psychological/prevention & control;Trees;Urban Health/statistics & numerical data

Abstract or Excerpt:
BACKGROUND: Looking out on and being in the green elements of the landscape around us seem to affect health, well-being and feelings of social safety. This article discusses the design of a research program on the effects of green space in the living environment on health, well-being and social safety.
METHODS/DESIGN: The program consists of three projects at three different scales: at a macro scale using data on the Netherlands as a whole, at an intermediate scale looking into the specific effect of green space in the urban environment, and at micro scale investigating the effects of allotment gardens. The projects are observational studies, combining existing data on land use and health interview survey data, and collecting new data through questionnaires and interviews. Multilevel analysis and GIS techniques will be used to analyze the data.
DISCUSSION: Previous (experimental) research in environmental psychology has shown that a natural environment has a positive effect on well-being through restoration of stress and attentional fatigue. Descriptive epidemiological research has shown a positive relationship between the amount of green space in the living environment and physical and mental health and longevity.The program has three aims. First, to document the relationship between the amount and type of green space in people's living environment and their health, well-being, and feelings of safety. Second, to investigate the mechanisms behind this relationship. Mechanisms relate to exposure (leading to stress reduction and attention restoration), healthy behavior and social integration, and selection. Third, to translate the results into policy on the crossroads of spatial planning, public health, and safety. Strong points of our program are: we study several interrelated dependent variables, in different ordinary settings (as opposed to experimental or extreme settings), focusing on different target groups, using appropriate multilevel methods.

Groft,J. N.; Hagen,B.; Miller,N. K.; Cooper,N.; Brown,S. (2005)
Adolescent health: a rural community's approach

Rural and remote health (Australia) 5(2): 366

Subject: physical activity, food access/nutrition, other; Rural adolescent health
Location: Canadian
Keywords: Adolescent; Adolescent Behavior/psychology;Adolescent Health Services/organization & administration;Alberta;Body Image;Community Health Planning/organization & administration;Exercise;Female;Health Knowledge, Attitudes, Practice;Health Services Research;Humans;Male;Needs Assessment;Questionnaires;Rural Health Services/organization & administration;Schools/organization & administration;Smoking;Street Drugs;Students/psychology

Abstract or Excerpt:
INTRODUCTION: Significant health problems encountered in adulthood often have their roots in health behaviours initiated during adolescence. In order to reverse this trend, school and health personnel, as well as parents and other community members working with high school students, need to be aware of the health-related beliefs and choices that guide the behaviours of teenagers. Although a wide variety of research has been conducted on this topic among urban adolescents, less is known about the health beliefs and behaviors of adolescents residing in rural areas, particularly in Canada. In general, rural Canadians are less healthy than their urban counterparts. Building on the knowledge and understanding of their own community, key stakeholders were invited to engage in the design and implementation of a participatory action research project aimed at understanding and improving the health of rural adolescents.
METHODS: A group of parents, teachers, students, school administrators and public health nurses engaged in a participatory action research project to better understand determinants of the health of rural adolescents at a high school in Western Canada. Group members developed and administered a health survey to 288 students from a small rural high school, in an effort to identify areas of concern and interest regarding health practices and beliefs of rural adolescents, and to take action on these identified concerns.
RESULTS: Results indicated some interesting but potentially worrying trends in this population. For example, while frequent involvement in a physical activity was noted by 75.9% of participants, close to half of the females (48%) described their body image as 'a little overweight' or 'definitely overweight', and approximately 25.8% of respondents noted that they skipped meals most of the time. Differences between the genders were apparent in several categories. For example, more girls smoked (16.2%) than boys (12.3%), and more males (55.0%) than females (41%) had tried illegal drugs. Participants indicated awareness of other health-compromising behaviours, including unsafe driving habits and high stress levels, and acknowledged

several steps they wanted to take to improve their health, as well as the barriers to taking those steps. Students identified improved nutrition, stress reduction, and increased levels of physical activity as particular important health goals. Students also recommended ways in which information and support could be provided within the school environment to enable them to achieve their health-related goals. Several activities developed in collaboration with students have incorporated the recommendations, and have spawned other activities in response to the ongoing identification of new concerns.
CONCLUSIONS: The process of including the rural community in the identification of health assets and needs from the perspective of students -- as well as the planning and implementation of appropriate strategies to address those needs -- demonstrates the strengths inherent within a small rural population. Community members' awareness of the need to create a healthy environment for youth is reflected in their willingness to participate in activities leading to improved health. Greater awareness of the health needs of rural adolescents, and of the influence of gender in some aspects of health behaviors, will help researchers to explore ways in which the unique culture of rural communities can be harnessed to help shape health-focused interventions.

Guite,H. F.; Clark,C.;Ackrill,G. (2006)
The impact of the physical and urban environment on mental well-being

Public health 120(12): 1117-1126

Subject: mental health; social, inside, outside environments
Location: UK
Keywords: Adult; Aged;Catchment Area (Health);Consumer Satisfaction/statistics & numerical data;Cross-Sectional Studies;Environment Design;Environmental Health/statistics & numerical data;Humans;London;Mental Health/statistics & numerical data;Middle Aged;Psychology, Social;Public Health/statistics & numerical data;Questionnaires;Socioeconomic Factors;Urban Health/statistics & numerical data

Abstract or Excerpt:
OBJECTIVES: To examine the strength of association between physical and social factors in the built environment and mental well-being, and to determine which factors are the most important.
STUDY DESIGN: A postal survey based on a theoretical model of domains that might link the physical and urban environment with mental well-being was sent to 2696 adults aged 18 years or over, in four areas of Greenwich, London. Mental health was measured using the SF36 subscales for mental health (MH) and vitality (V). Additional household and area level data were appended for each respondent from a range of sources.
RESULTS: 1012 questionnaires were returned (38% response rate). At the univariate level significant confounders that were associated with poorer mental well-being were being female, 85+ years, unemployed or retired, on housing benefit, council tenant, two or more children, and having requested re-housing Better mental well-being was associated with being aged 65 years to 84 years (better MH and V). Within domain analysis, adjusting for each of the confounding factors, resulted in the following factors being significantly associated with being in the lowest quartile for MH score: (i) control over the internal environment (damp), (ii) design and maintenance (not liking the look of the estate/road, (iii) noise (neighbour noise), (iv) density and escape (feeling over-crowded in the home, being dissatisfied with green spaces, dissatisfied with social and entertainment facilities) being dissatisfied with community facilities (such as libraries and community centres) was only significant for vitality, (v) fear of crime and harassment (feeling unsafe to go out in the day, feeling unsafe to go out at night, agreeing that needles and syringes left lying around are a problem) (vi) social participation (not enough events to get people together, not enough places to stop and chat). When these 12 factors were entered into a single model with the significant confounders five remained significantly associated with being in the lowest quartile for MH or V: neighbour noise MH OR 2.71 [95% CI 1.48, 4.98]; feeling over-crowded in the home MH OR 2.22 [1.42, 3.48]; being dissatisfied with access to green open spaces MH OR 1.69 [1.05, 2.74]; access to community facilities V OR 1.92, [1.24, 3.00]; feeling unsafe to go out in the day MH OR 1.64 [1.02, 2.64]; V OR 1.58 [1.00, 2.49].
CONCLUSIONS: This study confirms an association between the physical environment and mental well-being across a range of domains. The most important factors that operate independently are neighbour noise, sense of over-crowding in the home and escape facilities such as green spaces and community facilities, and fear of crime. This study highlights the need to intervene on both design and social features of residential areas to promote mental well-being.

Habash,R. W.; Brodsky,L. M.; Leiss,W.; Krewski,D.; Repacholi,M. (2003)
Health risks of electromagnetic fields. Part I: Evaluation and assessment of electric and magnetic fields

Critical Reviews in Biomedical Engineering 31(3): 141-195
http://edata-center.com/journals/4b27cbfc562e21b8,1279f8172a33ead5,48fda0935b1b7699.html

Subject: environmental determinants; health risks, residential and occupational EMFexposure
Keywords: Animals; Chronic Disease/epidemiology;Electromagnetic Fields/adverse effects;Environmental Exposure/adverse effects/analysis;Humans;Neoplasms, Radiation-Induced/epidemiology;Occupational Exposure/adverse effects/analysis;Risk Assessment

Abstract or Excerpt:
Exposure to electric and magnetic fields (EMF) emanating from the generation, distribution, and utilization of electricity is widespread. The major debate in recent years has focused on the possibility that exposure to EMF may result in adverse health consequences, including the development of cancer. This article provides a review and evaluation of potential health risks associated with residential and occupational exposure to EMF. In addition to reviewing data from laboratory, epidemiology, and clinical studies, we examine exposure data from field measurement surveys and exposure guidelines that have been established for EMF. Currently, the evidence in support of an association between EMF and childhood cancer is limited, although this issue warrants further investigation. Evidence of an association between EMF exposure and adult cancers, derived largely from occupational settings, is inconsistent, precluding clear conclusions. There is little evidence of an association between EMF and noncancer health effects. Epidemiological studies of EMF and population health are limited by exposure measurement error and the lack of a clear dose/response relationship in studies suggesting possible health risks. Further research is needed to clarify the ambiguous findings from present studies and to determine if EMF exposure poses a health risk.

Habash,R. W.; Brodsky,L. M.; Leiss,W.; Krewski,D.; Repacholi,M. (2003)
Health risks of electromagnetic fields. Part II: Evaluation and assessment of radio frequency radiation

Critical Reviews in Biomedical Engineering 31(3): 197-254
http://edata-center.com/journals/4b27cbfc562e21b8,1279f8172a33ead5,48fda0935b1b7699.html

Subject: environmental determinants; RF/RFR and health
Location: Canadian?
Keywords: Animals; Chronic Disease/epidemiology;Electromagnetic Fields/adverse effects;Environmental Exposure/adverse effects/analysis;Humans;Occupational Exposure/adverse effects/analysis;Radio Waves/adverse effects;Risk Assessment

Abstract or Excerpt:
The increasing use of different radio frequency (RF)-emitting devices in residential and occupational settings has raised concerns about possible health effects of RF energy emitted by such devices. The debate about the potential risks associated with RF fields will persist with the prevalent network-connected wireless products and services targeting the marketplace for all kinds of consumer use. The aim of this article is to provide biomedical researchers with a review and critical evaluation of the current literature on acute and long-term health risks associated with RF radiation (RFR). Issues examined include safety standards for RFR; dosimetry and measurement surveys; and toxicological, epidemiological, and clinical studies of health outcomes that may be associated with RFR. Overall, the existing evidence for a causal relationship between RFR and adverse health effects is limited. Additional research is needed to clarify possible associations between RFR and biological effects noted in some studies. Particular attention should be directed toward long-term, low-level exposure to RFR.

Halpern, David. (1995)
Mental Health and the Built Environment

Subject: mental health
Location: n/a

Abstract or Excerpt:
[from the publisher's website]
This text explores the relationship between the planned or built environment and the occurrence of mental ill-health. It begins by providing a broad overview of what is known about the causes of psychopathic behaviour. It then goes on to discuss the issues that arise when attempting to identify: the impact of the environment as a source of stress; the effects that the environment can have on the quality of relationships between people; and the relationship between symbolic aspects of the

environment, the planning process and mental health. The book uses analysis and case studies drawn from the UK and US and contains example illustrations of the built environment.

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Handy,S. L.; Boarnet,M. G.;Ewing,R.;Killingsworth,R. E. (2002)
How the built environment affects physical activity: views from urban planning

American Journal of Preventive Medicine 23(2 Suppl): 64-73

Subject: physical activity, methodology
Location: Non-Canadian
Keywords: Choice Behavior; City Planning;Environment Design;Exercise;Health Behavior;Health Promotion;Humans;Leisure Activities;Physical Fitness;Residence Characteristics;Transportation;Travel;Urbanization

Abstract or Excerpt:
The link between the built environment and human behavior has long been of interest to the field of urban planning, but direct assessments of the links between the built environment and physical activity as it influences personal health are still rare in the field. Yet the concepts, theories, and methods used by urban planners provide a foundation for an emerging body of research on the relationship between the built environment and physical activity. Recent research efforts in urban planning have focused on the idea that land use and design policies can be used to increase transit use as well as walking and bicycling. The development of appropriate measures for the built environment and for travel behavior is an essential element of this research. The link between the built environment and travel behavior is then made using theoretical frameworks borrowed from economics, and in particular, the concept of travel as a derived demand. The available evidence lends itself to the argument that a combination of urban design, land use patterns, and transportation systems that promotes walking and bicycling will help create active, healthier, and more livable communities. To provide more conclusive evidence, however, researchers must address the following issues: An alternative to the derived-demand framework must be developed for walking, measures of the built environment must be refined, and more-complete data on walking must be developed. In addition, detailed data on the built environment must be spatially matched to detailed data on travel behavior.

Hanna,Kathi E.; Christine Coussens (2001)
Rebuilding the unity of health and the environment: a new vision of environmental health for the 21st Century

Washington, D.C.: National Academy Press
http://www.nap.edu/catalog.php?record_id=10044

Subject: general

Abstract or Excerpt:
[from the Summary]
This is a summary of the workshop Rebuilding the Unity of Health and the Environment: A New Vision of Environmental Health for the 21st Century. The goal of this workshop was to emphasize the connection between human health and the natural, built, and social environments. This workshop integrated talks from many fields and created a dialogue among various environmental health stakeholders. . .

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Health Canada (2002)
Health and the Environment: Critical Pathways

Subject: environmental determinants; physical, chemical determinants of public health
Location: Canadian

Abstract or Excerpt:
Health problems as a result of exposure to environmental contaminants remain a serious concern for many Canadians. This is especially true for certain populations who, because of their stage of physical development, or their living and working conditions, are at greater risk than the general population. A growing concern for many Canadians is the cumulative effect of long-term exposure to low doses of environmental contaminants.

Heart and Stroke Foundation (2007)
Is where you live harming your health?

Subject: general

Abstract or Excerpt:
no abstract

Hembree,C.; Galea,S.;Ahern,J.;Tracy,M.;Markham Piper,T.;Miller,J.;Vlahov,D.;Tardiff,K. J. (2005)
The urban built environment and overdose mortality in New York City neighborhoods

Health and place 11(2): 147-156

Subject: other
Location: Non-Canadian
Keywords: Adolescent; Adult;Chi-Square Distribution;Female;Humans;Income/statistics & numerical data;Male;Middle Aged;New York City/epidemiology;Overdose/mortality;Residence Characteristics/statistics & numerical data;Risk Factors;Social Environment;Socioeconomic Factors;Urban Health

Abstract or Excerpt:
Accidental drug overdose continues to be a substantial cause of mortality for drug users. Characteristics of the neighborhood built environment may be important determinants of the likelihood of drug overdose mortality independent of individual-level factors. Using data from the New York City Office of the Chief Medical Examiner, we conducted a multilevel case control study using data on accidental overdose deaths as cases and non-overdose accidental deaths as controls. We used archival data from the New York City Housing and Vacancy Survey and the Mayor's Office of Operations to assess characteristics of neighborhood external (e.g. dilapidation of buildings) and internal (e.g. quality of utilities in houses) built environment. Multilevel analyses were used to assess the relations between the neighborhood built environment and the likelihood of overdose death. Six out of the eight characteristics of the external environment studied and three out of the six characteristics of the internal environment studied were significantly associated with the likelihood of fatal drug overdose in multilevel models after adjusting

for individual-level (age, race, sex) and neighborhood-level (income, drug use) variables. Deterioration of the built environment, particularly the external environment, is associated with an increased likelihood of fatal accidental drug overdose. Disinvestment in social resources, psychosocial stressors, neighborhood differences in response to a witnessed overdose, and differences in vulnerability to the adverse consequences of drug use in different neighborhoods may explain the observed associations.

Higgins,M.; Douglas,M.; Muirie,J. (2005)
Can health feasibly be considered as part of the planning process in Scotland?

Environmental Impact Assessment Review 25(7-8): 723-736

Subject: planning, collaboration, interventions
Location: UK (Scot)
Keywords: health impact assessment; planning;development;strategic environmental assessment

Abstract or Excerpt:
The planning system is significant because of its capacity to determine the quality of the built environment as well as the health, well-being and quality of life of the individuals and communities therein. Development planning is especially important because of the long-term impact of the decisions. This paper was developed in response to increasing recognition amongst HIA practitioners in Scotland of the importance of planning for health. It focuses on the relationship between the planning system in Scotland, specifically the Development Planning element of it, and population health and considers how the health impact assessment (HIA) approach can facilitate and support joint working with planners. In particular, consideration is given to the potential impact of the introduction of Strategic Environmental Assessment (SEA) on the linkages between health, HIA and planning.

Hirschhorn,J. S. (2004)
Zoning should promote public health

American Journal of Health Promotion 18(3): 258-260

Subject: planning; zoning as tool for health promotion
Location: Non-Canadian/na
Keywords: Environment Design/legislation & jurisprudence; Exercise;Health Promotion;Humans;Public Health;United States

Abstract or Excerpt:
Legally, governments use their police powers to protect public health, safety, and welfare through zoning. This paper presents a case for revisiting zoning on the basis of increasing evidence that certain types of community design promote public health, as opposed to the dominant pattern of sprawl development, which does not. Zoning, and the land use planning linked to it, that prohibits or disfavors health-promoting community designs contradicts the inherent public policy goal on which it is based. If there is a paradigm shift underway, from traditional sprawl to health-promoting community designs, then health professionals and others should understand why zoning must be reassessed.

Humpel, N., Marshall, A. L., Leslie, E., Bauman, A., & Owen, N. (2004)
Changes in neighborhood walking are related to changes in perceptions of environmental attributes

Annals of Behavioral Medicine 27(1): 60-67

Subject: physical activity, perceptions

Abstract or Excerpt:
BACKGROUND: Several studies have found significant cross-sectional associations of perceived environmental attributes with physical activity behaviors. Prospective relations with environmental factors have been examined for vigorous activity, but not for the moderate-intensity activities that environmental and policy initiatives are being designed to influence.
PURPOSE: To examine prospective associations of changes in perceptions of local environmental attributes with changes in neighborhood walking.
METHODS: Baseline and 10-week follow-up telephone interviews with 512 adults (49% men).
RESULTS: Men who reported positive changes in aesthetics and convenience were twice as likely to increase their walking.

Women who reported positive changes in convenience were more than twice as likely to have increased their walking. There were contrasting findings for men and women who reported traffic as less of a problem: Men were 61% less likely to have increased walking; however, women were 76% more likely to have done so.
CONCLUSIONS: Further studies are needed to determine the possibly causal nature of such environment-behavior relations and to elucidate relevant gender differences. Such evidence will provide underpinnings for public health initiatives to increase participation in physical activity.

Humpel, N., Owen, N., Iverson, D., Leslie, E., & Bauman, A. (2004)
Perceived environment attributes, residential location, and walking for particular purposes.

American Journal of Preventive Medicine 26(2): 119-125

Subject: physical activity, perceptions

Abstract or Excerpt:
BACKGROUND: Identifying environmental factors that can influence physical activity is a public health priority. We examined associations of perceived environmental attributes with walking for four different purposes: general neighborhood walking, walking for exercise, walking for pleasure, and walking to get to and from places.
METHODS: Participants (n =399; 57% women) were surveyed by mail. They reported place of residence, walking behaviors, and perceptions of neighborhood environmental attributes.
RESULTS: Men with the most positive perceptions of neighborhood "aesthetics" were significantly more likely (odds ratio [OR]=7.4) to be in the highest category of neighborhood walking. Men who perceived the weather as not inhibiting their walking were much more likely (OR=4.7) to be high exercise walkers. Women who perceived the weather as not inhibiting their walking were significantly more likely to be high neighborhood walkers (OR=3.8) and those with moderate perceptions of "accessibility" were much more likely to do more walking for pleasure (OR=3.5).
CONCLUSIONS: Different environmental attributes were associated with different types of walking and these differed between men and women. Approaches to increasing physical activity might usefully focus on those attributes of the local environment that might influence particular subsets of walking behavior.

Institute of Medicine of the National Academies. (2005)
Preventing Childhood Obesity: Health in the Balance

Subject: general; obesity

Abstract or Excerpt:
Table of Contents

Israel, Barbara A., Amy J. Schulz, Lorena Estrada-Martinez, Shannon N. Zenk, Edna Viruell-Fuentes, Antonia M. Villarruel and Carmen Stokes (2006)
Engaging Urban Residents in Assessing Neighborhood Environments and Their Implications for Health

Journal of Urban Health 83(3): 523-539
http://www.springerlink.com/content/119977/?k=built+environment

Subject: methodology, social justice
Location: US
Keywords: community-based participatory research; neighborhood assessment;qualitative and quantitative methods;stress process model;HEART-DISEASE MORTALITY;CARDIOVASCULAR-DISEASE;EAST-SIDE;PSYCHOLOGICAL DISTRESS;PARTICIPATORY RESEARCH;SOCIOECONOMIC-STATUS;SOCIAL DETERMINANTS;WORKER PARTNERSHIP;MEXICAN-AMERICANS;RACIAL IDENTITY

Abstract or Excerpt:
Researchers have worked to delineate the manner in which urban environments reflect broader social processes, such as those creating racially, ethnically and economically segregated communities with vast differences in aspects of the built environment, opportunity structures, social environments, and environmental exposures. Interdisciplinary research is essential to gain an enhanced understanding of the complex relationships between these stressors and protective factors in urban environments and health. The purpose of this study was to examine the ways that multiple factors may intersect to influence the social and physical context and health within three areas of Detroit, Michigan. We describe the study design and results from seven focus groups conducted by the Healthy Environments Partnership (HEP) and how the results informed the development of a survey questionnaire and environmental audit tool. The findings from the stress process exercise used in the focus groups described here validated the relevance of a number of existing concepts and measures, suggested modifications of others, and evoked several new concepts and measures that may not have been captured without this process, all of which were subsequently included in the survey and environmental audit conducted by HER Including both qualitative and quantitative methods can enrich research and maximize the extent to which research questions being asked and hypotheses being tested are driven by the experiences of residents themselves, which can enhance our efforts to identify strategies to improve the physical and social environments of urban areas and, in so doing, reduce inequities in health

Ivey,J. L.; de Loe,R. C.; Kreutzwiser,R. D. (2006)
Planning for source water protection in Ontario

Applied Geography 26(39145): 192-209
http://www.sciencedirect.com/science?_ob=MImg&_imagekey=B6V7K-4M51FG9-1-3&_cdi=5845&_user=1067412&_orig=search&_coverDate=10%2F31%2F2006&_sk=999739996&view=c&wchp=dGLbVlz-zSkzV&md5=9d778ac9811b09f2eac6741fc5e8e412&ie=/sdarticle.pdf

Subject: planning; policy assessment as constraining or facilitating water protection
Location: Canadian
Keywords: source water protection; land use planning;municipal drinking water;institutional arrangements;Ontario;GROUNDWATER PROTECTION;MANAGEMENT;CAPACITY;CHALLENGES;CANADA;ISSUES;HEALTH;POLICY

Abstract or Excerpt:
Ontario began developing a drinking water source protection planning process in 2000, after a rural community's water supply was contaminated by pathogens from agricultural runoff. An expert committee report has recommended legislating a new source protection "sphere of jurisdiction" for municipalities; however, no specific new municipal tools or authorities have been proposed as yet. This paper reports findings from an evaluation of the extent to which existing institutional arrangements for land use planning and water management facilitate or constrain source protection by municipalities. A case study of the Regional Municipality of Waterloo suggests there is the potential to link land use planning more strongly to water management through creative use of existing tools, forgoing the need for major institutional changes.

Jackson, Richard J.; Chris Kochtitzky (2001)
Creating a healthy environment: the impact of the built environment on public health

Subject: general

Abstract or Excerpt:
[from the Introduction]
When people consider factors adversely affecting their health, they generally focus on influences, such as poor diet or the need for more exercise. Rarely do they consider less traditional factors, such as housing characteristics, land-use patterns, transportation choices, or architectural or urban-design decisions, as potential health hazards. However, when these factors are ignored or poorly executed, the ecosystems in our communities collapse, people suffer the consequences. We have always known that a 2-hour commute to work each day on America's freeways is not a pleasant experience; it is also becoming clear that it is an unhealthy experience. We see evidence every day that Americans exercise less often and suffer higher levels of stress than they did in the past. Yet we often fail to make the connection between these all-too-common facets of everyday life and how unhealthy we are. As America increasingly becomes a nation that permits and even encourages thoughtless development and unmanaged growth, the impact of these factors grows clearer, and we ignore them at our peril. . .
[I]n this monograph, we focus mainly on the following:
- The relation of land-use decisions to air quality and respiratory health;
- The built environment (including all manmade physical components of human settlements such as buildings, streets, open spaces, and infrastructure) in terms of whether it promotes or discourages physical activity;
- The impact of urban design on the number of pedestrian injuries and deaths, particularly among children;
- The choices communities make about the built environment that improve mobility and the quality of life for their elderly and disabled residents; and
- The ways that various land-use decisions affect community water quality, sanitation, and the incidence of disease outbreaks.

Jackson,R. J. (2003)
The impact of the built environment on health: an emerging field

American Journal of Public Health 93(9): 1382-1384

Subject: general
Location: n/a
Keywords: Automobiles; City Planning;Community Health Planning;Environment Design;Healthy People Programs;Humans;Public Health;Social Change;Transportation;United States

Abstract or Excerpt:
no abstract (editorial)

Jackson,Richard; Harp,Toni; Wright,Tom (2002)
Land use planning: why public health must be involved

Journal of law, medicine and ethics 30(3 Suppl): 70-74

Subject: interventions
Location: n/a/US
Keywords: Community Health Planning: legislation & jurisprudence; Connecticut;Conservation of Natural Resources: legislation & jurisprudence;Environmental Health: legislation & jurisprudence;Health Promotion;Humans;Interinstitutional Relations;New Jersey;New York City;Public Health: legislation & jurisprudence;Public Health Administration: legislation & jurisprudence;United States

Abstract or Excerpt:
The way that land is used has a direct impact on public health. Legislators and other with responsibility for land use planning need to be aware of the public health connection and need to promote effective land use planning as a means of improving the public's health. This article discusses the public health/land use connection and the role that local, state, and national legislators can play in promoting land use planning that supports the public's health. It also provides an example of a collaborative local land use initiative aimed at addressing a public health problem in a city and at providing a model that other locations can use in making land use conform to sound public health policy. Finally, it provides an overview of initiatives to

promote healthy land use in the New York metropolitan area by Regional Plan Association, a private non-profit planning organization.

Jago, R., Baranowski, T., Zakeri, I., & Harris,M. (2005)
Observed environmental features and the physical activity of adolescent males

American Journal of Preventive Medicine 29(2): 98-104

Subject: physical activity

Abstract or Excerpt:
Background: It has recently been reported that adult physical activity was associated with environmental features. The aim of this study was to determine whether environmental features were associated with physical activity among male adolescents.
Methods: Physical activity levels of 210 Boy Scouts were assessed for 3 days by accelerometry during 2003 and 2004. Mean minutes of sedentary, light, and moderate-to-vigorous intensity activity were calculated. Environmental features within a 400-meter radius of each participant's home address were assessed by direct observation using the Systematic Pedestrian and Cycling Environmental Scan (SPACES) instrument. Principal component factor analysis reduced the 35 SPACES items to four factors. Hierarchical and spatial regressions were conducted with physical activity as the dependent variable and environmental factors, age, body mass index, and ethnicity as independent variables.
Results: Four factors were obtained: walking/cycling ease, tidiness, sidewalk characteristics, and street access and condition. Sidewalk characteristics were negatively associated with minutes of sedentary behavior while age was positively associated. Sidewalk characteristics were positively associated with minutes of light-intensity physical activity and age negatively associated. No environmental factor correlated with moderate-to-vigorous physical activity.
Conclusions: A sidewalk characteristics factor, composed of sidewalk location, sidewalk material, presence of streetlights, and number and height of trees, was positively associated with light-intensity physical activity among male adolescents.

Jerrett M, Buzzelli M, Burnett R,De Luca P. (2005)
Air pollution, social confounders and mortality in small areas of Hamilton, Canada.

Social science and medicine 60: 2845-2863

Subject: air quality, social justice; pollution and mortality
Location: Canadian
Keywords: Air pollution; Healtheffects; Lifestyle; Socioeconomic factors; Geostatistics; Canada

Abstract or Excerpt:
Scientists and policymakers have shown growing interest in the health effects of chronic air pollution exposure. In this study, we use geostatistical techniques in combination with small-area data to address a central research question: ‘‘Does chronic exposure to particulate air pollution significantly associate with mortality when the effects of other social, demographic, and lifestyle confounders are taken into account?’’ Our analysis relies on age-standardized mortality ratios for census tracts (CTs) of Hamilton (average population of 3419 persons), social and demographic data from the 1991 Census of Canada, smoking variables extracted from secondary surveys, and total suspended particulate (TSP) data from 23 monitoring stations operated by the Ministry of the Environment. Air pollution data are interpolated with a geostatistical procedure known as ‘‘kriging’’. This method translates fixed-site pollution monitoring observations into a continuous surface, which was overlaid onto the population-weighted centroids of the CTs. Our results show substantively large and statistically significant health effects for women and men. Evaluated over the interquartile range of the data, we found the relative risk of premature mortality for TSP exposure to be 1.19 (95% CI: 1.13–1.26) for women and 1.30 (95% CI: 1.24–1.37) for men. We also tested associations with cardio-respiratory and cancer mortality. We found positive, significant associations between particulate exposure and these causes of death in most models. Inclusion of socioeconomic, demographic, and lifestyle reduced but did not eliminate the health effects of exposure to particulate air pollution. Overall our results suggest that intra-urban variations in particulate air pollution significantly associate withpremature, all-cause, cardio-respiratory, and cancer mortality in small areas of Hamilton.

Jerrett, M., R. Burnett, M.S. Goldberg, M. Sears, D. Krewski, R. Catalan, P. Kanaroglou, N. Finkelstein,C.Giovis. (2003)
Spatial analysis for environmental health research: concepts, methods and examples.

Journal of toxicology and environmental health: Part A 66(16): 1735,1783-1810

Subject: methodology
Location: Canadian

Abstract or Excerpt:
Spatial analysis can illuminate environmental health research in two ways. First, spatial analysis may suggest possible causal factors in disease pathogenesis. Association between disease and place may imply that the population living there either possesses inherent traits that make it more susceptible to disease or experiences elevated exposure to a risk factor such as air pollution. Second, spatial analysis can help identify how populations adapt and relate to their environment. This knowledge may lead to improved understanding of how people perceive and avoid health risks of environmental origin. The potential for spatial analysis to uncover these aspects of the association between health and the environment is limited by data and methodological problems that are discussed in the article. To familiarize researchers and policymakers with this increasingly important approach, we review spatial-analytic methods under three headings: visualization, exploration, and modeling. We use illustrative examples to assist readers in understanding the strengths and weaknesses of specific methods.

Jerrett,M.,M.Finkelstein. (2005)
The geography of risk in cohort studies linking air pollution exposure to mortality.

Journal of Toxicology and Environmental Health, Part A, 68(13-14): 1207-1242
http://www.informaworld.com/smpp/content~content=a714036633?words=geography%7crisk%7ccohort%7cstudies%7clinking%7cair%7cpollution%7cexposure%7cmortality&hash=761573230

Subject: air quality, methodology; research and geographics of risk as important
Location: Canadian

Abstract or Excerpt:
This article addresses the question of how to incorporate spatial processes into the assessment of chronic health effects from air pollution exposure. An analytic framework is developed around three related concepts: (1) the geography of susceptibility; (2) the geography of exposure; and (3) points of intersection between these two, termed the geography of risk. The article discusses how each concept encompasses many lower level issues such as meteorological dispersion of pollutants, time-space activity patterns, and population distributions of susceptible individuals in time and space. A key premise is that researchers should target studies with high degrees of overlap between geographies of exposure and susceptibility. Instances where the overlap remains incomplete, or systematically biased, usually produce attenuated or unreliable risk estimates, and some of this discordance may find expression in spatially autocorrelated residuals.

Johnson, Sherrill (2006)
Designing against falls: The impact of the built environment on older adult falls

Kaplan,M. S.; Newsom,J. T.; McFarland,B. H.; Lu,L. (2001)
Demographic and psychosocial correlates of physical activity in late life

American Journal of Preventive Medicine 21(4): 306-312

Subject: physical activity; demographic and psychosocial correlates
Location: Canadian
Keywords: Aged; Canada;Educational Status;Exercise;Female;Geriatrics;Health Surveys;Humans;Leisure Activities;Logistic Models;Male;Marital Status;Population Surveillance;Social Support

Abstract or Excerpt:
INTRODUCTION: According to the Centers for Disease Control and Prevention and the World Health Organization, increasing physical activity may help prolong health and preserve the quality of life in late adulthood. Physical activity has taken center stage as the behavior most likely to alter health. However, there is little recent population-wide information about the demographic and psychosocial correlates of physical activity in the elderly population. The purpose of the study was to identify the factors associated with older adults' frequency of physical activity. The study may have implications for preventive interventions.
METHODS: Data for 12,611 community-dwelling people aged > or = 65 from the 1996-1997 Canadian National Population Health Survey were examined. Predictors of frequent versus infrequent self-reported physical activity lasting > 15 minutes were examined using logistic regression analyses. The predictor variables included geographic location, psychological distress (Generalized Distress Scale), demographic factors (age, gender, educational level, and marital status), perceived social support, chronic medical conditions, physical limitations due to injury, functional limitations, smoking behavior, and body mass index (BMI).
RESULTS: Gender (male); younger age; higher levels of education; being unmarried; absence of chronic conditions, injuries, and functional limitations; lower BMI; social support (females); nonsmoking; region; and lower levels of psychological distress were associated with frequent physical activity in late life. Older adults in western Canadian provinces were more active than those in eastern provinces.
CONCLUSIONS: The results will be useful for the design of interventions aimed at improving older adults' health behavior and other health and functional outcomes, especially for subgroups in particular need. Recommendations for further longitudinal research are presented.

Keller-Olaman,S.; K.Wilson (n.d.)
Neighbourhood & Health: Environmental Exposure and Health Status in Hamilton, Ontario

Subject: air quality, social justice; differentialed exposure through exclusion
Location: Canadian

Abstract or Excerpt:
no abstract (poster)

Keller-Olaman,Susan (2004)
Exploring Contributions of Individual and Neighbourhood Characteristics to Health and Lifestyles in Hamilton, Ontario

Subject: social justice; neighbourhood level analysis, double jeaopardy
Location: Canadian

Abstract or Excerpt:
[excerpt from "lessons learned"]
Based on our results, we conclude that reduced health status and unhealthy lifestyle behaviours are associated with disadvantaged neighbourhoods in Hamilton.

This supports our suggestion regarding the larger study--that data collected at the national level does not always provide a picture of what may occur within a city. Local-level variations best identify the barriers to and facilitators of healthy lifestyles and improved health status faced by local populations.

Based on the present analysis, having friends and the ability to cope may be vital for better self-rated health, and neighbourhood and local features were not important. However, trying to link local features to everyday life is difficult. For a neighbourhood analysis, we need to specify boundaries. We realise, however, that people may not necessarily purchase fast food nor exercise solely in their neighbourhood. Despite this, we did construct a reliable and valid indicator of unhealthy features.

We observed that individual characteristics and social and physical environments are of varying importance for the lifestyle and wellbeing measures.

Kelly-Schwartz,A. C.; Stockard,J.; Doyle,S.; Schlossberg,M. (2004)
Is sprawl unhealthy? A multilevel analysis of the relationship of metropolitan sprawl to the health of individuals

Journal of Planning Education and Research 24(2): 184-196

Subject: physical activity; built environment, walking, fitness, and health
Location: US
Keywords: health; sprawl;physical activity;obesity;sprawl-health chain;PHYSICAL-ACTIVITY;BUILT ENVIRONMENT;PUBLIC-HEALTH;URBAN SPRAWL;LIFE-STYLE;WALKING;WOMEN

Abstract or Excerpt:
This article addresses the contention that urban sprawl influences general health through physical activity, obesity, and the presence of chronic disease. Data on individual health is obtained from the National Health and Nutrition Examination Survey III study in 29 primary metropolitan statistical areas, and data on sprawl are front Ewing et al. Using hierarchical modeling, the results indicate that even with strong controls for individual variables' residents of areas with more highly accessible and gridded street networks have higher health ratings. At the same time, residents of more densely populated urban areas have lower rated health, net of individual-level measures. Measures of sprawl have no significant relationship to frequency of walking, body mass index, or diagnosis of various chronic diseases. However, among those with chronic conditions, including hypertension, diabetes, and lung disease, those who live in areas with more highly connected street networks have higher rated health.

Kiefer,L.; Frank,J.;Di Ruggiero,E.;Dobbins,M.;Manuel,D.;Gully,P. R.;Mowat,D. (2005)
Fostering evidence-based decision-making in Canada: examining the need for a Canadian population and public health evidence centre and research network

Canadian journal of public health 96(3): I1-I39

Subject: knowledge transfer/sharing; information and knowledge sharing
Location: Canadian
Keywords: Canada; Cooperative Behavior;Decision Making;Evidence-Based Medicine/organization & administration;Health Services Research/organization & administration;Humans;Information Dissemination;Interprofessional Relations;Interviews;Needs Assessment;Policy Making;Program Evaluation;Public Health Practice

King, Wendy, Jennifer Brach, Steven Belle, Richard Killingsworth, Mark Fenton, Andrea Kriska (2003)
The Relationship between Convenience of Destinations and Walking Levels in Older Women

American Journal of Health Promotion 18(1)

Subject: physical activity, perceptions
Location: US
Keywords: Aged; Aged, 80 and over; Demography; Environment Design; Female; Health Behavior; Health Status; Humans; Leisure Activities; Pennsylvania; Questionnaires; Residence Characteristics; Walking/statistics & numerical data; Women's Health

Abstract or Excerpt:
PURPOSE: To examine the relationship between physical activity and (1) convenience of destinations, measured by whether destinations (such as a park, trail, businesses, and services) are within walking distance of the home, and (2) participants' perception of the quality of their neighborhood surroundings for walking, captured with a global neighborhood "walkability" rating. DESIGN: Cross-sectional analysis of data obtained in 1999.
SETTING: Community in southwest Pennsylvania.
SUBJECTS: Older Caucasian women (n = 149, mean age = 74.2 years). Response rate = 79%.
MEASURES: Walking levels, leisure-time physical activity, and features of the neighborhood environment were measured with interviewer-administered questionnaires. Physical activity was also measured objectively with a pedometer.
RESULTS: Living within walking distance (defined as within a 20-minute walk of home) of a park; biking or walking trail; or department, discount, or hardware store was related to higher pedometer readings ($p < .01$). In addition, there was a positive trend between the sum of destinations within walking distance of home and activity levels measured by pedometer and questionnaire ($p < .01$). There was also a positive trend between participants' neighborhood "walkability" rating and activity levels measured by pedometer and questionnaire ($p < .01$).
CONCLUSION: These findings suggest that the ability to make utilitarian walking trips from home and the perception of having favorable neighborhood surroundings for walking are associated with increased physical activity levels in older women.

Kirtland, K. A., Porter, D. E., Addy, C. L., Neet, M. J., Williams, J. E., & Sharpe, P. A. et al. (2003)
Environmental measures of physical activity supports: Perception versus reality.

American Journal of Preventive Medicine 24(4): 323-331

Subject: physical activity, perceptions

Abstract or Excerpt:
BACKGROUND: Perceptions of the environment and physical activity have been associated using survey methods, yet little is known about the validity of environmental surveys. In this study, perceptions of the environment at neighborhood and community levels were assessed (1) to determine validity by comparing respondent perceptions to objective measures and (2) to determine test-retest reliability of the survey.
METHODS: A telephone survey was administered to a stratified sample of Sumter County, South Carolina adults. Respondents' home addresses were mapped using a geographic information system (GIS) (n =1112). As an indicator of validity, kappa statistics were used to measure agreement between perceptions and objective measures identified at neighborhood and community levels using GIS. A second survey in an independent sample (n=408) assessed test-retest reliability.
RESULTS: When assessing perceptions of environmental and physical activity in a defined geographic area, validity and reliability for neighborhood survey items were kappa= -0.02 to 0.37 and rho=0.42 to 0.74, and for community survey items were kappa= -0.07 to 0.25 and rho=0.28 to 0.56.
CONCLUSIONS: Although causality between perception of access and safety and actual physical activity level cannot be assumed, those meeting national physical activity guidelines or reporting some physical activity demonstrated greatest agreement with access to recreation facilities, while those not meeting the guidelines demonstrated greater agreement with safety of recreation facilities. Factors such as distance and behavior may explain differences in perceptions at neighborhood and community levels. Using local environments with short distances in survey methods improves validity and reliability of results.

Kochtitzky,C. S.; Frumkin,H.; Rodriguez,R.; Dannenberg,A. L.; Rayman,J.; Rose,K.; Gillig,R.; Kanter,T.; Centers for Disease Control and Prevention (2006)
Urban planning and public health at CDC

Morbidity and mortality weekly report 55(Suppl 2): 34-38

Subject: planning
Location: Non-Canadian
Keywords: Centers for Disease Control and Prevention (U.S.)/history/trends; City Planning/history/trends;History, 20th Century;History, 21st Century;Humans;Public Health/history/trends;United States

Abstract or Excerpt:
Urban planning, also called city and regional planning, is a multidisciplinary field in which professionals work to improve the welfare of persons and communities by creating more convenient, equitable, healthful, efficient, and attractive places now and for the future. The centerpiece of urban planning activities is a "master plan," which can take many forms, including comprehensive plans, neighborhood plans, community action plans, regulatory and incentive strategies, economic development plans, and disaster preparedness plans. Traditionally, these plans include assessing and planning for community needs in some or all of the following areas: transportation, housing, commercial/office buildings, natural resource utilization, environmental protection, and health-care infrastructure. Urban planning and public health share common missions and perspectives. Both aim to improve human well-being, emphasize needs assessment and service delivery, manage complex social systems, focus at the population level, and rely on community-based participatory methods. Both fields focus on the needs of vulnerable populations. Throughout their development, both fields have broadened their perspectives. Initially, public health most often used a biomedical model (examining normal/abnormal functioning of the human organism), and urban planning often relied on a geographic model (analysis of human needs or interactions in a spatial context). However, both fields have expanded their tools and perspectives, in part because of the influence of the other. Urban planning and public health have been intertwined for most of their histories. In 1854, British physician John Snow used geographic mapping of an outbreak of cholera in London to identify a public water pump as the outbreak's source. Geographic analysis is a key planning tool shared by urban planning and public health. In the mid-1800s, planners such as Frederick Law Olmsted bridged the gap between the fields by advancing the concept that community design contributes to physical and mental health; serving as President Lincoln's U.S. Sanitary Commission Secretary; and designing hundreds of places, including New York's Central Park. By 1872, the disciplines were so aligned that two of the seven founders of the American Public Health Association were urban designers (an architect and a housing specialist). In 1926, the U.S. Supreme Court, in validating zoning and land-use law as a legal government authority in Village of Euclid v. Ambler Realty, cited the protection of public health as part of its justification. Other connections have included 1) pioneering urbanist Jane Jacobs, who during the 1960s, called for community design that offered safe and convenient options for walking, biking, and impromptu social interaction; and 2) the Healthy Cities movement, which began in Europe and the United States during the 1980s and now includes projects in approximately 1,000 cities that in various ways highlight the role of health as much more than the presence of medical care.

Kushner,James A. (2007)
Healthy cities: the intersection of urban planning, law and health

Subject: general, planning
Location: US
Keywords: City planning and redevelopment law--United States; Zoning law--United States;Transportation--Health aspects--United States;Housing and health--United States;City planning--Health aspects--United States

Abstract or Excerpt:
Book Description
Healthy Cities looks at the design of communities in the United States as mandated by law and how that design affects the delivery and cost of health care. This book recommends modifications to reduce health care costs, assure an adequate health infrastructure, and increase disease and trauma prevention through improved urban planning mechanisms. Healthy Cities is the first book in the fields of public health and urban planning to explore legal mechanisms to integrate health and urban design policy. American urban design contributes to obesity, air pollution, and traffic congestion. Imagine if our communities were designed for health, fitness, and convenience. Can housing and neighborhoods be designed for pleasant walks and car-free living? Can streets be tree-lined and attractive? Can pedestrians enjoy their surroundings and experience rather than being sandwiched between traffic and parking lots?

Lake,A.; Townshend,T. (2006)
Obesogenic environments: exploring the built and food environments

Journal of the Royal Society of Health 126(6): 262-267

Subject: food access/nutrition, physical activity; obesity, environmental influences
Location: Non-Canadian
Keywords: Eating/physiology/psychology; Environment Design;Exercise;Great Britain/epidemiology;Health Behavior;Humans;Life Style;Obesity/epidemiology/etiology/prevention & control;Risk Assessment;Risk Factors;Social Environment

Abstract or Excerpt:
Obesity is a significant health and social problem which has reached pandemic levels. The obesogenicity of an environment has been defined as 'the sum of influences that the surroundings, opportunities, or conditions of life have on promoting obesity in individuals or populations'. Prevention and treatment of obesity has focused on pharmacological, educational and behavioural interventions, with limited overall success. A novel and a longer-term approach would be to investigate the environments that promote high energy intake and sedentary behaviour; this has not yet been fully understood. The obesity epidemic has attracted attention at all levels, from general media interest to policy and practice from health and other professions including urban designers and planners. Shaping the environment to better support healthful decisions has the potential to be a key aspect of a successful obesity prevention intervention. Thus in order to develop effective environmental interventions, in relation to obesity, we need to understand how individuals, and different groups of individuals, interact with their environments in terms of physical activity and food intake.

LaPelle,Nancy; Luckmann,Roger;Simpson,E. Hatheway;Martin,Elaine (2006)
Identifying strategies to improve access to credible and relevant information for public health professionals: a qualitative study

BMC Public Health 6(1): 89
http://www.biomedcentral.com/1471-2458/6/89

Subject: knowledge transfer/sharing; communication and information on PH
Location: US

Abstract or Excerpt:
BACKGROUND:Movement towards evidence-based practices in many fields suggests that public health (PH) challenges may be better addressed if credible information about health risks and effective PH practices is readily available. However, research has shown that many PH information needs are unmet. In addition to reviewing relevant literature, this study performed a comprehensive review of existing information resources and collected data from two representative PH groups, focusing on identifying current practices, expressed information needs, and ideal systems for information access.

METHODS:Nineteen individual interviews were conducted among employees of two domains in a state health department – communicable disease control and community health promotion. Subsequent focus groups gathered additional data on preferences for methods of information access and delivery as well as information format and content. Qualitative methods were used to identify themes in the interview and focus group transcripts.

RESULTS:Informants expressed similar needs for improved information access including single portal access with a good search engine; automatic notification regarding newly available information; access to best practice information in many areas of interest that extend beyond biomedical subject matter; improved access to grey literature as well as to more systematic reviews, summaries, and full-text articles; better methods for indexing, filtering, and searching for information; and effective ways to archive information accessed. Informants expressed a preference for improving systems with which they were already familiar such as PubMed and listservs rather than introducing new systems of information organization and delivery. A hypothetical ideal model for information organization and delivery was developed based on informants' stated information needs and preferred means of delivery. Features of the model were endorsed by the subjects who reviewed it.

CONCLUSION:Many critical information needs of PH practitioners are not being met efficiently or at all. We propose a dual strategy of: 1) promoting incremental improvements in existing information delivery systems based on the expressed preferences of the PH users of the systems and 2) the concurrent development and rigorous evaluation of new models of information organization and delivery that draw on successful resources already operating to deliver information to clinical medical practitioners.

Lee,C.; Moudon,A. V. (2004)
Physical activity and environment research in the health field: Implications for urban and transportation planning practice and research

Journal of Planning Literature 19(2): 147-181
http://www-ca2.csa.com/ids70/browse_toc.php?&issn=0885-4122&volume=19&issue=2&db=sageurb-set-c&SID=cfb961d49d35008da69e5dfcc1508ad9

Subject: physical activity; environment behavior research, support or hinder physical activity
Location: n/a
Keywords: DESCRIPTIVE EPIDEMIOLOGY; PERCEIVED ENVIRONMENT;BUILT ENVIRONMENT;WALKING;EXERCISE;PROMOTION;ADULTS;FORM;DETERMINANTS;AUSTRALIANS

Abstract or Excerpt:
This article reviews literature from the health field investigating the characteristics of environments that support or hinder physical activity. This literature shows that physical activity is associated with objective and subjective measures of accessibility to recreational facilities and local destinations, as well as with neighborhood safety and visual quality. Walking and biking emerge as prominent forms of physical activity and occur primarily in neighborhood streets and public facilities, suggesting that building walkable and bikable communities can address health as well as transportation concerns. The studies help advance environment-behavior research related to urban and transportation planning. They identify behavioral and environmental determinants of physical activity and employ rigorous data collection methods and theoretical frameworks that are new to the planning field. The article concludes that multidisciplinary research will likely yield promising results in identifying the aspects of environments that can be modified to encourage physical activity and physically active travel.

Lee,C.; Moudon,A. V.;Courbois,J. Y. (2006)
Built environment and behavior: spatial sampling using parcel data

Annals of Epidemiology 16(5): 387-394

Subject: methodology
Location: Non-Canadian
Keywords: Bicycling; Data Collection/methods;Demography;Environment;Environment Design;Health Behavior;Humans;Sampling Studies;Walking

Abstract or Excerpt:
PURPOSE: The quality and economy of inferential research rely heavily on the sampling method. This paper addresses a methodological challenge in environment-behavior research: sampling respondents in relation to their built environmental characteristics. METHODS: A discussion of issues related to traditional neighborhood-based sampling serves to introduce a new spatial sampling strategy. Spatial sampling consists of defining conceptual population of interest, constructing spatial sample frame using parcel-level environmental data in GIS, examining the sample frame, determining the sampling design and size, and drawing the samples. An application of this method is illustrated using a recent study examining environmental correlates of walking and biking. RESULTS: Spatial sampling with parcel-level data ensures sufficient variations in and proper distributions of the environmental variables of interest, while controlling for the conditions of no interest. The use of the individual as unit of analysis offers an economic, generalizable, and easily interpretable approach to environment-behavior research, and discourages the potentially erroneous a priori definition of neighborhoods and aggregation problems. CONCLUSIONS: With its capacity to consider a broad range of detailed environmental variables, spatial sampling contributes to finding new or stronger environment-behavior associations and to the growing number of studies using the social ecologic model.

Lejano,R. P.; Smith,C. S. (2006)
Incompatible land uses and the topology of cumulative risk

Environmental management 37(2): 230-246

Subject: air quality, social justice; air pollution, risk, neighbourhoods
Location: US (CA)
Keywords: Air Pollutants/analysis/toxicity; Air Pollution/adverse effects;Benzene/analysis/toxicity;Environmental Monitoring/methods;Industrial Waste;Los Angeles;Models, Theoretical;Risk Assessment;Toluene/analysis/toxicity;Urban Health;Vehicle Emissions

Abstract or Excerpt:
The extensive literature on environmental justice has, by now, well defined the essential ingredients of cumulative risk, namely, incompatible land uses and vulnerability. Most problematic is the case when risk is produced by a large aggregation of small sources of air toxics. In this article, we test these notions in an area of Southern California, Southeast Los Angeles (SELA), which has come to be known as Asthmatown. Developing a rapid risk mapping protocol, we scan the neighborhood for small potential sources of air toxics and find, literally, hundreds of small point sources within a 2-mile radius, interspersed with residences. We also map the estimated cancer risks and noncancer hazard indices across the landscape. We find that, indeed, such large aggregations of even small, nondominant sources of air toxics can produce markedly elevated levels of risk. In this study, the risk profiles show additional cancer risks of up to 800 in a million and noncancer hazard indices of up to 200 in SELA due to the agglomeration of small point sources. This is significant (for example, estimates of the average regional point-source-related cancer risk range from 125 to 200 in a million). Most importantly, if we were to talk about the risk contour as if they were geological structures, we would observe not only a handful of distinct peaks, but a general "mountain range" running all throughout the study area, which underscores the ubiquity of risk in SELA. Just as cumulative risk has deeply embedded itself into the fabric of the place, so, too, must intervention seek to embed strategies into the institutions and practices of SELA. This has implications for advocacy, as seen in a recently initiated participatory action research project aimed at building health research capacities into the community in keeping with an ethic of care.

Leslie,E.; Coffee,N.; Frank,L.; Owen,N.; Bauman,A.; Hugo,G. (2007)
Walkability of local communities: using geographic information systems to objectively assess relevant environmental attributes

Health and place 13(1): 111-122

Subject: physical activity, methodology; GIS, walkability, measurement
Location: Australia
Keywords: Adult; Aged;Australia;Environment Design;Geographic Information Systems;Health Promotion;Humans;Middle Aged;Motor Activity;Public Facilities;Public Policy;Research Design;Residence Characteristics/classification;Social Support;Transportation/methods;Walking/physiology

Abstract or Excerpt:
Geographic Information Systems (GIS) can be used to objectively measure features of the built environment that may influence adults' physical activity, which is an important determinant of chronic disease. We describe how a previously developed index of walkability was operationalised in an Australian context, using available spatial data. The index was used to generate a stratified sampling frame for the selection of households from 32 communities for the PLACE (Physical Activity in Localities and Community Environments) study. GIS data have the potential to be used to construct measures of environmental attributes and to develop indices of walkability for cities, regions or local communities.

Leyden,K. M. (2003)
Social capital and the built environment: the importance of walkable neighborhoods

American Journal of Public Health 93(9): 1546-1551

Subject: physical activity, social capital
Location: Non-Canadian
Keywords: Automobile Driving/psychology/statistics & numerical data; City Planning;Environment Design;Family Characteristics;Humans;Ireland;Public Health;Research;Residence Characteristics;Social Support;Walking/psychology/statistics & numerical data

Abstract or Excerpt:
OBJECTIVES: I sought to examine whether pedestrian-oriented, mixed-use neighborhoods encourage enhanced levels of social and community engagement (i.e., social capital). METHODS: The study investigated the relationship between neighborhood design and individual levels of social capital. Data were obtained from a household survey that measured the social capital of citizens living in neighborhoods that ranged from traditional, mixed-use, pedestrian-oriented designs to modern, car-dependent suburban subdivisions in Galway, Ireland. RESULTS: The analyses indicate that persons living in walkable, mixed-use neighborhoods have higher levels of social capital compared with those living in car-oriented suburbs. Respondents living in walkable neighborhoods were more likely to know their neighbors, participate politically, trust others, and be socially engaged. CONCLUSIONS: Walkable, mixed-use neighborhood designs can encourage the development of social capital.

Li,F.; Fisher,K. J.;Brownson,R. C.;Bosworth,M. (2005)
Multilevel modelling of built environment characteristics related to neighbourhood walking activity in older adults

Journal of epidemiology and community health 59(7): 558-564

Subject: physical activity
Location: US
Keywords: Aged; Cross-Sectional Studies;Environment, Controlled;Health Promotion/methods;Housing/statistics & numerical data;Humans;Models, Theoretical;Oregon;Population Density;Public Health;Residence Characteristics;Urban Health/statistics & numerical data;Walking

Abstract or Excerpt:
OBJECTIVE: To examine the relation between built environment factors (representing several dimensions of urban form of neighbourhoods) and walking activity at both the neighbourhood level and the resident level, in an older adult sample.
DESIGN, SETTING, PARTICIPANTS: A cross sectional, multilevel design with neighbourhoods as the primary sampling unit and senior residents as the secondary unit. Five hundred and seventy seven residents (mean age = 74 years, SD = 6.3 years) participated in the survey, which was conducted among 56 city defined neighbourhoods in Portland, Oregon, USA. Neighbourhood level variables were constructed using geographical information systems. Resident level variables consisted of a mix of self reports and geocoded data on the built environment.
MAIN OUTCOME MEASURE: Self reported neighbourhood walking.
MAIN RESULTS: A positive relation was found between built environment factors (density of places of employment, household density, green and open spaces for recreation, number of street intersections) and walking activity at the neighbourhood level. At the resident level, perceptions of safety for walking and number of nearby recreational facilities were positively related to high levels of walking activity. A significant interaction was observed between number of street intersections and perceptions of safety from traffic.
CONCLUSIONS: Certain neighbourhood built environment characteristics related to urban form were positively associated with walking activity in the neighbourhoods of senior residents. Public health promotion of walking activity/urban mobility and the design of interventions need to consider the contribution of neighbourhood level built environment influences.

Librett, J.J.,Yore, M.M, & Schmid, T.L. (2003)
Local ordinances that promote physical activity: A survey of municipal policies.

American Journal of Public Health 93(9): 1399-1403

Subject: planning
Location: US
Keywords: Bicycling; City Planning/legislation & jurisprudence; Community Health Planning/legislation & jurisprudence; Environment Design/legislation & jurisprudence; Exercise; Health Promotion/legislation & jurisprudence; Humans; Local Government; Physical Fitness; Policy Making; Public Health/legislation & jurisprudence; Recreation; United States; Utah; Walking

Abstract or Excerpt:
In this Utah-based study, we sought to identify the types of municipal employees responsible for physical activity policies, identify municipal ordinances that may influence physical activity, and determine local governments' intentions to implement policies.

In 2001, we mailed a survey to all of the state's municipalities with the goal of measuring 6 physical activity domains: sidewalks, bicycle lanes, shared-use paths, work sites, greenways, and recreational facilities. Data from 74 municipalities revealed that planners made up a small proportion of municipal staff. Relative to cities experiencing slow or medium growth, high growth cities reported more ordinances encouraging physical activity.

Physical activity policies can be monitored across municipalities. Moreover, evidence-based public health practice provides direction for limited staff and funding resources.

Liu,G. C.; Wilson,J. S.;Qi,R.;Ying,J. (2007)
Green neighborhoods, food retail and childhood overweight: Differences by population density

American Journal of Health Promotion 21(4): 317-325

Subject: food access/nutrition; environmental attributes and food quality consumption
Location: US
Keywords: obesity; environment design;ecosystem;food industry;prevention research;PHYSICAL-ACTIVITY;INNER-CITY;URBAN;ENVIRONMENT;HEALTH;COMMUNITY;CHILDREN;ADULTS;ADOLESCENTS

Abstract or Excerpt:
Purpose. This study examines relationships between overweight in children and two environmental factors-amount of vegetation surrounding a child's place of residence and proximity ' of the child's residence to various types of food retail locations. We hypothesize that living in greener neighborhoods, father from fast food restaurants, and closer to supermarkets would be associated with lower risk of overweight.

Design. Cross-sectional study.

Setting. Network of primary care pediatric clinics in Marion County, Indiana.

Subjects. We acquired data for 7334 subjects, ages 3 to 18 years, presenting for routine well-child care.

Measures. Neighborhood vegetation and proximity to food retail were. calculated using geographic information systems for each subject. rising circular and network buffers. Child weight status was defined using body mass index percentiles.

Analysis. We used cumulative logit models to examine associations between an index of overweight, neighborhood vegetation, and food retail environment.

Results. After controlling for individual socio-demographics and neighborhood socioeconomic status, measures of vegetation and food retail significantly predicted overweight in children. Increased neighborhood vegetation was associated with decreased risk for overweight, but only for subjects residing in higher population density regions. Increased distance between a subject's residence and the nearest large brand name supermarkets was associated with increased risk of overweight, but only far subjects residing in lower population density regions.

Conclusions. This research suggests that aspects of the built. environment are determinants Of child, weight status, ostensibly by influencing physical activity and dietary behaviors.

Lopez,R. P.; Hynes,H. P. (2006)
Obesity, physical activity, and the urban environment: public health research needs

Environmental Health: A Global Access Science Source 5: 25

Subject: physical activity; obesity, suburb/urban similarities/differences
Location: Non-Canadian/na
Keywords: Cities; Environment Design;Exercise;Facility Design and Construction;Humans;Obesity;Physical Fitness;Population Density;Public Health;Public Policy;Research/trends;Social Environment;Urban Population;Walking

Abstract or Excerpt:
Persistent trends in overweight and obesity have resulted in a rapid research effort focused on built environment, physical activity, and overweight. Much of the focus of this research has been on the design and form of suburbs. It suggests that several features of the suburban built environment such as low densities, poor street connectivity and the lack of sidewalks are associated with decreased physical activity and an increased risk of being overweight. But compared to suburban residents, inner city populations have higher rates of obesity and inactivity despite living in neighborhoods that are dense, have excellent street connectivity and who's streets are almost universally lined with sidewalks. We suggest that the reasons for this apparent paradox are rooted in the complex interaction of land use, infrastructure and social factors affecting inner city populations. Sometimes seemingly similar features are the result of very different processes, necessitating different policy responses to meet these challenges. For example, in suburbs, lower densities can result from government decision making that leads to restrictive zoning and land use issues. In the inner city, densities may be lowered because of abandonment and disinvestment. In the suburbs, changes in land use regulations could result in a healthier built environment. In inner cities, increasing densities will depend on reversing economic trends and investment decisions that have systematically resulted in distressed housing, abandoned buildings and vacant lots.These varying issues need to be further studied in the context of the totality of urban environments, incorporating what has been learned from other disciplines, such as economics and sociology, as well as highlighting some of the more successful inner city policy interventions, which may provide examples for communities working to improve their health. Certain disparities among urban and suburban populations in obesity and overweight, physical activity and research focus have emerged that are timely to address. Comparable research on the relationship of built environment and health is needed for urban, especially inner city, neighborhoods.

Lopez-Zetina,J.; Lee,H.;Friis,R. (2006)
The link between obesity and the built environment. Evidence from an ecological analysis of obesity and vehicle miles of travel in California

Health and place 12(4): 656-664

Subject: physical activity; obesity, activity, car travel
Location: US (CA)
Keywords: Adolescent; Adult;Automobile Driving;California/epidemiology;Data Collection;Environment Design;Female;Humans;Male;Middle Aged;Obesity/epidemiology;Travel

Abstract or Excerpt:
AIMS: Obesity and physical inactivity are known to be risk factors for many chronic diseases including hypertension, coronary artery disease, diabetes, and cancer. We sought to explore the association between an indicator of transportation data (Vehicle Miles of Travel, VMT) at the county level as it relates to obesity and physical inactivity in California.
METHODS: Data from the California Health Interview Survey 2001 (CHIS 2001), the US 2000 Census, and the California Department of Transportation were merged to examine ecological correlations between vehicle miles of travel, population density, commute time, and county indicators of obesity and physical inactivity. Obesity was measured by body mass index (BMI). Physical inactivity was based on self-reported behaviors including walking, bicycling, and moderate to vigorous activity. The unit of analysis was the county. Thirty-three counties in California with population size greater than 100,000 persons per county were retained in the analyses.
RESULTS: CHIS 2001 statewide obesity prevalence ranged from 11.2% to 28.5% by county. Physical inactivity ranged from 13.4% to 35.7%. Daily vehicle miles of travel ranged from 3.3 million to 183.8 million per county. By rank bivariate correlation, obesity and physical inactivity were significantly associated ($p<0.01$). Furthermore, by rank analysis of variance, the highest mean rank obesity was associated with the highest rank of VMT ($p<0.01$). Similar rank patterns were observed between obesity and physical inactivity and commute time. Associations between VMT and physical inactivity were examined but failed to reach statistical significance.
CONCLUSION: This analysis adds to the growing evidence supporting the association between VMT (a measure of automobile transportation) and obesity. An urban design characterized by over dependence on motorized transportation may be related to adverse health effects.

Loukaitou-sideris,Anastasia (2006)
Is it Safe to Walk? Neighborhood Safety and Security Considerations and Their Effects on Walking

Journal of Planning Literature 20(3): 219-232

Subject: physical activity, other (safety); design and policy intervention
Location: US

Abstract or Excerpt:
The importance of walking and physical activity as determinants of good health has been well established in the medical and public health literature, but a significant number of Americans live sedentary lifestyles. Aplethora of variables lie behind an individual's decision to walk, cycle, or exercise. This article focuses on a particular environmental variable, the safety of neighborhood surroundings, and explores how it is influencing physical activity. It integrates literatures from public health, criminology, and planning to identify, qualify, and evaluate the link between safety and security considerations and physical activity. It then proceeds to place safety and security concerns within a spatial context and to examine design and policy interventions that can help create environments more amenable to walking.

Lucy,W. H. (2003)
Mortality risk associated with leaving home: Recognizing the relevance of the built environment

American Journal of Public Health 93(9): 1564-1569

Subject: injury, other; homicide, fatalities, leaving home and the built environment
Location: US

Abstract or Excerpt:
Conclusions. Traffic fatalities are largely unrecognized as a danger to be factored into residential location decisions. Land use controls that deter sprawl along narrow exurban roads can reduce the mortality risks associated with leaving home.

Lucy analyzes traffic fatalities and homicides related to leaving home for routine activities, and considers the connections between these fatalities and the built environment. Results reveal that traffic fatality rates were highest in exurban areas and combined traffic fatality and homicide-by-stranger rates were higher in some or all outer counties than in central cities or inner suburbs.

Lund, H. (2003)
Testing the claims of new urbanism: Local access, pedestrian travel, and neighboring behaviors.

Journal of the American Planning Association 69(4): 414-429

Subject: planning, physical activity

Abstract or Excerpt:
This study tests the New Urbanist claims that placing amenities such as parks and retail shops within walking distance of homes will increase pedestrian travel and thereby increase interaction among neighbors. It also examines the relative roles of physical design and personal attitudes and perceptions in predicting walking and neighboring behaviors. Surveys were conducted in eight neighborhoods (four inner-city, four suburban) with varying degrees of local access to parks and shops. Analyses were conducted at the neighborhood and individual levels and were supplemented with qualitative data. The findings provide some support for each of the tested relationships, but also underscore the significance of other variables, especially personal attitudes.

Maantay,J. (2001)
Zoning, equity, and public health

American Journal of Public Health 91(7): 1033-1041
http://www.act-trans.ubc.ca/research.htm

Subject: planning, social justice, air quality; zoning, industrial pollution, health
Location: US (NY)
Keywords: Health Planning/organization & administration; Health Policy;Health Services Accessibility/organization & administration;Health Status;Housing;Humans;Industry/organization & administration;Local Government;Minority Groups/statistics & numerical data;New York City;Ownership;Poverty/statistics & numerical data;Public Health;Residence Characteristics;Socioeconomic Factors;Urban Health;Urban Renewal/organization & administration;World Health

Abstract or Excerpt:
Zoning, the most prevalent land use planning tool in the United States, has substantial implications for equity and public health. Zoning determines where various categories of land use may go, thereby influencing the location of resulting environmental and health impacts. Industrially zoned areas permit noxious land uses and typically carry higher environmental burdens than other areas. Using New York City as a case study, the author shows that industrial zones have large residential populations within them or nearby. Noxious uses tend to be concentrated in poor and minority industrial neighborhoods because more affluent industrial areas and those with lower minority populations are rezoned for other uses, and industrial zones in poorer neighborhoods are expanded. Zoning policies, therefore, can have adverse impacts on public health and equity. The location of noxious uses and the pollution they generate have ramifications for global public health and equity; these uses have been concentrated in the world's poorer places as well as in poorer places within more affluent countries. Planners, policymakers, and public health professionals must collaborate on a worldwide basis to address these equity, health, and land use planning problems.

MacLachlan,J. C.; Jerrett,M.; Abernathy,T.; Sears,M.; Bunch,M. J. (2007)
Mapping health on the internet: a new tool for environmental justice and public health research

Health and place 13(1): 72-86

Subject: air quality, social justice; GIS-web for air quality ses, public health - monitoring tools
Location: Canadian
Keywords: Air Pollution/adverse effects/analysis/economics; Asthma/epidemiology/etiology;Cluster Analysis;Environmental Health/economics/ethics/instrumentation;Epidemiologic Research Design;Focus Groups;Geographic Information Systems;Humans;Internet;Ontario/epidemiology;Public Health Informatics;Social Justice;Socioeconomic Factors

Abstract or Excerpt:
This paper examines the prospects for integrating Internet platform GIS or 'web-GIS' into environmental justice and related public health research. Specifically, we document the development of a web-GIS created for investigating relationships between health, air quality and socioeconomic factors in Hamilton, Canada. After development of the web-GIS site, we assembled a focus group of public health professionals to test functionality and render opinions about the potential of the site and geographic information in their program implementation. Results show overwhelming support for the further integration of GIS into public health practice. The results also underscore the potential of web-GIS to alleviate concerns of cost and data availability that often limit the use of GIS in community debates centred on environmental justice issues.

Maddock,J. (2004)
The relationship between obesity and the prevalence of fast food restaurants: State-level analysis

American Journal of Health Promotion 19(2): 137-143

Subject: food access/nutrition
Location: US
Keywords: obesity; built environment;nutrition;prevention research;ALCOHOL OUTLET DENSITY;UNITED-STATES;PHYSICAL-ACTIVITY;DIETARY CHANGE;PREVENTION;EPIDEMIC;HEALTH

Abstract or Excerpt:
PURPOSE: Obesity accounts for approximately 300,000 deaths a year in the United States, and prevalence rates have been increasing over the past decade. The nutrition environment may be contributing to this epidemic. This study examined the relationship between fast food restaurants and obesity on a state-wide basis.
DESIGN: A one-time cross-sectional analysis of secondary data was used for this study.

SETTING: The setting for this study was the United States.
SUBJECTS: State-level data were used as the unit of analysis. Alaska was excluded as an outlier, and the District of Columbia was added (N = 50).
MEASURES: Measures included aggregate state-level means for square miles per fast food restaurant, population per fast food restaurant, population density, ethnicity, age, gender, physical inactivity, fruit and vegetable intake, and obesity rates. Data were obtained from the 2002 Behavioral Risk Factor and Surveillance Survey, the 2000 U.S. Census, and the 2002 U.S. Yellow Pages.
RESULTS: Multiple hierarchal regressions revealed that square miles per fast food restaurants and residents per restaurant accounted for 6% of the variance in state obesity rates after controlling for population density, ethnicity, age, gender, physical inactivity, and fruit and vegetable intake. The entire model explained 70% of the total variance in state obesity rates.
CONCLUSIONS: These results indicate a correlational relationship between both the number of residents per fast food restaurant and the square miles per fast food restaurants with state-level obesity prevalence. Limitations include the use of correlational aggregate data.

Manfreda,J.; Sears,M. R.; Becklake,M. R.; Chan-Yeung,M.; Dimich-Ward,H.; Siersted,H. C.; Ernst,P.; Sweet,L.; Van Til,L.; Bowie,D. M.; Anthonisen,N. R. (2004)
Geographic and gender variability in the prevalence of bronchial responsiveness in Canada

Chest 125(5): 1657-1664

Subject: other, methodology
Location: Canadian
Keywords: Adult; Asthma/diagnosis/epidemiology/physiopathology;Bronchi/drug effects/physiopathology;Bronchoconstrictor Agents/diagnostic use;Canada/epidemiology;Female;Humans;Male;Methacholine Chloride/diagnostic use;Prevalence;Sex Factors

Abstract or Excerpt:
OBJECTIVES: Geographic variability in reported prevalences of asthma worldwide could in part relate to interpretation of symptoms and diagnostic biases. Bronchial responsiveness measurements provide objective evidence of a common physiologic characteristic of asthma. We measured bronchial responsiveness using the standardized protocol of the European Community Respiratory Health Survey (ECRHS) in six sites in Canada, and compared prevalences across Canada with international sites.
DESIGN: Samples of 3,000 to 4,000 adults aged 20 to 44 years were randomly selected in Vancouver, Winnipeg, Hamilton, Montreal, Halifax, and Prince Edward Island, and a mail questionnaire was completed by 18,616 individuals (86.5%). Preselected random subsamples (n = 2,962) attended a research laboratory for examination including more detailed questionnaires, lung function testing including methacholine challenge, and skin testing with 14 allergens.
RESULTS: Prevalences of bronchial hyperresponsiveness, measured as cumulative dose of methacholine required to produce a 20% fall from the post-saline solution FEV1 < or = 1 mg, ranged from 4.9% (95% confidence interval [CI], 1.6 to 8.5) in Halifax to 22.0% (95% CI, 18.1 to 26.0) in Hamilton (median, 10.7%). In all Canadian sites, bronchial hyperresponsiveness was more prevalent in women than in men. Neither the geographic nor gender differences were accounted for by differences in age, smoking, skin test reactivity, or baseline FEV1. Geographic- and gender-related variability changed little when only bronchial hyperresponsiveness associated with asthma-like symptoms was considered.
CONCLUSIONS: A wide variability in bronchial responsiveness can occur within one country, almost as wide as the range found across all international sites participating in the ECRHS study and not explained by differences in gender, smoking, skin test reactivity, and FEV1. While gender variability in the prevalence of bronchial responsiveness is likely due to hormonal and immunologic factors, geographic variability is likely to result from environmental factors.

McCormack, G, B Giles-Corti, A Lange, T Smith, K Martin & TJ Pikora (2004)
An Update of Recent Evidence of the Relationship Between Objective and Self-Report Measures of the Physical Environment and Physical Activity Behaviours

Journal of Science and Medicine in Sport 7(1Suppl): 81-92

Subject: physical activity, perceptions
Location: n/a
Keywords: Environment; Environment Design; Esthetics; Exercise; Health Behavior; Humans; Residence Characteristics; Safety; Walking

Abstract or Excerpt:
The physical environment has the potential to influence the physical behaviours of large numbers of people; hence creating supportive environments has the potential to increase physical activity (PA). During the last decade, there has been growing interest in how the physical environment shapes PA behaviour. This area of research is important given that levels of PA participation are declining globally. Literature was reviewed that examined the association between physical environmental attributes and PA behaviours. The environmental attributes were grouped into four categories based on a conceptual framework of environmental factors that might influence PA and included functionality, safety, aesthetics and destinations. Positive associations were found between both perceived and objectively measured environmental factors and PA behaviour. The availability, accessibility and convenience of destinations and facilities, as well as the general functionality of the neighbourhood (eg, the presence of sidewalks, traffic conditions) and aesthetics were positively associated with various levels of PA. The review highlights the need for future studies: to examine behaviour-specific environmental attributes, to collect objectively-measured environmental data and to include both objective and perceived environmental data in the same studies, and to adopt prospective study designs to allow causal relationships to be established.

McGinn, Aileen P., Kelly R. Evenson, Amy H. Herring, Sara L. Huston and Daniel A. Rodriguez

McGinn,A. P.; Evenson,K. R.; Herring,A. H.; Huston,S. L.; Rodriguez,D. A. (2007)
Exploring Associations between Physical Activity and Perceived and Objective Measures of the Built Environment

Journal of Urban Health 84(2): 162-184
http://www.springerlink.com/content/119977/?k=built+environment

Subject: physical activity, perceptions; objective measures and activity
Location: US
Keywords: physical activity; built environment;Geographic Information Systems (GIS);perceptions;objective measures;URBAN FORM;PUBLIC-HEALTH;UNITED-STATES;WALKING;DETERMINANTS;WOMEN;OLDER;CONVENIENCE;PREVENTION;INACTIVITY

Abstract or Excerpt:
The built environment may be responsible for making nonmotorized transportation inconvenient, resulting in declines in physical activity. However, few studies have assessed both the perceived and objectively measured environment in association with physical activity outcomes. The purpose of this study was to describe the associations between perceptions and objective measures of the built environment and their associations with leisure, walking, and transportation activity. Perception of the environment was assessed from responses to 1,270 telephone surveys conducted in Forsyth County, NC and Jackson, MS from January to July 2003. Participants were asked if high-speed cars, heavy traffic, and lack of crosswalks or sidewalks were problems in their neighborhood or barriers to physical activity. They were also asked if there are places to walk to instead of driving in their neighborhood. Speed, volume, and street connectivity were assessed using Geographic Information Systems (GIS) for both study areas. Locations of crashes were measured using GIS for the NC study area as well. Objective and perceived measures of the built environment were in poor agreement as calculated by kappa coefficients. Few associations were found between any of the physical activity outcomes and perception of speed, volume, or presence of sidewalks as problems in the neighborhood or as barriers to physical activity in regression analyses. Associations between perceptions of having places to walk to and presence of crosswalks differed between study sites. Several associations were found between objective measures of traffic volume, traffic speed, and crashes with leisure, walking, and transportation activity in Forsyth County, NC; however, in Jackson, MS, only traffic volume was associated with any of the physical activity outcomes. When both objective and perceived measures of the built environment were combined into the same model, we observed independent associations with physical activity; thus, we feel that evaluating both objective and perceived measures of the built environment may be necessary when examining the relationship between the built environment and physical activity.

McMackin,Holly (n.d.)
An inventory of potential indicators relating human health and the built environment from a community design perspective

Subject: methodology
Location: Canadian

Abstract or Excerpt:
[from the Introduction]
This report explores indicators, already in use, which may have the potential to explore the relationship between human health and the built environment. Specific indicators of interest are those that may be useful in attempting to gauge the contribution of community design and planning to community health.

Michael,Y. L.; Green,M. K.; Farquhar,S. A. (2006)
Neighborhood design and active aging

Health and place 12(4): 734-740

Subject: physical activity; neighbourhood design, active aging
Location: US (Portland)
Keywords: Aged; Aged, 80 and over;Aging;Environment Design;Exercise;Female;Focus Groups;Humans;Male;Middle Aged;Oregon;Residence Characteristics

Abstract or Excerpt:
This qualitative analysis of focus groups describes how neighborhood design encourages active aging. Nine focus groups were conducted in 2002 and 2003 with residents (N=60) aged 55 and over living in Portland, OR, USA. Content analysis revealed that local shopping and services, traffic and pedestrian infrastructure, neighborhood attractiveness, and public transportation influence activity among older adults. This information will be useful for making policy recommendations relating to land use planning and transportation, to assist in senior-friendly developments and neighborhood improvements, and to design effective senior health interventions with an emphasis on neighborhood design influences.

Michael,Y.; Beard,T.;Choi,D.;Farquhar,S.;Carlson,N. (2006)
Measuring the influence of built neighborhood environments on walking in older adults

Journal of Aging and Physical Activity 14(3): 302-312

Subject: physical activity, perceptions, methodology
Location: Non-Canadian
Keywords: Aged/psychology; Cross-Sectional Studies;Environment Design;Female;Geographic Information Systems;Health Behavior;Humans;Male;Perception;Residence Characteristics;Walking

Abstract or Excerpt:
There is a need for greater understanding of how perceptions and objective measures of the physical environment influence physical activity among seniors. The goal of this study was to examine the degree of association between perceived and objective characteristics of the neighborhood environment and the relation of each type of measurement to neighborhood walking in older adults. Data on self-reported frequency of walking in the neighborhood and perceived measures of neighborhood environment from 105 older adults were linked to objective measures assessed by geographic information systems and an audit instrument. Perceived and objective measurements of the built environment exhibited a low degree of agreement (kappas: <.20). After adjustment for education, age, and gender, presence of a mall was positively associated with neighborhood walking in both the objective and perceived models.

Mobley,L. R.; Root,E. D.; Finkelstein,E. A.; Khavjou,O.; Farris,R. P.; Will,J. C. (2006)
Environment, obesity, and cardiovascular disease risk in low-income women

American Journal of Preventive Medicine 30(4): 327-332

Subject: other, social justice; obesity, coronary heart disease, built env, neighbourhood
Location: Non-Canadian
Keywords: Adult; Aged;Body Mass Index;Cardiovascular Diseases/epidemiology;Demography;Female;Humans;Middle Aged;Obesity/epidemiology;Poverty;Residence Characteristics;Risk Factors;Socioeconomic Factors;United States/epidemiology

Abstract or Excerpt:
BACKGROUND: Financially disadvantaged populations are more likely to live in communities that do not support healthy choices. This paper investigates whether certain characteristics of the built environment are associated with obesity or coronary heart disease (CHD) risk among uninsured low-income women.
METHODS: Using a sample of 2001-2002 data from 2692 women enrolled in the WISEWOMAN program of the Centers for Disease Control and Prevention, the study team performed regression analysis (conducted in January-April 2005) to estimate body mass index (BMI) and the log of 10-year CHD risk as a function of the built environment and socioecologic measures.
RESULTS: For women living in an environment of maximum mixed land use (i.e., an environment more conducive to healthy living), BMI was lower by 2.60 kg/m2 and CHD risk was lower by 20% than for women living in single-use uniform environments (i.e., environments less conducive to healthy living). An additional fitness facility per 1000 residents was associated with BMI and CHD risk that were lower by 1.39 kg/m2 and 15.1%, respectively. Crime was positively associated with BMI and CHD risk, whereas neighborhood affluence was negatively associated. Living in more racially segregated areas was negatively associated with CHD risk among black, Hispanic, and Asian women and positively associated with CHD risk among American Indian women. CONCLUSIONS: The built environment and socioecologic characteristics of financially disadvantaged women were associated with BMI and CHD risk. More research is needed to understand the effects of racial segregation or acculturation on health for specific subpopulations.

Moore,E.; Richter,B. A.; Patton,C. K.; Lear,S. A. (2006)
Mapping stairwell accessibility in Vancouver's downtown core

Canadian journal of public health 97(2): 118-120

Subject: physical activity; office building stairwells
Location: Canadian
Keywords: Adult; Architectural Accessibility/statistics & numerical data;British Columbia;Elevators and Escalators;Environment Design;Exercise;Humans;Interior Design and Furnishings;Lighting;Location Directories and Signs;Middle Aged;Occupational Health;Security Measures;Urban Health;Walking

Abstract or Excerpt:
BACKGROUND: The increase in obesity is due in part to changes in the environment that affect behaviours such as physical activity. Stairwells in buildings present an opportunity to increase physical activity in the workplace. We characterized the stairwell accessibility in business buildings in the downtown core of Vancouver.
METHODS: Characteristics of the stairwells in business buildings with two or more floors were obtained. Stairwells were characterized based on their visibility from the main entrance, signage, presence of physical door, and interior lighting and space. Building completion year was obtained from the Vancouver City Hall.
RESULTS: A total of 138 buildings in the pre-designated area were eligible for characterization. Due to security concerns, only 123 were assessed. Of those assessed, 54% had stairwells visible from the main entrance, 33% had locked doors and only 18% had signs on the stairwell doors. Of the 83 stairwells that were accessible, 54% and 36% were considered brightly lit and spacious enough for two people, respectively. Only 11% of the buildings studied had accessible stairwells that met all of our accessibility criteria. More recently built buildings tended to have a higher proportion of locked stairwell doors; otherwise, building completion year was not associated with any of the accessibility criteria.
INTERPRETATION: Based on their environmental characteristics, very few buildings were set up in a way that encouraged stair use. For the work environment to be conducive to increased physical activity, building policy will need to consider the implications of design on activity patterns.

Morrison,D. S.; Thomson,H.; Petticrew,M. (2004)
Evaluation of the health effects of a neighbourhood traffic calming scheme

Journal of epidemiology and community health 58(10): 837-840

Subject: physical activity, mental health; health impacts, traffic calming
Keywords: Accidents, Traffic/prevention & control; Adolescent;Adult;Aged;Environment Design;Female;Health Status;Humans;Male;Mental Health;Middle Aged;Motor Activity;Motor Vehicles;Poverty Areas;Program Evaluation;Prospective Studies;Safety;Scotland;Urban Health/statistics & numerical data;Walking

Abstract or Excerpt:
STUDY OBJECTIVE: To assess the secondary health impacts of a traffic calming scheme on a community.
METHODS: Prospective cohort study of a randomly selected sample of the local community using postal questionnaires and pedestrian counts on the affected road six months before and six months after the implementation of the scheme. The setting was a community in which a traffic calming scheme was built in the main road (2587 households). The Short Form 36 version 2 was included in the questionnaire and summary measures of physical health (physical component summary) and mental health (mental component summary) calculated. A random sample of 750 households was initially posted the pre-intervention questionnaire.
MAIN RESULTS: There were increases in observed pedestrian activity in the area after the introduction of the traffic calming scheme. Physical health improved significantly but mental health did not change. Traffic related problems improved, while other local nuisances were reported to be worse.
CONCLUSIONS: The introduction of a traffic calming scheme is associated with improvements in health and health related behaviours. It is feasible to prospectively evaluate broader health impacts of similar transport interventions although poor response rates may limit the validity of results.

Mota, J., Almeida, M., Santos, P., & Ribeiro,J.C. (2005)
Perceived neighborhood environments and physical activity in adolescents

Preventive medicine 41(5-6): 834-836

Subject: physical activity, perceptions
Keywords: Physical activity; Environment; Adolescenc

Abstract or Excerpt:
Background: There is a reason to believe that physical environments variables play an especially important role in the level of physical activity. Few studies have examined the association between environmental variables and level of physical activity in adolescents.
Objectives: This study aims were: (1) to evaluate differences in perceived neighborhood environment according to physical activity level and (2) to determine which, if any, perceived neighborhood environmental variables were associated with reported physical activity levels in an adolescent population.
Methods: The sample comprised of 1123 adolescents, which were classified according to physical activity levels into actives (nÂ =Â 589) and non-active (nÂ =Â 534). A questionnaire assessed Perceived Neighborhood Environments. Physical activity was assessed by questionnaire and used as the dependent variable.
Results: More active children were reported to more significantly (PÂ <Â 0.05) agree with the importance of the accessibility of shops, the social environment, neighbors with recreational facilities, and aesthetics. Logistic regression analysis showed that aesthetic (ORÂ =Â 1.302; PÂ =Â 0.05) and recreational facilities (ORÂ =Â 1.297; PÂ =Â 0.05) domains were related to being physically active.
Conclusions: Some perceived neighborhood environmental attributes were found to be associated with level of physical activity in adolescents.

Moudon,A. V.; Lee,C. (2003)
Walking and bicycling: an evaluation of environmental audit instruments

American Journal of Health Promotion 18(1): 21-37

Subject: physical activity, methodology; walkability, bikability measurements
Location: n/a
Keywords: Bicycling; City Planning/standards;Community Health Planning/standards;Environment Design/standards;Health Behavior;Health Promotion/standards;Humans;Public Health/instrumentation;Transportation;Walking

Abstract or Excerpt:
PURPOSE: This paper reviews existing environmental audit instruments used to capture the walkability and bikability of environments. The review inventories and evaluates individual measures of environmental factors used in these instruments. It synthesizes the current state of knowledge in quantifying the built environment. The paper provides health promotion professionals an understanding of the essential aspects of environments influencing walking and bicycling for both recreational and transportation purposes. It serves as a basis to develop valid and efficient tools to create activity-friendly communities.
DATA SOURCES: Keyword searches identified journal articles from the computer-based Academic Citation Databases, including the National Transportation Library, the Web of Science Citation Database, and MEDLINE. Governmental publications and conference proceedings were also searched.
STUDY INCLUSION AND EXCLUSION CRITERIA: All instruments to audit physical environments have been included in this review, considering both recreation- and transportation related walking and bicycling. Excluded are general methods devised to estimate walking and cycling trips, those used in empirical studies on land use and transportation, and research on walking inside buildings.
DATA EXTRACTION METHODS: Data have been extracted from each instrument using a template of key items developed for this review. The data were examined for quality assurance among three experienced researchers.
DATA SYNTHESIS: A behavioral model of the built environment guides the synthesis according to three components: the origin and destination of the walk or bike trip, the characteristics of the road traveled, and the characteristics of the areas surrounding the trip's origin and destination. These components, combined with the characteristics of the instruments themselves, lead to a classification of the instruments into the four categories of inventory, route quality assessment, area quality assessment, and approaches to estimating latent demand for walking and bicycling. Furthermore, individual variables used in each instrument to measure the environment are grouped into four classes: spatiophysical, spatiobehavioral, spatiopsychosocial, and policy-based. MAJOR CONCLUSIONS: Individually, existing instruments rely on selective classes of variables and therefore assess only parts of built environments that affect walking and bicycling. Most of the instruments and individual measures have not been rigorously tested because of a lack of available data on walking and bicycling and because of limited research budgets. Future instrument development will depend on the acquisition of empirical data on walking and bicycling, on inclusion of all three components of the behavioral model, and on consideration of all classes of variables identified.

Moudon,A. V.; Lee,C.;Cheadle,A. D.;Collier,C. W.;Johnson,D.;Schmid,T. L.;Weather,R. D. (2005)
Cycling and the built environment, a US perspective

Transportation Research Part D - Transport and Environment 10(3): 245-261

Subject: physical activity, perceptions; objective environment and cycling
Location: US (WA)
Keywords: cycling; built environment;land use;infrastructure;GIS;PHYSICAL-ACTIVITY;LIFE-STYLE;WALKING;INTERVENTIONS

Abstract or Excerpt:
This disaggregate cross-sectional study uses primary data on the cycling behavior of 608 randomly sampled respondents in urbanized King County, Washington, and objective parcel-level GIS measures of land use and infrastructure conditions. Binary logit model findings provide new insights on who bicycles, and on perceived and actual built environmental conditions associated with the likelihood of cycling in neighborhoods, controlling for socio-demographic variables. A high 21% of the respondents report cycling at least once a week in their neighborhood, more often for recreation or exercise than for transportation. Cycling is more popular among male, younger adults, transit users, and those who are physically active and in good health. Both perceived and objective environmental conditions contribute to the likelihood of cycling. Proximity to trails and the presence of agglomerations of offices, clinics/hospitals, and fast food restaurants, measured objectively, are significant environmental variables. Previously researched correlates of cycling, such as the presence of bicycle lanes, traffic speed and volume, slope, block size, and the presence of parks, are found insignificant when objectively measured. A non-linear relationship is found between the odds of cycling and the perception of traffic problems and automobile-oriented facilities. Overall, cycling is only moderately associated with the neighborhood environment. It appears to be an individual choice that is independent from environmental support. This finding likely reflects the limited bicycle infrastructure in the sample frame-an unfortunate condition found in most US metropolitan regions. Policy and intervention programs could increase cycling by

improving both actual and perceived environmental conditions. (c) 2005 Elsevier Ltd. All rights reserved.

Nelson, M. C., Gordon-Larsen, P., Song, Y., & Popkin, B. M. (2006)
Built and social environments: Associations with adolescent overweight and activity.

American Journal of Preventive Medicine 31(2): 109-117

Subject: physical activity, methodology
Keywords: Adolescent; Adolescent Behavior; Adult; Environment; Exercise; Female; Health Behavior; Humans; Male; Obesity/epidemiology/etiology; Overweight; Population; Residence Characteristics; Socioeconomic Factors; United States/epidemiology

Abstract or Excerpt:
BACKGROUND: Little is known about the patterning of neighborhood characteristics, beyond the basic urban, rural, suburban trichotomy, and its impact on physical activity (PA) and overweight.
METHODS: Nationally representative data (National Longitudinal Study of Adolescent Health, 1994-1995, n = 20,745) were collected. Weight, height, PA, and sedentary behavior were self-reported. Using diverse measures of the participants' residential neighborhoods (e.g., socioeconomic status, crime, road type, street connectivity, PA recreation facilities), cluster analyses identified homogeneous groups of adolescents sharing neighborhood characteristics. Poisson regression predicted relative risk (RR) of being physically active (five or more bouts/week of moderate to vigorous PA) and overweight (body mass index equal or greater than the 95th percentile, Centers for Disease Control and Prevention/National Center for Health Statistics growth curves).
RESULTS: Six robust neighborhood patterns were identified: (1) rural working class; (2) exurban; (3) newer suburban; (4) upper-middle class, older suburban; (5) mixed-race urban; and (6) low-socioeconomic-status (SES) inner-city areas. Compared to adolescents living in newer suburbs, those in rural working-class (adjusted RR[ARR] = 1.38, 95% confidence interval [CI] = 1.13-1.69), exurban (ARR = 1.30, CI = 1.04-1.64), and mixed-race urban (ARR = 1.31, CI = 1.05-1.64) neighborhoods were more likely to be overweight, independent of individual SES, age, and race/ethnicity. Adolescents living in older suburban areas were more likely to be physically active than residents of newer suburbs (ARR = 1.11, CI = 1.04-1.18). Those living in low-SES inner-city neighborhoods were more likely to be active, though not significantly so, compared to mixed-race urban residents (ARR = 1.09, CI = 1.00-1.18).
CONCLUSIONS: These findings demonstrate disadvantageous associations between specific rural and urban environments and behavior, illustrating important effects of the neighborhood on health and the inherent complexity of assessing residential landscapes across the United States. Simple classical urban-suburban-rural measures mask these important complexities.

Nelson,M. C.; Gordon-Larsen,P.;Song,Y.;Popkin,B. M. (2006)
Built and social environments associations with adolescent overweight and activity

American Journal of Preventive Medicine 31(2): 109-117

Subject: physical activity; cluster analysis of neighbourhoods and weight/activity
Location: US
Keywords: Adolescent; Adolescent Behavior;Adult;Environment;Exercise;Female;Health Behavior;Humans;Male;Obesity/epidemiology/etiology;Overweight;Population;Residence Characteristics;Socioeconomic Factors;United States/epidemiology

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were more likely to be physically active than residents of newer suburbs (ARR = 1.11, CI = 1.04-1.18). Those living in low-SES inner-city neighborhoods were more likely to be active, though not significantly so, compared to mixed-race urban residents (ARR = 1.09, CI = 1.00-1.18).
CONCLUSIONS: These findings demonstrate disadvantageous associations between specific rural and urban environments and behavior, illustrating important effects of the neighborhood on health and the inherent complexity of assessing residential landscapes across the United States. Simple classical urban-suburban-rural measures mask these important complexities.

Northridge,M. E.; Sclar,E. D.; Biswas,P. (2003)
Sorting out the connections between the built environment and health: a conceptual framework for navigating pathways and planning healthy cities

Journal of Urban Health 80(4): 556-568
http://www.springerlink.com/content/119977/?k=built+environment

Subject: general, methodology; conceptual model, research, challenges
Location: Non-Canadian
Keywords: City Planning/organization & administration; Cooperative Behavior;Environment Design;Health Promotion;Health Status;Humans;Public Health;Social Environment;United States;Urban Health

Abstract or Excerpt:
The overarching goal of this article is to make explicit the multiple pathways through which the built environment may potentially affect health and well-being. The loss of close collaboration between urban planning and public health professionals that characterized the post-World War II era has limited the design and implementation of effective interventions and policies that might translate into improved health for urban populations. First, we present a conceptual model that developed out of previous research called Social Determinants of Health and Environmental Health Promotion. Second, we review empirical research from both the urban planning and public health literature regarding the health effects of housing and housing interventions. And third, we wrestle with key challenges in conducting sound scientific research on connections between the built environment and health, namely: (1) the necessity of dealing with the possible health consequences of myriad public and private sector activities; (2) the lack of valid and reliable indicators of the built environment to monitor the health effects of urban planning and policy decisions, especially with regard to land use mix; and (3) the growth of the "megalopolis" or "super urban region" that requires analysis of health effects across state lines and in circumscribed areas within multiple states. We contend that to plan for healthy cities, we need to reinvigorate the historic link between urban planning and public health, and thereby conduct informed science to better guide effective public policy.

Northridge,M. E.; Sclar,E. (2003)
A joint urban planning and public health framework: contributions to health impact assessment

American Journal of Public Health 93(1): 118-121

Subject: planning; urban planning, public health
Location: n/a
Keywords: City Planning/organization & administration; Cooperative Behavior;Health Promotion;Health Status;Humans;Program Evaluation;Public Health;Social Environment;United States;Urban Health

Abstract or Excerpt:
A joint urban planning and public health perspective is articulated here for use, in health impact assessment. Absent a blueprint for a coherent and supportive structure on which to test our thinking, we are bound to fall flat. Such a perspective is made necessary by the sheer number of people living in cities throughout the world, the need for explicit attention to land use and transportation systems as determinants of population health, and the dearth of useful indicators of the built environment for monitoring progress. If explicit attention is not paid to the overarching goals of equality and democracy, they have little if any chance of being realized in projects, programs, and policies that shape the built environment and therefore the public's health.

Northridge,M. E.; Stover,G. N.;Rosenthal,J. E.;Sherard,D. (2003)
Environmental equity and health: understanding complexity and moving forward

American Journal of Public Health 93(2): 209-214

Subject: social justice; environmental (inlcuding built env.) justice
Location: Non-Canadian
Keywords: Cost of Illness; Environmental Exposure/statistics & numerical data;Ethnic Groups/classification/statistics & numerical data;Evaluation Studies;Female;Health Status;Housing;Humans;Male;Prejudice;Risk Factors;Rural Health;Socioeconomic Factors;United States/epidemiology;Urban Health

Abstract or Excerpt:
The authors invoke a population health perspective to assess the distribution of environmental hazards according to race/ethnicity, social class, age, gender, and sexuality and the implications of these hazards for health. The unequal burden of environmental hazards borne by African American, Native American, Latino, and Asian American/Pacific Islander communities and their relationship to well-documented racial/ethnic disparities in health have not been critically examined across all population groups, regions of the United States, and ages. The determinants of existing environmental inequities also require critical research attention. To ensure inclusiveness and fill important gaps, scientific evidence is needed on the health effects of the built environment as well as the natural environment, cities and suburbs as well as rural areas, and indoor as well as outdoor pollutants.

O'Neill M., M. Jerrett, I. Kawichi I, JI Levy, AJ Cohen, N. Gouveia, P. Wilkinson, T. Fletcher, L. Cifuentes,J.Schwartz (2003)
Health, wealth and air pollution.

Environmental health perspectives 111(16): 186-1870
http://www.ehponline.org/members/2003/6334/6334.pdf

Subject: air quality, social justice; SEP, air pollution, health
Location: n/a

Abstract or Excerpt:
The effects of both ambient air pollution and socioeconomic position (SEP) on health are well documented. A limited number of recent studies suggest that SEP may itself play a role in the epidemiology of disease and death associated with exposure to air pollution. Together with evidence that poor and working-class communities are often more exposed to air pollution, these studies have stimulated discussion among scientists, policy makers, and the public about the differential distribution of the health impacts from air pollution. Science and public policy would benefit from additional research that integrates the theory and practice from both air pollution and social epidemiologies to gain a better understanding of this issue. In this article we aim to promote such research by introducing readers to methodologic and conceptual approaches in the fields of air pollution and social epidemiology; by proposing theories and hypotheses about how air pollution and socioeconomic factors may interact to influence health, drawing on studies conducted worldwide; by discussing methodologic issues in the design and analysis of studies to determine whether health effects of exposure to ambient air pollution are modified by SEP; and by proposing specific steps that will advance knowledge in this field, fill information gaps, and apply research results to improve public health in collaboration with affected communities. Key words: air pollution, environmental justice, epidemiology, exposure assessment, socioeconomic factors.

Olaman S, Eyles J, Elliott S, Dovinsky N, Jerrett M,Wilson K. (2003)
Neighbourhood and Health: An analysis of Environmental Exposure and Health Status in Hamilton, Ontario, Canada.

Location: Canadian

Ontario Medical Association (2005)
The Illness Cost of Air Pollution

Subject: air quality; costs
Location: Canadian

Abstract or Excerpt:
[from the Introduction]
In June 2000, the OMA presented the first version of our Illness Costs of Air Pollution software model and detailed findings on the health effects and economic costs of air pollution in Ontario. It was apparent that over time, a rapidly improving scientific understanding of smog's health effects would require the OMA to update this model. In 2000 the science would not support the information that we are now able to present. Due to our improved understanding, we have found that some of our previous estimates have been decreased, but the science now compels us to attribute more serious illness and premature deaths to smog.
Included in the new OMA determinations of smog's toll are new health studies on the chronic effects of exposure, new air pollution and demographic data and extensive analysis of the principle studies on the health effects of air pollution. Improved as it is, there are still gaps in scientific understanding and thus further improvements to ICAP will be possible in the future. Of most concern to the OMA is the lack of credible studies on doctors' office visits due to smog related illness. We have not included a value for this important and expensive impact, thus still underestimating smog's overall cost.

Ontario Medical Association (2007)
Smog's excess burden on baby boomers: aging population most vulnerable to smog

Subject: air quality
Location: Canadian

Abstract or Excerpt:
[from the introductioin]
In 2005, the OMA revised its Illness Costs of Air Pollution (ICAP) Software Model, and findings on the health effects of smog in Ontario. We reported Ontario's smog-health impacts for 2005, but as these estimates are based on a changing population, we ensured that the model was also capable of 20-year projections of smog's health impact.
This long-term perspective allows us to provide updated estimates of the annual smog burden, but also to show health-effects trends. Unfortunately, smog-related illness and premature death are increasing. The findings that are presented in this report are of significant concern to physicians because they show an increased vulnerability of patients, but also have ramifications for health care. It is clear that a significant increase in smog illness will present an additional burden on an already stressed health-care system.

Owen, N., Humpel, N., Leslie, E., Bauman, A., & Sallis, J. F. (2004)
Understanding environmental influences on walking; review and research agenda.

American Journal of Preventive Medicine 27(1): 67-76

Subject: physical activity
Location: n/a
Keywords: Environment; Exercise; Health Behavior; Humans; Residence Characteristics; Social Environment; Walking/psychology

Abstract or Excerpt:
BACKGROUND: Understanding how environmental attributes can influence particular physical activity behaviors is a public health research priority. Walking is the most common physical activity behavior of adults; environmental innovations may be able to influence rates of participation.
METHOD: Review of studies on relationships of objectively assessed and perceived environmental attributes with walking. Associations with environmental attributes were examined separately for exercise and recreational walking, walking to get to

and from places, and total walking.
RESULTS: Eighteen studies were identified. Aesthetic attributes, convenience of facilities for walking (sidewalks, trails); accessibility of destinations (stores, park, beach); and perceptions about traffic and busy roads were found to be associated with walking for particular purposes. Attributes associated with walking for exercise were different from those associated with walking to get to and from places.
CONCLUSIONS: While few studies have examined specific environment-walking relationships, early evidence is promising. Key elements of the research agenda are developing reliable and valid measures of environmental attributes and walking behaviors, determining whether environment-behavior relationships are causal, and developing theoretical models that account for environmental influences and their interactions with other determinants.

Paluck,E. C.; Allerdings,M.; Kealy,K.; Dorgan,H. (2006)
Health promotion needs of women living in rural areas: an exploratory study

Canadian journal of rural medicine 11(2): 111-116

Subject: other, physical activity, mental health; health-promoting activities, barriers, supports
Location: Canadian
Keywords: Adolescent; Adult;Aged;Exercise;Female;Focus Groups;Health Promotion;Humans;Middle Aged;Pilot Projects;Rural Population;Saskatchewan;Social Isolation;Social Support;Women's Health

Abstract or Excerpt:
OBJECTIVES: To describe the types of health-promoting activities currently engaged in by women who live in rural communities, to explore perceived barriers and facilitators to staying healthy in rural communities, and to examine how these factors may differ for women throughout their adult life.
DESIGN: Qualitative pilot study.
PARTICIPANTS AND SETTING: Women aged 18 years and older living in a small rural community in Saskatchewan.
METHOD: Eight focus groups were conducted with a total of 44 participants who had been stratified into 3 age groups. Content analysis of the focus group transcripts was undertaken.
MAIN FINDINGS: Older women were more likely to report that they engage in a balance of activities to promote their physical and mental health. Middle and younger aged women, however, were more likely to engage in activities to promote their physical health, with less emphasis on their mental health. Among the 3 age groups, exercise and nutrition-related activities were most commonly reported. Social support and the "rural way of life" were the most commonly reported community supports available to these women. Younger women were more likely to discuss family commitments as a barrier to maintaining physical fitness,and older women discussed the impact that loneliness and lack of appropriate exercise options had on healthy living in their community.
CONCLUSION: The interviews provided a chance for a group of rural women to paint their own picture of promoting and maintaining their health in their own community. The activities engaged in by women to maintain their health, and the barriers and facilitators to staying healthy were different for women of different ages. It is useful for health planners to understand how women's health promotion needs vary across their adult life span.

Patterson, P. K., & Chapman, N. J. (2004)
Urban form and older residents' service use, walking, driving, quality of life, and neighborhood satisfaction

American Journal of Health promotion 19(1): 45-52

Subject: physical activity, planning
Location: US

Abstract or Excerpt:
PURPOSE: This study explored the relationship between pedestrian-friendly urban form as reflected in new urbanism design guidelines, and neighborhood service use, walking, driving, quality of life, and neighborhood satisfaction among older women.
DESIGN: A cross-sectional survey compared residents of census tracts similar indemographic characteristics but differing in urban form.
SETTING: The setting was urban and suburban areas of Portland, Oregon.
SUBJECTS: The sample consisted of 372 females living alone over age 70 in six census tracts; 133 (36%) completed surveys.
MEASURES: The New Urbanism Index rated the physical features of respondents' neighborhoods. The Neighborhood Resident Survey assessed travel modes and neighborhood satisfaction. The Quality of Life Index measured resident well-being. The Dartmouth COOP Functional Health Charts measured health status. Group comparisons were made with t-tests and regression analysis.

RESULTS: Although limited by the cross-sectional design, the study showed that new urbanism partially explained several differences in service use and activity: distance to a grocery store (r2 change = .11, p = .001), number of services used within 1 mile from home (r2 change = .06, p = .007), number of walking activities (r2 change = .08, p = .001), number of services accessed by walking (r2 change = .14, p = .000), and number of services accessed by driving (r2 change = .05, p = .001). CONCLUSIONS: Traditional urban neighborhoods with mixed services and good pedestrian access were associated with increased walking among older residents.

Pedersen,Carsten; Mortensen,Preben (2006)
Urbanization and traffic related exposures as risk factors for Schizophrenia

BMC Psychiatry 6(1): 2

Subject: other
Location: Danish

Abstract or Excerpt:
BACKGROUND:Urban birth or upbringing increase schizophrenia risk. Though unknown, the causes of these urban-rural differences have been hypothesized to include, e.g., infections, diet, toxic exposures, social class, or an artefact due to selective migration.
METHODS:We investigated the hypothesis that traffic related exposures affect schizophrenia risk and that this potential effect is responsible for the urban-rural differences. The geographical distance from place of residence to nearest major road was used as a proxy variable for traffic related exposures. We used a large population-based sample of the Danish population (1.89 million people) including information on all permanent addresses linked with geographical information on all roads and house numbers in Denmark. Schizophrenia in cohort members (10,755 people) was identified by linkage with the Danish Psychiatric Central Register.
RESULTS:The geographical distance from place of residence to nearest major road had a significant effect. The highest risk was found in children living 500–1000 metres from nearest major road (RR = 1.30 (95% Confidence Interval: 1.17–1.44). However, when we accounted for the degree of urbanization, the geographical distance to nearest major road had no significant effect.
CONCLUSION:The cause(s) or exposure(s) responsible for the urban-rural differences in schizophrenia risk were closer related to the degree of urbanization than to the geographical distance to nearest major road. Traffic related exposures might thus be less likely explanations for the urban-rural differences in schizophrenia risk.

Perdue,W. C.; Stone,L. A.; Gostin,L. O. (2003)
The built environment and its relationship to the public's health: The legal framework

American Journal of Public Health 93(9): 1390-1394

Subject: general, planning
Location: n/a
Keywords: CHILDREN; OBESITY

Abstract or Excerpt:
Public health advocates can help shape the design of cities and suburbs in ways that improve public health, but to do so effectively they need to understand the legal framework. This article reviews the connection between public health and the built environment and then describes the legal pathways for improving the design of our built environment.

Pikora, Terri, Bille Giles-Corti, Fiona Bull, Konrad J (2003)
Developing a framework for assessment of the environmental determinants of walking and cycling

Social science and medicine 56: 1693-1703

Subject: physical activity, planning, methodology
Keywords: Adult; Australia; Bicycling/statistics & numerical data; City Planning; Consensus; Delphi Technique; Environment Design; Exercise/psychology; Health Behavior; Humans; Public Policy; Residence Characteristics/statistics & numerical data; Social Environment; Transportation; Walking/statistics & numerical data

Abstract or Excerpt:
The focus for interventions and research on physical activity has moved away from vigorous activity to moderate-intensity activities, such as walking. In addition, a social ecological approach to physical activity research and practice is recommended. This approach considers the influence of the environment and policies on physical activity. Although there is limited empirical published evidence related to the features of the physical environment that influence physical activity, urban planning and transport agencies have developed policies and strategies that have the potential to influence whether people walk or cycle in their neighbourhood. This paper presents the development of a framework of the potential environmental influences on walking and cycling based on published evidence and policy literature, interviews with experts and a Delphi study. The framework includes four features: functional, safety, aesthetic and destination; as well as the hypothesised factors that contribute to each of these features of the environment. In addition, the Delphi experts determined the perceived relative importance of these factors. Based on these factors, a data collection tool will be developed and the frameworks will be tested through the collection of environmental information on neighbourhoods, where data on the walking and cycling patterns have been collected previously. Identifying the environmental factors that influence walking and cycling will allow the inclusion of a public health perspective as well as those of urban planning and transport in the design of built environments.

Poortinga,W. (2006)
Perceptions of the environment, physical activity, and obesity

Social science and medicine 63(11): 2835-2846

Subject: perceptions, physical activity; obsesity, self rated health, and physical activity
Location: UK (Eng)/na
Keywords: environment; social capital;social support;physical activity;obesity;BUILT ENVIRONMENT;LINKING PERCEPTIONS;MULTILEVEL ANALYSIS;SOCIAL-FACTORS;URBAN SPRAWL;OLDER-ADULTS;LIFE-STYLE;HEALTH;NEIGHBORHOOD;WALKING

Abstract or Excerpt:
Obesity rates are rising rapidly across the developed and developing world. Until recently obesity research has mainly focused on biological, psychological and behavioural factors. But there is growing agreement that environmental factors play an important role as well. In this study data from the 2003 Health Survey for England (n = 14,836) were analysed from a multilevel perspective to examine (1) the associations of the perceptions of the local environment with obesity, self-rated health, and physical activity, and (2) whether physical activity mediates the association between the perceptions of the environment, and obesity and self-rated health. This study found that perceptions of the friendliness of the local environment were mainly associated with self-rated health; perceived access to leisure facilities with sports activities; perceived access to a post office with walking; and the presence of social nuisances with obesity and poor self-rated health. In addition, positive perceptions of the social environment (i.e., social support and social capital) were associated with higher levels of physical activity, and lower levels of poor self-rated health and obesity. Only limited support was found for the idea that health behaviours mediate the associations between the perceptions of the environment, obesity, and self-rated health. Controlling for the three physical activity measures only rendered a small number of associations with self-rated health non-significant, and did not affect the associations with obesity. Overall, the results show that certain aspects of the environment may contribute to the risk of obesity and poor health. More research is needed to examine the specific mechanisms that link (the perceptions of) the environment to obesity and health.

Powell,K. E. (2005)
Land use, the built environment, and physical activity: a public health mixture; a public health solution

American Journal of Preventive Medicine 28(2 Suppl 2): 216-217

Location: Non-Canadian
Keywords: Environment Design; Exercise;Health Promotion;Humans

Reidpath, D. D., Burns, C., Garrard, J., Mahoney, M., & Townsend, M. (2002)
An ecological study of the relationship between social and environmental determinants of obesity.

Health and place 8(2): 141-145

Subject: food access/nutrition, social justice

Abstract or Excerpt:
There is growing concern with the increasing prevalence of obesity in industrialised countries, a trend that is more apparent in the poor than in the rich. In an ecological study, the relationship between an area measure of socioeconomic status (SES) and the density of fast-food outlets was examined as one possible explanation for the phenomenon. It was found that there was a dose-response between SES and the density of fast-food outlets, with people living in areas from the poorest SES category having 2.5 times the exposure to outlets than people in the wealthiest category. The findings are discussed.

Rhodes,R. E.; Brown,S. G.; McIntyre,C. A. (2006)
Integrating the perceived neighborhood environment and the theory of planned behavior when predicting walking in a Canadian adult sample

American Journal of Health Promotion 21(2): 110-118

Subject: physical activity, perceptions; perceived neigbourhood influences on walking
Location: Canadian
Keywords: British Columbia; Cross-Sectional Studies;Female;Health Behavior;Humans;Male;Middle Aged;Perception;Residence Characteristics;Walking/psychology

Abstract or Excerpt:
PURPOSE: To integrate the characteristics of the perceived environment with the theory of planned behavior (TPB) to determine (1) whether the TPB mediates relations among environmental characteristics and walking, and (2) whether the environment moderates TPB-walking relations.
DESIGN: Cross-sectional.
SETTING: South Vancouver Island, British Columbia, Canada.
SUBJECTS: Random sample of 351 adults (36% response rate).
MEASURES: Participants completed measures of the perceived neighborhood environment, the TPB, and walking behavior that was assessed using an adapted Godin leisure time questionnaire.
RESULTS: Results using structural equation modeling indicated that the TPB mediated the environment-walking relationship. Specifically, retail land-mix use and neighborhood aesthetics were associated with walking through affective and instrumental attitudes. Results using moderated regression analyses showed that recreation land-mix use moderated the intention-behavior relationship, with those individuals who perceived closer access to recreation facilities having a larger intention-behavior relationship. A significant moderating effect for crime on the instrumental attitude-intention relationship was also identified, but the effect size was small to trivial.
CONCLUSIONS: These results suggest that the perceived neighborhood may influence walking through attitudes and may also influence the intention-behavior gap. Prospective studies using objective walking and environment data are required to improve the veracity of the findings and to identify possible causal relationships.

Ross, C. E. (2000)
Walking, exercising, and smoking: Does neighborhood matter?

Social science and medicine 51(2): 265-274

Subject: other, physical activity, social justice
Location: US

Abstract or Excerpt:
Neighborhood context could affect health behaviors because of structure or contagion. We expected that residents of US neighborhoods where a high percentage of residents are poor and do not have college degrees would be more likely to smoke and less likely to walk and exercise. We examined the hypotheses using multi-level data in which survey information from a representative sample of Illinois residents is linked to census-tract information about poverty and education in their neighborhood. Contrary to expectations we found that residents of poor neighborhoods were more likely to walk than those in less disadvantaged places, adjusting for individual poverty, household income, education, race, ethnicity, sex, age, and marital status. This was the case despite the fact that residents of poor neighborhoods were more afraid to leave the house and feared being victimized on the streets. Consistent with expectations we found that residents of neighborhoods where a high percentage of residents are college educated are more likely to walk. Thus, the two aspects of neighborhood socioeconomic status had opposite effects on walking. Neighborhood context had no effect on the likelihood of exercising strenuously. Men in poor neighborhoods were more likely to smoke than those in less disadvantaged places, but neighborhood context had no significant effect on women's likelihood of smoking.

Rutt,C. D.; Coleman,K. J. (2005)
Examining the relationships among built environment, physical activity, and body mass index in El Paso, TX

Preventive medicine 40(6): 831-841

Subject: physical activity; body mass index, built environment
Location: US (TX)
Keywords: Age Distribution; Body Mass Index;Cohort Studies;Computer Simulation;Diet;Environment;Female;Health Behavior/ethnology;Health Surveys;Hispanic Americans/psychology/statistics & numerical data;Humans;Incidence;Male;Motor Activity;Obesity/diagnosis/ethnology;Risk Assessment;Severity of Illness Index;Sex Distribution;Socioeconomic Factors;Texas/epidemiology

Abstract or Excerpt:
OBJECTIVE: The current study examined the relationships among built environment, physical activity, and body mass index (BMI) in a primarily Hispanic border community in El Paso, TX.
METHODS: Data from a 2001 community-wide health survey were matched to environmental data using geocoding techniques in ARC VIEW software. A total of 996 adults were surveyed by phone and 452 were successfully geocoded.
RESULTS: The sample was 71% female, 79% Hispanic, 42 +/- 17 years old, moderately acculturated, and had socioeconomic status (SES) levels of semi-skilled workers. Increasing BMI was related to less moderate intensity physical activity (P = 0.05), higher SES (P = 0.0003), worse overall health (P = 0.0004), and living in areas with greater land-use mix (less residential; P = 0.03). The relationship between overall health and BMI was in part mediated by higher numbers of barriers to physical activity in those with poor health, which lead to a decrease in moderate physical activity. These variables explained 20% of the variance in BMI.
CONCLUSIONS: This is one of the first studies to find a positive relationship between land-use mix and BMI in a predominantly Hispanic, low-income community. The positive association between BMI and land-use mix may be due to the inclusion of individual SES as a controlling variable in the analyses, suggesting that SES may have a differential effect on how the built environment influences BMI in low- to moderate-income minority communities.

Saelens, Brian, Sallis Jim, and Frank, Lawrence, (2003)
Environmental Correlates of Walking and Cycling: How Findings from Transportation, Urban Design, and City Planning Literature Can Inform Physical Activity Research

Annals of Behavioral Medicine 25(2): 80-91

Subject: physical activity
Keywords: Bicycling/statistics & numerical data; City Planning/trends; Environment Design/trends; Forecasting/methods; Humans; Residence Characteristics; Social Environment; Transportation/statistics & numerical data; United States; Urban Health; Urban Population; Walking/statistics & numerical data

Abstract or Excerpt:
Research in transportation, urban design, and planning has examined associations between physical environment variables and individuals' walking and cycling for transport. Constructs, methods, and findings from these fields can be applied by physical activity and health researchers to improve understanding of environmental influences on physical activity. In this review, neighborhood environment characteristics proposed to be relevant to walking/cycling for transport are defined, including population density, connectivity, and land use mix. Neighborhood comparison and correlational studies with nonmotorized transport outcomes are considered, with evidence suggesting that residents from communities with higher density, greater connectivity, and more land use mix report higher rates of walking/cycling for utilitarian purposes than low-density, poorly connected, and single land use neighborhoods. Environmental variables appear to add to variance accounted for beyond sociodemographic predictors of walking/cycling for transport. Implications of the transportation literature for physical activity and related research are outlined. Future research directions are detailed for physical activity research to further examine the impact of neighborhood and other physical environment factors on physical activity and the potential interactive effects of psychosocial and environmental variables. The transportation, urban design, and planning literatures provide a valuable starting point for multidisciplinary research on environmental contributions to physical activity levels in the population.

Saelens,B. E.; Sallis,J. F.; Black,J. B.; Chen,D. (2003)
Neighborhood-based differences in physical activity: an environment scale evaluation

American Journal of Public Health 93(9): 1552-1558

Subject: physical activity, methodology; neighbourhood walkability, overweight, method comparison
Location: Non-Canadian
Keywords: Adult; Automobile Driving/statistics & numerical data;Body Weight/ethnology;California;City Planning;Environment Design;Exercise/psychology;Health Surveys;Humans;Obesity/epidemiology;Public Health/statistics & numerical data;Research Design;Residence Characteristics/classification/statistics & numerical data;Safety;Self Efficacy;Urban Health;Walking/statistics & numerical data

Abstract or Excerpt:
OBJECTIVES: This study evaluated a neighborhood environment survey and compared the physical activity and weight status of the residents in 2 neighborhoods.
METHODS: On 2 occasions, 107 adults from neighborhoods with differing "walkability" were selected to complete a survey on their neighborhood environment. Physical activity was assessed by self-report and by accelerometer; height and weight were assessed by self-report.
RESULTS: Neighborhood environment characteristics had moderate to high test-retest reliabilities. Residents of high-walkability neighborhoods reported higher residential density, land use mix, street connectivity, aesthetics, and safety. They had more than 70 more minutes of physical activity and had lower obesity prevalence (adjusted for individual demographics) than did residents of low-walkability neighborhoods.
CONCLUSIONS: The reliability and validity of self-reported neighborhood environment subscales were supported. Neighborhood environment was associated with physical activity and overweight prevalence.

Savitch,H. V. (2003)
How Suburban Sprawl Shapes Human Well-Being

Journal of Urban Health 80(4): 590-607
http://scholarsportal.info.proxy.lib.uwaterloo.ca/pdflinks/07082021310802426.pdf

Subject: general
Location: US
Keywords: Geography; Health Status; Population Density; Quality of Life; Residence Characteristics; Suburban Health; Taxes; United States

Abstract or Excerpt:
[from the introduction]
It is not often that one has an opportunity to consider the politics of urban development and its relationship to human well-being. Many discussions of this kind are limited to political issues—or how groups use power to acquire terrain, set land use rights, and promote building policies. Other analyses point to the effects of urban development on land use—or how building policies change the placement of jobs, transportation, and commerce. Most socially oriented studies deal with how urban development affects income, class, or race. Economists tackling the issue are most interested in job creation, revenue generation, fiscal questions, and the like. These are not unimportant questions. Indeed, they touch our daily lives. After all, politics shape the rewards obtained by different groups, social relations determine where we live, and economics bear directly on the creation of wealth. Apart from these perspectives, human well-being has unique attributes and presents special opportunities. As I use the term well-being, it encompasses two components: (1) the evolving condition of our natural environment, and (2) the changing profile of our general health. Reversing the order somewhat, the World Health Organization employs the notion of health to include a variety of factors, defining it as not just the absence of disease but as “a state of complete physical, mental and social well being.” This approach points up the essential qualities and fundamental aspects of our existence. What can be more crucial than the surroundings in which we spend our waking lives, the relations we have with others, and our own physical vigor? Ultimately, we have to ask ourselves, to what purposes should we apply our energies? Why is it that we struggle over rewards to be obtained from designing the built environment? The answer lies in the improvement of our well-being.

Savitz,D. A.; Poole,C. (2001)
Do studies of wire code and childhood leukemia point towards or away from magnetic fields as the causal agent?

Bioelectromagnetics Suppl 5: S69-85

Subject: other, environmental determinants; magnetic fields, childhood leukemia
Location: Canadian, US
Keywords: Canada/epidemiology; Child;Electromagnetic Fields/adverse effects;Environmental Exposure;Epidemiologic Factors;Housing;Humans;Leukemia/epidemiology/etiology;Risk Factors;Social Class;United States/epidemiology

Abstract or Excerpt:
A long-standing point of controversy in the epidemiologic literature concerns the meaning of a wire code-childhood leukemia association for assessing the role of magnetic field exposure. Six studies of wire codes and childhood leukemia in North America were examined, three of which reported positive associations and all of which found some relation between wire codes and measured magnetic fields. Supporting magnetic fields as the basis for the wire code associations are the correspondence between those wire code levels which predict distinct magnetic fields and those which predict leukemia risk in the positive studies. Geographic locations and methods that refine wire codes as magnetic fields predictors also tend to strengthen the association with leukemia. Opposing arguments are based on the failure of the wire code-magnetic field association to predict the strength of association across studies, including the unexplained lack of association between wire codes and leukemia in the Midwest and in Canada. Alternatives to magnetic fields are less supported; residential mobility, social class, and neighborhood characteristics are unlikely to explain a wire code effect. Ambiguity persists because of the modest strength of the wire code-leukemia association, the complexity of the relation between wire codes and magnetic fields, lack of knowledge of risk factors for childhood leukemia, and the limited evaluation of wire code correlates other than magnetic fields.

Schulz,Amy; Northridge,Mary E. (2004)
Social Determinants of Health: Implications for Environmental Health Promotion

Health Education and Behavior 31(4): 455-471

Subject: social justice
Location: US

Abstract or Excerpt:
In this article, the authors draw on the disciplines of sociology and environmental and social epidemiology to further understanding of mechanisms through which social factors contribute to disparate environmental exposures and health inequalities. They propose a conceptual framework for environmental health promotion that considers dynamic social processes through which social and environmental inequalities—and associated health disparities—are produced, reproduced, and potentially transformed. Using empirical evidence from the published literature, as well as their own practical experiences in conducting community-based participatory research in Detroit and Harlem, the authors examine health promotion interventions at various levels (community-wide, regional, and national) that aim to improve population health by addressing various aspects of social processes and/or physical environments. Finally, they recommend moving beyond environmental remediation strategies toward environmental health promotion efforts that are sustainable and explicitly designed to reduce social, environmental, and health inequalities.

Skinner,K.; Hanning,R. M.; Tsuji,L. J. (2006)
Barriers and supports for healthy eating and physical activity for First Nation youths in northern Canada

International journal of circumpolar health 65(2): 148-161

Subject: physical activity, food access/nutrition
Location: Canadian
Keywords: Adolescent; Adult;Arctic Regions;Canada;Child;Diet/economics/psychology;Female;Health Behavior;Humans;Inuits;Male;Middle Aged;Motor Activity;Rural Population

Abstract or Excerpt:
OBJECTIVES: To investigate barriers and supports for healthy eating and physical activity in youths in a remote sub-arctic community, Fort Albany First Nation, Ontario, Canada.
STUDY DESIGN: A qualitative multi-method participatory approach.
METHODS: The study included a purposive convenience sample of two adult (n = 22) and three youths (n = 30; students in grades 6 to 8) focus groups, unstructured one-on-one interviews with adult key informants (n = 7), and a scan of the community environment. Data were coded and analysed by hand and using Nvivo software. Hurricane thinking and concept mapping were used to illustrate findings and relationships between concepts.
RESULTS: Dominant emerging themes included empowerment, trust, resources, barriers and opportunities, while major sub-themes included food security, cost, accessibility/availability, capacity building, community support, programs/training and the school snack/breakfast program.
CONCLUSIONS: Numerous barriers to healthy nutrition and physical activity exist in this community and are possibly similar in other remote communities. Empowerment is a core issue that should be considered in the design of public health interventions for First Nations youths in remote sub-arctic communities.

Soltani,Ali; Primerano,Frank;Allan,Andrew;Somenahalli,Sekhar (2006)
Design for movement: linking non-work travel and activity level to local urban design dimensions

Urban Design International 11(3-4): 173
http://proquest.umi.com/pqdweb?did=1249850641&Fmt=7&clientId=16746&RQT=309&VName=PQD

Subject: physical activity
Location: Australia
Keywords: Urban planning; Sustainable development;Design;Models;Exercise;Walkways

Abstract or Excerpt:
With the arising sustainability issues related to both the natural and built environments along with health issues as a result of reduced activity, active modes of travel such as walking and bicycling are being investigated to increase their use to combat such issues in Australian cities. This study through an advanced behavioural modelling approach on four typical suburbs of metropolitan Adelaide, Australia confirms that urban design generally have a modest but sometimes statistically significant effect on modal choices. Well-connected streets, and close proximity to jobs and key functions were shown to induce non-

motorised travel. Other exogenous environmental factors such as population density, street quality, and the level of public transport had little influences. From a urban design and planning policy perspective, this suggests that greater daily activity and consequent health and environmental benefits might accrue from designing human-scale, walkable communities that appeal to the preference of different social groups vs investment in master-planned communities in the hope of swaying travel behaviour. That is, pedestrian-friendly places suited to the taste preferences of socio-demographic groups might induce more physical activity over the long run through the process of residential self-selection than overt efforts to create fully planned, attractive and quality landscapes all over suburbia.

Southern,D. A.; McLaren,L.; Hawe,P.; Knudtson,M. L.; Ghali,W. A.; APPROACH Investigators (2005)
Individual-level and neighborhood-level income measures: agreement and association with outcomes in a cardiac disease cohort

Medical care 43(11): 1116-1122

Subject: methodology; area-based income as proxy for self-reported income, cardiac disease
Location: Canadian
Keywords: Alberta/epidemiology; Censuses;Coronary Disease/mortality/therapy;Female;Heart Catheterization;Humans;Income;Male;Middle Aged;Outcome Assessment (Health Care);Poverty Areas;Prospective Studies;Quality of Life;Questionnaires;Registries;Residence Characteristics;Self Disclosure

Abstract or Excerpt:
BACKGROUND: Census-based measures of income often are used as proxies for individual-level income. Yet, the validity of such area-based measures relative to 'true' individual-level income has not been fully characterized.
OBJECTIVES: The objectives of this study were (1) to determine whether area-based measures of household income are a suitable proxy for self-reported household income and (2) to assess whether these measures are associated with outcomes in a cardiac disease cohort.
RESEARCH DESIGN: We used a prospective cohort from the Alberta Provincial Project for Outcome Assessment in Coronary Heart Disease (APPROACH) cardiac catheterization registry.
UBJECTS: A total of 4372 patients having undergone cardiac catheterization and who also completed a 1-year follow-up questionnaire on self-reported income level were studied.
MEASURES: Our measurements were survival to 2.5 years after catheterization and health-related quality of life (EuroQoL).
RESULTS: Agreement between the 2 income measures generally was poor (unweighted Kappa = 0.07), particularly for the low-income patients. Despite this poor agreement, both income measures were positively associated with survival and EuroQoL scores. An outcome analysis that simultaneously considered individual level income and area-based income revealed that low-income individuals have poorer survival and lower quality of life scores if they live in low income neighborhoods, but not if they live in high income neighborhoods.
CONCLUSIONS: The area-based estimates of household income in these data demonstrate poor agreement with self-reported household income at the level of individual patients, particularly for low-income patients. Despite this, both income measures appear to be prognostically relevant, perhaps because individual and neighborhood income measure different constructs.

Srinivasan,S.; Dearry,A.;L R O'Fallon (2003)
Reviewing the Evidence - Creating Healthy Communities, Healthy Homes, Healthy People: Initiating a Research Agenda on the Built Environment and Public Health

American Journal of Public Health 93(9): 1446-1450

Subject: general
Location: n/a

Abstract or Excerpt:
Mounting evidence suggests physical and mental health problems relate to the built environment, including human-modified places such as homes, schools, workplaces, parks, industrial areas, farms, roads and highways. The public health relevance of the built environment requires examination. Preliminary research demonstrates the health benefits of sustainable communities. However, the impact of mediating and moderating factors within the built environment on health must be explored further. Given the complexity of the built environment, understanding its influence on human health requires a community-based, multilevel, interdisciplinary research approach.
The authors offer recommendations, based upon a recent conference sponsored by the National Institute of Environmental Health Sciences (NIEHS), for research and policy approaches, and suggest interagency research alliances for greater public health impact.

Srinivasan,S.; O'Fallon,L. R.;Dearry,A. (2003)
Creating healthy communities, healthy homes, healthy people: initiating a research agenda on the built environment and public health

American Journal of Public Health 93(9): 1446-1450

Subject: general, physical activity, mental health
Location: Non-Canadian
Keywords: City Planning; Community Health Planning;Congresses;Empirical Research;Environment Design;Housing/standards;Humans;Interinstitutional Relations;Life Style;Public Health;Socioeconomic Factors;Transportation;United States

Abstract or Excerpt:
Mounting evidence suggests physical and mental health problems relate to the built environment, including human-modified places such as homes, schools, workplaces, parks, industrial areas, farms, roads and highways. The public health relevance of the built environment requires examination. Preliminary research demonstrates the health benefits of sustainable communities. However, the impact of mediating and moderating factors within the built environment on health must be explored further. Given the complexity of the built environment, understanding its influence on human health requires a community-based, multilevel, interdisciplinary research approach. The authors offer recommendations, based upon a recent conference sponsored by the National Institute of Environmental Health Sciences (NIEHS), for research and policy approaches, and suggest interagency research alliances for greater public health impact.

Srinivasan,Shobha; Liam O'Fallon;Allen Dearry;National Institute of Environmental Health (2002)
Built environment : healthy communities, healthy homes, healthy people : final report, July 15-16, 2002

Abstract or Excerpt:
not available

Standing Committee on Health (2007)
Healthy Weights, Healthy Children: Healthy Weights for Healthy Kids

Subject: other (obesity)
Location: Canadian

Abstract or Excerpt:
[from section titled "The Committee Approach"]
Childhood obesity has become an “epidemic” in Canada. Obesity rates are increasing worldwide, but Canada has one of the highest rates of childhood obesity in the developed world, ranking fifth out of 34 OECD countries. Recent data reveals that 26% of young Canadians aged 2 to 17 years are overweight or obese. Even more distressing is the evidence that about 55% of First Nations children on reserve and 41% of Aboriginal children living off reserve are either overweight or obese.
Children who are obese are at increased risk of being overweight or obese as adults. The Committee shares the fears of many experts who predict that today’s children will be the first generation for some time to have poorer health outcomes and a shorter life expectancy than their parents. The health implications of overweight and obesity — a range of preventable chronic diseases and premature death — are well documented. These implications are serious enough for adults who develop weight problems but pose an even greater threat for children who may develop chronic ailments at an uncharacteristic early age. Problems include (but are not limited to) the development of Type 2 diabetes, heart attack and stroke susceptibility, joint problems, and mental health issues.
On 15 June 2006, the House of Commons Standing Committee on Health initiated a study on childhood obesity in Canada with a particular focus on the responsibility of the federal government for First Nations and Inuit children. Through a series of thematic panels held from September 2006 to February 2007, the Committee aimed to: gather information on the dimensions of the overall situation; understand the influence of a wide range of health determinants; examine the approaches adopted in

the provinces/territories and relevant countries; and define the role of the federal government in this area.
Knowing that this issue presents a complex public health concern, the Committee went beyond the traditional health community to hear from a wide range of witnesses about the role of income, education, social and physical environments in contributing to increasing rates of obesity among Canada's children. In addition to hearing specifically from First Nations, Inuit and other Aboriginal groups, it heard from witnesses representing health professionals, nutrition and fitness organizations, the food, telecommunication and advertising industry, recreation and sport groups, municipal and provincial governments, food security initiatives, and others. The Committee also held two videoconferences with consumer, industry and government representatives from the United Kingdom, a country with several years of experience in tackling childhood obesity.
But, most significantly, the Committee went beyond the federal health portfolio in its horizontal federal approach. In addition to representatives from Health Canada, the Public Health Agency of Canada, and the Canadian Institutes of Health Research, it invited a wide range of federal departments and agencies to talk about their responsibility in a broad and comprehensive approach to this serious problem. Finance Canada, Indian and Northern Affairs Canada, Sport Canada, Heritage Canada, Infrastructure Canada, the Canadian Food Inspection Agency, the Canadian Radio-television and Telecommunications Commission and Statistics Canada talked about their particular role in the multiple dimensions essential to effective federal action on healthy weights for children.

Stanilov,K. (2004)
Health and community design: The impact of the built environment on physical activity

Journal of Planning Education and Research 24(1): 107-108

Subject: physical activity
Location: US

Abstract or Excerpt:
[excerpt]
The book Health and Community Design presents the most comprehensive and compelling answer to these questions written to this date. It provides a detailed account of the impact that the design of the built environment has on patterns of physical activity. The authors develop a powerful argument for the need to build communities with physical characteristics that promote more active lifestyles for their residents. This goal, the authors argue, could be accomplished through a combination of design principles and public policies that incorporate walking and bicycling into the daily routine of urban dwellers. Communities with such characteristics can provide enormous benefits for the health of their residents as medical studies have repeatedly proven that sedentary lifestyles are a major contributor for premature death, chronic disease, poor mental health, and obesity.

The book abounds with data supporting this argument drawing from a wide array of research linking urban form and physical health.

Stokes,R. J.; Macdonald,J.; Ridgeway,G. (2007)
Estimating the effects of light rail transit on health care costs

Health and place

Subject: physical activity; health and $ cost/benefit of light rail transit
Location: US

Abstract or Excerpt:
In recent years, there has been a proliferation of research on the effects of the built environment, including mass transit systems, on health-related outcomes. While there is general agreement that the built environment affects travel choices and physical activity, it remains unclear how much of a public health benefit (in dollars) can be derived from land use policies that support walking, biking, and transit. In the present study, we develop a model to assess the potential cost savings in public health that will be realized from the investment in a new light rail transit system in Charlotte, NC. Relying on estimates of future riders, area obesity rates, and the effects of public transit on physical activity (daily walking to and from the transit stations), we simulated the potential yearly public health cost savings associated with this infrastructure investment. Our results indicate that investing in light rail is associated with a 9-year cumulative public health cost savings of $12.6 million. While these results suggest that there is a sizable public health benefit associated with the adoption of light rail, they also indicate that the effects are relatively small compared to the costs associated with constructing and operating such systems. These findings suggest that planning efforts that focus solely on the health impact of modifications in the built environment are likely to overstate the economic benefits. Public health benefits should be considered along with broader environmental health benefits.

Sturm,R.; Cohen,D. A. (2004)
Suburban sprawl and physical and mental health

Public health 118(7): 488-496

Subject: physical activity, mental health, other
Location: US
Keywords: built environment; chronic conditions;urban form;mental health;urban sprawl;COMMUNITY;EXERCISE;SYMPTOMS;SOMATIZATION;POLLUTION;HEADACHE;THERAPY;DESIGN

Abstract or Excerpt:
Objective. To study the association between objective measures of suburban sprawl and chronic medical conditions and mental health disorders in the USA.
Methods. Cross-sectional analysis of survey data merged with objective measures of suburban sprawl. Outcomes are self-reported medical conditions, mental health disorders and health-related quality of life.
Results. Sprawl significantly predicts chronic medical conditions and heath-related quality of life, but not mental health disorders. An increase in sprawl from one standard deviation less to one standard deviation more than average implies 96 more chronic medical problems per 1000 residents, which is approximately similar to an aging of the population of 4 years.
Conclusions. A robust association between sprawl and physical (but not mental) health suggests that suburban design may be an important new avenue for health promotion and disease prevention.

Taylor,Henry Louis (2005)
Health and the built environment the effects of where we live, work and play

Subject: general, social justice

Abstract or Excerpt:
Health and the Built Environment: The Effects of Where We Live, Work and Play explores the role played by the built environment in causing health problems among inner city residents, with a particular emphasis on the African American community. Notwithstanding, the issues discussed in this essay impact all socioeconomic groups living in distressed central city and suburban neighborhoods and this includes Latinos, Asians, Native Americans, and low-income working class whites. Moreover, the built environment, albeit in different ways, also contributes to the health problems of middle-class central city and suburban residents. Nonetheless, given the staggering health disparities between blacks and whites, and the extent to which the literature on heath and the built environment neglects issues pertaining to inner city communities, the emphasis on African Americans is more than warranted.

Health and the Built Environment is not only concerned with the health effects of where we live, work, and play, but also with the type of urban planning strategies and public policies needed to address the problem. It argues that the active living movement and the new urbanism and smart growth planning strategies are primarily informed by sprawl and conditions found in middle-class central city and suburban neighborhoods. Thus, the policies, urban designs, and new construction ideas emanating from these movements will only minimally impact built environment conditions found in distressed inner city communities.

An emerging trend in the design, urban planning, and medical professions is one that investigates how the built environment contributes to the health problems of Americans. This viewpoint is based on the notion that inadequate diet and sedentary living increases the risk for many chronic diseases, such as cardiovascular disease, hypertension, colon cancer, type-2 diabetes, osteoporosis, obesity, anxiety and depression. A consensus now exists among health scientists, medical practitioners and other professionals that an active lifestyle reduces the risk for many chronic diseases and/or facilitates the successful management of those illnesses. Within this context, the active living movement arose a few years ago to attack the sedentary culture problem. It stressed the development of a lifestyle that integrates physical activity into daily routines, with the goal of accumulating minimally 30 minutes of activity each day by walking, bicycling, exercising, working in the yard, taking the stairs, or engaging in some other type of physical activity.

The active living movement supported the activities of new urbanism and smart growth. Urban planners advocating this approach to residential development suggest that transportation policy, neighborhood design, and existing land use patterns contribute to physical inactivity and the development of a culture of sedentary living. They call for a new approach to residential development that promotes high density neighborhoods and mixed land-use developments that bring residential, commercial,

and retail activities closer together so that traffic is reduced and more cycling and walking is encouraged. Collectively, active living, new urbanism, and smart growth are constructing a new model of residential development that incorporates wellness into the design and construction of neighborhoods.

However, this essay argues that these movements are not only primarily based on conditions found in predominantly white middle-class central city and suburban communities, but also their advocates do not consider the significant differences that exist in dissimilar parts of the built environment. The point is that the barriers to active living found in distressed inner city neighborhoods are significantly different from those found in other parts of the metropolis. Here, built environment issues are more complex and challenging. Consequently, a distinct approach must be used to attack them. For example, in the inner city, barriers to active living and a healthy lifestyle are impeded by crime, violence, fear, inadequate food security, dilapidated housing, poorly maintained sidewalks, streets, sewer and water lines, and blight. These conditions create stressors that are produced by poverty, low-incomes, joblessness, difficult work situations, and the struggle to make ends meet, along with cultural and financial obstacles to health care. These built environment issues have produced a health crisis so severe that in December 2004, the NAACP said “the fight for quality health care is the new civil rights battle.”

The obstacles to wellness erected by the inner city built environment cannot be solved unless the emerging model of health care connects its strategy to the quest to radically reconstruct the inner city built environment. Toward this end, design professionals, urban planners, health scientists, medical practitioners, public health experts, and policy makers must develop insight into the differential barriers to wellness found in inner city neighborhoods and then formulate strategies and policies to attack them.

Taylor,W. C.; Sallis,J. F.;Lees,E.;Hepworth,J. T.;Feliz,K.;Volding,D. C.;Cassels,A.;Tobin,J. N. (2007)
Changing social and built environments to promote physical activity: recommendations from low income, urban women

Journal of physical activity and health 4(1): 54-65

Subject: physical activity, social justice
Location: Non-Canadian
Keywords: African Americans/statistics & numerical data; Aged;Body Weights and Measures;Consumer Participation/methods;Environment Design;Female;Hispanic Americans/statistics & numerical data;Humans;Law Enforcement;Middle Aged;Motor Activity;Police;Poverty/ethnology/statistics & numerical data;Sanitation;Social Environment;Urban Population/statistics & numerical data;Women's Health/ethnology

Abstract or Excerpt:
BACKGROUND: Middle age and older (mean = 58.7 y), racial/ethnic minority women report low levels of physical activity. Recommendations to change the social and built environments to promote physical activity in this group are underdeveloped. Two research questions guided this study: What environmental changes are recommended by racial/ethnic minority women? What policies are related to the environmental changes? METHODS: The findings from nine Nominal Group Technique sessions with 45 subjects were analyzed. RESULTS: More police protection, cleaner streets, removal of drugs from streets, more street lights, walking groups, and free gyms were prioritized by subjects as the most important recommendations. The relevant policies included municipal, police department, sanitation department, public works, and transportation department. CONCLUSIONS: Racial/ethnic minority women living in low income, urban areas recommend improvements that affect overall quality of life. Meeting basic needs may be a prerequisite for use of physical activity resources.

Timperio, A., Crawford, D., Telford, A., & Salmon, J. (2004)
Perceptions about the local neighborhood and walking and cycling among children.

Preventive medicine 38(1): 39-47

Subject: physical activity, perceptions
Location: Australia

Abstract or Excerpt:
BACKGROUND: This study examined associations between perceptions of the local neighborhood and walking and cycling among children.
METHODS: Children aged 5-6 years (n=291) and 10-12 years (n=919) were recruited from 19 Australian primary schools. Parents reported their child's usual walking or cycling to local destinations and their perceptions of their neighborhood. Ten- to twelve-year-olds were asked their perceptions of traffic, strangers, road safety and sporting venues, and their perceptions of their parent's views on these issues.

RESULTS: Five- to six-year-old boys whose parents believed there was heavy traffic in their area were 2.8 times more likely (95%CI=1.1-6.8), and 5- to 6-year-old girls whose parents owned more than one car were 70% less likely (95%CI=0.1-0.8), and whose parents believed that public transport was limited in their area were 60% less likely (95%CI=0.2-0.9) than other children to walk or cycle at least three times per week. Parental belief that there were no lights or crossings was associated with walking or cycling among 10- to 12-year-old boys (OR=0.4, 95%CI=0.2-0.7). Among older girls, parent's belief that their child needed to cross several roads to reach play areas (OR=0.4, 95%CI=0.2-0.8) and that there is limited public transport in their area (OR=0.7, 95%CI=0.4-0.97), and child's belief that there were no parks or sports grounds near home (OR=0.5, 95%CI=0.3-0.8) were associated with a lower likelihood of walking or cycling.
CONCLUSION: Perceptions of the local neighborhood may influence children's physical activity.

Tomlinson, Paul (2007)
Planning for health: bringing the professions together

Journal Of The Royal Society For The Promotion Of Health 127(2): 62-63
http://search2.scholarsportal.info/ids70/gateway.php?mode=pdf&doi=10.1177%2F1466424007075452&db=sagenurs-set-c&s1=187bd25f29b2bd7ac72a37eb7ea36339&s2=38582e6dfbe8b1ff19fabe0b15cf9dce

Subject: planning, collaboration
Location: na/UK

Abstract or Excerpt:
no abstract

Transport Concepts (1994)
Linkages: Built Environment, Well-Being And Active Living

Subject: physical activity, planning; benefits of active living on all aspects of quality of life
Location: Canadian

Abstract or Excerpt:
[excerpt from Excutive Summary]
Budget pressures are causing governments to review health care policy. The new trend in health policy, exemplified by the Evans-Stoddart or Mustard-Frank approaches, puts more emphasis on social and physical environments than on expensive health care services.

At the same time, local governments concerned about the cost of providing infrastructure and services, are trying to encourage more compact, mixed-use developments. "Neo-traditional" planning brings residential, commercial and retail activities closer together, reduces traffic, and encourages more cycling and walking.

The Active Living, Go For Green Program can play an important role reinforcing and supporting both of these beneficial trends. Active Living Environments encourage more walking and cycling that contributes to well-being and reduces health care costs. Walking and cycling support intensification of urban centres, and enable them to function with less auto traffic. . .

Trayers,T.; Deem,R.;Fox,K. R.;Riddoch,C. J.;Ness,A. R.;Lawlor,D. A. (2006)
Improving health through neighbourhood environmental change: are we speaking the same language? A qualitative study of views of different stakeholders

Journal of public health (Oxford, England) 28(1): 49-55

Subject: collaboration, planning, physical activity; inclusion of neigbhourhood groups in design
Location: UK
Keywords: Adolescent; Adult;Antisocial Personality Disorder/psychology;Child;Child, Preschool;Community Health Planning;Consumer Participation;Environment Design;Focus Groups;Humans;Life Style;Middle Aged;Motor Activity/physiology;Poverty Areas;Public Health/methods;Residence Characteristics;Safety/standards;Vulnerable Populations/psychology

Abstract or Excerpt:
OBJECTIVE: To explore the perspectives of four groups of stakeholders to proposed improvements to the built environment-a neighbourhood renewal consisting of a home zone development and an extension of the National Cycle Network (NCN). Design Qualitative focus group study. Setting A deprived neighbourhood. Sample Four focus groups were conducted with 10 residents from the neighbourhood undergoing change, nine pupils from a local primary school, 10 students and tutors from a local further education college and three local authority planners overseeing the developments.
RESULTS: We identified four main themes relating to the impact of environmental change. These were safety, space, antisocial behaviour and physical activity and health, the latter being the least important to all groups. A mismatch regarding environmental change emerged in perspectives between different stakeholders. The residents were most concerned about home and car (parking) safety and in particular felt that the new cycle/walk way would reduce their safety, whereas the planners felt that the environmental change would provide a safer and healthier environment for the residents.
CONCLUSION: The assumption that planned provision of supportive environments will improve levels of physical activity, health and lifestyle may not be true if the developments do not take account of community concerns regarding personal safety.

Vandegrift, D., & Yoked, T. (2004)
Obesity rates, income, and suburban sprawl: An analysis of US states

Health and place 10(3): 221-229

Subject: other (obesity)

Abstract or Excerpt:
In a decade of economic growth and rising income, obesity has risen dramatically. This is puzzling when researchers have found that there is an inverse relation between income and obesity. This paper argues that new location patterns produced by suburban sprawl are an important cause of rising obesity rates. New location patterns are such that work, school and social activities are not as easily accessible by foot. Changes in sprawl then drive changes in the causes of obesity identified by medical researchers (e.g., low activity levels). We define sprawl as increases in the amount of developed land, holding population constant. Determinants and outcomes are analyzed on a population basis. We use state-level data from the 1990s on obesity to show that states that increased the amount of developed land (holding population constant) showed larger increases in obesity. As a result, town planning efforts to reduce sprawl may be justified not only on aesthetic grounds but also based on efforts to reduce the costs associated with treating medical conditions related to obesity.

Vlahov,D.; Gibble,E.; Freudenberg,N.; Galea,S. (2004)
Cities and health: History, approaches, and key questions

Academic Medicine 79(12): 1133-1138

Subject: general, methodology
Location: n/a
Keywords: NATIONAL-COMORBIDITY-SURVEY; PSYCHIATRIC-DISORDERS;SOCIAL DETERMINANTS;BUILT ENVIRONMENT;PUBLIC-HEALTH;UNITED-STATES;MENTAL-HEALTH;PREVALENCE;CARE;EPIDEMIOLOGY

Abstract or Excerpt:
The majority of the world's population will live in cities in the next few years, and the pace of urbanization worldwide will continue to accelerate over the coming decades. Such a dramatic demographic shift can be expected to have an impact on population health. Although there has been historic interest in how city living is associated with health, this interest has waxed and waned and a cogent framework has yet to evolve that encompasses key issues in urban health. In this article, the authors discuss three alternate approaches to the study of urban health today; these include considering urban health from the

perspective of a presumed urban health penalty, from an urban sprawl perspective, and more comprehensively, considering how urban living conditions may be associated with health. The authors also propose three key questions that may help guide the study and practice of urban health in coming decades. These include considering what specific features of cities are causally related to health, the extent to which these features are unique to a particular city or are different between cities, and ultimately, to what extent these features of cities are modifiable in order to allow interventions that can improve the health of urban populations.

Vojnovic,I. (2006)
Building communities to promote physical activity: A multi-scale geographical analysis

Geografiska Annaler Series B - Human Geography 88B(1): 67-90

Subject: physical activity
Location: US (MI)
Keywords: urban planning and design; travel behaviour;physical activity;LAND-USE;PUBLIC-HEALTH;UNITED-STATES;ACTIVITY PATTERNS;URBAN SPRAWL;LOS-ANGELES;US ADULTS;OBESITY;PREVALENCE;WALKING

Abstract or Excerpt:
The objective of this paper is to make explicit the linkages between specific characteristics in the urban built environment, moderate physical activity (in particular walking and cycling), and public health. The review will take place at three different scales - the region, the city and the city-block. At all three scales, the main interest is placed on accessibility, with the recognition that if distances are short enough and there is high connectivity within neighbourhoods, people might be encouraged to walk or cycle. The paper will draw on urban built environment characteristics from a number of Michigan municipalities, including Detroit, Ann Arbor, Birmingham, East Lansing and Okemos.

Wakefield,J. (2004)
Fighting obesity through the built environment

Environmental health perspectives 112(11): A616-A623

Subject: general
Location: Non-Canadian
Keywords: Adult; Child;Cities;Environment Design;Exercise;Facility Design and Construction;Health Promotion;Housing;Humans;Industry;Life Style;Obesity/epidemiology/prevention & control;Schools;Social Marketing;Workplace

Abstract or Excerpt:
[from the introduction]
Although it's easy to point the finger at everyone from Ronald McDonald to Bill Gates, no one entity or factor is specifically to blame for the nation's raging obesity epidemic, according to speakers at the first-ever national conference on obesity and the built environment, held in late May in Washington, D.C. But every community can do something to combat it, participants agreed.
The built environment includes all aspects of the environment that are modified by humans, including homes, schools, workplaces, parks, industrial areas, and highways. Participants at Obesity and the Built Environment: Improving Public Health Through Community Design first probed how various aspects of the built environment currently contribute to obesity by affecting eating and physical activity habits and facilitating an increasingly sedentary
lifestyle. Then participants discussed how the built environment can be changed to combat obesity, and how environmental health research and interventions can impact this growing public health problem.
The conference brought together researchers, planners, health care providers, developers, policy makers, and community and business leaders to develop agendas for future research and policy implementation, and to facilitate partnerships among these disciplines. . .
[more information available from: http://www.niehs.nih.gov/drcpt/beoconf/agenda.htm]

Walker,Sally; Ronald Colman (n.d.)
The Cost of Physical Inactivity in Halifax Regoinal Municipality

Subject: physical activity
Location: Canadian

Abstract or Excerpt:
[from the introduction]
Physical activity provides proven health benefits. It protects against heart disease, stroke, hypertension, type 2 diabetes, colon cancer, breast cancer, osteoporosis, obesity, depression, anxiety, and stress. Evidence indicates that in Halifax Regional Municipality 30% of heart disease, 22% of osteoporosis, 16% of stroke, hypertension, type 2 diabetes, and colon cancer, and 9% of breast cancer are attributable to physical inactivity.
Regular physical activity also protects against obesity and assists weight control; fosters development of healthy muscles, bones and joints; increases strength and endurance; improves behavioural development in children and adolescents; and helps maintain function and preserve independence in older adults. Studies show that regular exercisers have much less overall lifetime morbidity than those who are sedentary, indicating that avoided medical costs due to physical activity are not simply deferred to older ages.
Urban planning offers excellent opportunities to increase chances for physical activity of residents by making walking or cycling viable alternatives to motorized transportation
and by providing access to sports and recreation facilities. . .
According to the Canadian Community Health Survey, 48% of Halifax Regional Municipality (HRM) residents, 50% of Nova Scotians, and 47% of Canadians were physically inactive in 2003. HRM has the lowest rate of inactivity for any of the Nova Scotia statistical health regions, two of which have rates of inactivity of 54% (the South- SW Nova Scotia region and the Pictou-Guysborough-Antigonish-Strait region).
The evidence is clear that increased physical activity would save the province millions of dollars a year in avoided health care costs. It is estimated that physical inactivity in HRM costs the provincial health care system $16 million a year in hospital, physician and drug costs alone. . .
Given the enormous health care burden of a sedentary lifestyle, a regional plan in HRM that provides for safe and walkable communities, sidewalks and biking paths, as well as access to quality sport and recreation programs and facilities, has the potential to reduce the enormous human and economic burden of physical inactivity, and to improve the health of HRM residents.

Wang,Guijing; Macera,Caroline A.;Scudder-soucie,Barbara;Schmid,Tom;Pratt,Michae;Buchner,David (2005)
A Cost-Benefit Analysis of Physical Activity Using Bike/Pedestrian Trails

Health Promotion Practice 6(2): 174-179
http://search2.scholarsportal.info/ids70/gateway.php?mode=pdf&doi=10.1177%2F1524839903260687&db=sagenurs-set-c&s1=187bd25f29b2bd7ac72a37eb7ea36339&s2=ff0f927d8133a0e328d4d531e5b10886

Subject: other, physical activity; cost benefit of bike/pedestrian trails
Location: US
Keywords: Health Economics; Public Health;Community Health Nursing;Health Policy;Physical Education

Abstract or Excerpt:
From a public health perspective, a cost-benefit analysis of using bike/pedestrian trails in Lincoln, Nebraska, to reduce health care costs associated with inactivity was conducted. Data was obtained from the city's 1998 Recreational Trails Census Report and the literature. Per capita annual cost of using the trails was U.S.$209.28 ($59.28 construction and maintenance, $150 of equipment and travel). Per capita annual direct medical benefit of using the trails was $564.41. The cost-benefit ratio was 2.94, which means that every $1 investment in trails for physical activity led to $2.94 in direct medical benefit. The sensitivity analyses indicated the ratios ranged from 1.65 to 13.40. Therefore, building trails is cost beneficial from a public health perspective. The most sensitive parameter affecting the cost-benefit ratios were equipment and travel costs; however, even for the highest cost, every $1 investment in trails resulted in a greater return in direct medical benefit.

Wardman,D.; Clement,K.; Quantz,D. (2005)
Access and utilization of health services by British Columbia's rural Aboriginal population

International journal of health care quality assurance 18(03-Feb): xxvi-xxxi

Subject: other (access to health services)
Location: Canadian
Keywords: Adult; British Columbia/ethnology;Ethnic Groups;Female;Health Services Accessibility;Health Services, Indigenous/utilization;Humans;Indians, North American;Male;Middle Aged;Rural Population

Abstract or Excerpt:
PURPOSE: To provide a picture of the access and use of health services by Aboriginal British Columbians living in both reserve and off-reserve communities.
DESIGN/METHODOLOGY/APPROACH: This project represents a collaborative effort between the University of British Columbia and multiple Aboriginal community partners. Between June and November 2003, 267 face-to-face interviews were conducted with Aboriginal persons in seven rural community organizations across the province.
FINDINGS: This paper reports on the results of a survey of 267 Aboriginal clients. It was found that a substantial number of survey respondents accessed health services provided by an Aboriginal person. Although most respondents felt that services were available, they also identified a number of concerns. These revolved around the need to travel for services, as well as a lack of access to more specialized services. A number of self-reported barriers to service were also identified. These findings have several policy implications and will be useful to service planners.
RESEARCH LIMITATIONS/IMPLICATIONS: Several questions for additional research were identified including the need to establish an inventory of service problem areas and investigating service and benefit policy and community awareness issues.
ORIGINALITY/VALUE: This paper provides policy makers with knowledge on the rural Aboriginal population, a population that has faced long standing problems in accessing appropriate health services.

Weaver,N.; Williams,J. L.;Weightman,A. L.;Kitcher,H. N.;Temple,J. M.;Jones,P.;Palmer,S. (2002)
Taking STOX: developing a cross disciplinary methodology for systematic reviews of research on the built environment and the health of the public

Journal of epidemiology and community health 56(1): 48-55

Subject: methodology
Location: Canadian
Keywords: Databases, Bibliographic; Environmental Health/standards;Housing/standards;Humans;Information Storage and Retrieval/methods;Mental Health;Public Health/standards;Research/methods;Review Literature;Wounds and Injuries/epidemiology

Abstract or Excerpt:
STUDY OBJECTIVE: To develop a cross disciplinary literature search methodology for conducting systematic reviews of all types of research investigating aspects of the built environment and the health of the public.
DESIGN: The method was developed following a comprehensive search of literature in the area of housing and injuries, using 30 databases covering many disciplines including medicine, social science, architecture, science, engineering, environment, planning and psychology. The results of the database searches, including the type (or evidence) of research papers identified, were analysed to identify the most productive databases and improve the efficiency of the strategy. The revised strategy for literature searching was then applied to the area of neighbourhoods and mental health, and an analysis of the evidence type of references was carried out. In recognition of the large number and variety of observational studies, an expanded evidence type classification was developed for this purpose.
MAIN RESULTS: From an analysis of 722 citations obtained by a housing and injuries search, an overlap of only 9% was found between medical and social science databases and only 1% between medical and built environment databases. A preliminary evidence type classification of those citations that could be assessed (from information in the abstracts and titles) suggested that the majority of intervention studies on housing and injuries are likely to be found in the medical and social science databases. A number of relevant observational studies (10% of all research studies) would have been missed, however, by excluding built environment and grey literature databases. In an area lacking in interventional research (housing/neighbourhoods and mental health) as many as 25% of all research studies would have been missed by ignoring the built environment and grey literature.
CONCLUSIONS: When planning a systematic review of all types of evidence in a topic relating to the built environment and the health of the public, a range of bibliographical databases from various disciplines should be considered.

Weich,S.; Blanchard,M.;Prince,M.;Burton,E.;Erens,B.;Sproston,K. (2002)
Mental health and the built environment: cross-sectional survey of individual and contextual risk factors for depression

The British journal of psychiatry: the journal of mental science 180: 428-433

Subject: mental health
Location: England
Keywords: Adolescent; Adult;Aged;Cross-Sectional Studies;Depressive Disorder/epidemiology/etiology;Environment;Environment Design;Female;Housing;Humans;London/epidemiology;Male;Middle Aged;Odds Ratio;Prevalence;Psychiatric Status Rating Scales;Risk Factors;Socioeconomic Factors;Urban Health

Abstract or Excerpt:
BACKGROUND; Little is known about the effects of the physical environment on individual health. AIMS: The present study tested the hypothesis that the prevalence of depression is associated with independently rated measures of the built environment, after adjusting for individuals' socio-economic status and the internal characteristics of their dwellings.
METHOD: Cross-sectional survey of 1887 individuals aged 16 years and over in two electoral wards in north London. Depression was ascertained using the Center for Epidemiologic Studies Depression scale (CES-D). The built environment was rated independently, using a validated measure.
RESULTS: After adjusting for socio-economic status, floor of residence and structural housing problems, statistically significant associations were found between the prevalence of depression and living in housing areas characterised by properties with predominantly deck access (odds ratio=1.28, 95% CI 1.03-1.58; P=0.02) and of recent (post-1969) construction (odds ratio=1.43, 95% CI 1.06-1.91; P=0.02).
CONCLUSIONS: The prevalence of depression was associated with independently rated features of the built environment, independent of individuals' socio-economic status and internal characteristics of dwellings.

Yates, Thorn & Associates (2004)
Population Health and Urban Form: A Review of the Literature

Abstract or Excerpt:
not available

Zhang,X.; Christoffel,K. K.;Mason,M.;Liu,L. (2006)
Identification of contrastive and comparable school neighborhoods for childhood obesity and physical activity research

International Journal of Health Geographics 5: 14

Subject: physical activity, food access/nutrition; obesity, neighbourhood, school characteristics
Location: US
Keywords: Adolescent; Chicago/epidemiology;Child;Cluster Analysis;Epidemiologic Factors;Geographic Information Systems;Humans;Obesity/epidemiology;Residence Characteristics;Schools

Abstract or Excerpt:
The neighborhood social and physical environments are considered significant factors contributing to children's inactive lifestyles, poor eating habits, and high levels of childhood obesity. Understanding of neighborhood environmental profiles is needed to facilitate community-based research and the development and implementation of community prevention and intervention programs. We sought to identify contrastive and comparable districts for childhood obesity and physical activity research studies.We have applied GIS technology to manipulate multiple data sources to generate objective and quantitative measures of school neighborhood-level characteristics for school-based studies. GIS technology integrated data from multiple sources (land use, traffic, crime, and census tract) and available social and built environment indicators theorized to be associated with childhood obesity and physical activity. We used network analysis and geoprocessing tools within a GIS environment to integrate these data and to generate objective social and physical environment measures for school districts.

We applied hierarchical cluster analysis to categorize school district groups according to their neighborhood characteristics. We tested the utility of the area characterizations by using them to select comparable and contrastive schools for two specific studies.
RESULTS: We generated school neighborhood-level social and built environment indicators for all 412 Chicago public elementary school districts. The combination of GIS and cluster analysis allowed us to identify eight school neighborhoods that were contrastive and comparable on parameters of interest (land use and safety) for a childhood obesity and physical activity study.
CONCLUSION: The combination of GIS and cluster analysis makes it possible to objectively characterize urban neighborhoods and to select comparable and/or contrasting neighborhoods for community-based health studies.