

Built environments and health

Place, space and human health

Good health depends on healthy environments, settings and living conditions.

Interest is growing in how the design of the built environment can promote health and prevent many 21st century public health concerns such as obesity, cardiovascular diseases, injury, mental illness and social inequities.

“When so many of our patients have the same problems, we must realize that poor health is not caused only by a lack of discipline, but may be the result of the built environments in which we live.”

*Richard Jackson, Director,
National Center for Environmental
Health, U.S. Center for Disease
Control and Prevention¹*

What are built environments?

The physical environment created or modified by humans. The dimensions of the built environment are typically understood to be:

Land use patterns

- municipal development, neighbourhood planning, urban design; the scientific, aesthetic, and orderly arrangement of land, resources, facilities and services.

Transportation systems

- roads, public transit, sidewalks, bike lanes; the physical infrastructure and services that provide the links or connectivity among human activities.

Building design

- houses, offices, stores, schools, hospitals; the aesthetic, physical and functional qualities of buildings and streetscapes.

The evidence linking built environments and health

Health research has been dominated by an understanding that the factors adversely affecting health can be attributed to individual behaviour (ie. poor diet or lack of exercise) rather than on the settings and structures surrounding us. But this is changing. The accumulating evidence is showing an association between external factors and chronic diseases and injuries. In terms of basic needs like shelter and a supply of clean water, the connection to health is obvious; but other larger-scale features of the built environment, such as the design of our cities, towns, transportation systems, and buildings, are also connected to health. The design of the built environment influences whether and how people get ill or injured.

Human-environment interactions are complex however, and there are many challenges to researching this issue. It is difficult to establish *cause and effect* relationships between the built environments and their impacts on population health. But the studies are consistent in pointing out that there is a clear *association* between built environments and chronic disease and injury.



World Health Organization estimates of the impact of built environments on disease and injury²

Disease, injury or condition	Modifiable environmental factors	Percent of disease/injury/condition that could be prevented by changing the environment
Cardiovascular diseases (global)	Air pollution, risks in the workplace (stress, work-life imbalance), exposure to chemicals, exposure to second-hand tobacco smoke	14%
Injuries due to road traffic collisions (North America)	Land use policies and practices, inappropriate road design, urban structure and density, poor road maintenance	17%
Injuries due to falls (developed countries)	Housing environment, construction sites, safety of recreational environments	26%
Physical inactivity (North America)	Land-use mix and densities, access to destinations, transport infrastructure (includes car, bicycle and pedestrian), building design	31%

Strategies to link built environments and health

- Consolidate and use the evidence showing the impact of built environments on injury, disease and death.
- Foster collaboration between public health professionals and architects, engineers, builders, and planners to ensure that the ways the built environment is used, managed and developed can result in a healthy quality of life for all.
- Support the development of regulations and policies (such as building and safety codes, zoning ordinances, transportation master plans and municipal development plans) which create safer and healthier built environments.

Find out more

- “Linking Health and the Built Environment: An Annotated Bibliography of Canadian and Other Related Research” (Ontario Health Communities Coalition Report)
- “Building Health: Creating and Enhancing Places for Healthy, Active Lives” (2007)

References

1. Jackson RJ. The Impact of the Built Environment on Health: An Emerging Field. *American Journal of Public Health* 2003 Sep;93(9):1382-1384
2. Pruss-Ustun A, Corvalan C. Preventing disease through healthy environments: Towards an estimate of the environmental burden of disease. Geneva: World Health Organization; 2006.