

SHAPING HEALTHY CITIES: NASHVILLE

Built Environment and Health Factor Groupings

A review of national and international empirical (research) literatures raised the following aspects of the built environment as factors impacting health. Factors were then grouped according to the overarching system or phenomenon they referred to. This list is neither exhaustive, nor exclusive; factors that matter, but are not listed, may not have received the attention of research communities yet, or, may not have been identified in our search. A reference list of the studies we identified is available from NCDC, and information on other studies of relevance welcome.

Group 1. Transportation.

Transportation factors that impact health:

- Dependence on automobile (limits those unable to drive)
- Traffic congestion, hazards
- Commute time/distance (Vehicle Miles Traveled)
- Mixed transportation (bus, subway, train, car, bike, walk)
- Proximity of public transit (to residences, workplaces, goods, services)
- Active transportation
 - Bike-ability: bike lanes, bike lane connectivity, cycle tracks, overpasses/underpasses/tunnels, lower speed limits, trails, bike racks
 - See Walk-ability
- Transit oriented development (clustering of development around existing/planned transit services)
- Affordable public transit (can limit access to goods and services)
- Frequency, availability, reliability, comfort of public transport
- Road design—traffic calming, streetscape improvements (limit collisions)
- Available parking, parking regulations (limit/facilitate automobile use)

Group 2. Open Space and Parks

Open space or park factors that impact health:

- Types (provide for different populations, needs)
- Amenities available (lights, sports fields, etc)
- Proximity of parks to homes (accessibility for children, elderly, people with disabilities)
- Aesthetics/attractiveness of parks
- Safety and perceived safety
- Maintenance
- Presence and characteristics of trails
- Recreation facilities (near homes)

Group 3. Housing

Housing factors that impact health:

- Proximity to highways (air quality)
- Housing affordability (unaffordable housing can lead to living in substandard housing, limit money spent on other goods/services)
- Gentrification (potential housing displacement)
- Housing quality (building materials, ventilation, filtration)
- Residential density

Group 4. Food Resources

Food resource factors that impact health:

- Grocery store development (location and access)
- Design of grocery stores (pedestrian oriented vs. car oriented)
- Farmers' markets
- Community gardens
- Presence of fast food and alcohol outlets
- Local food producers and distributors

Group 5. Walk-ability (Pedestrian Safety)

Walk-ability factors that impact health:

- Residential density, population density
- Walking infrastructure (sidewalk design, crosswalks, trails, labeling/maintenance of paths, etc.)
- Aesthetics (presence of greenery, trees, attractive landscapes, litter, graffiti, etc.)
- Traffic safety (avoid traffic collisions)
- Street connectivity (route directness)
- Land use mix
- Perceived access to stores, areas of interest
- Pedestrian-oriented retail development
- Employment density/workplace proximity
- Safe commute for children to schools

Group 6. Neighborhood Design/Development

Neighborhood design/ development factors that impact health:

- Neighborhood centers (retail, service or transit based)
- Diversity of destinations
- Residential and employment density
- Denser, more vibrant commercial districts
- Aesthetics (appealing to experience)
- Perceived access to stores
- Mixed use zoning (create mixed use communities)
- Commute/transit times
- Housing and essential goods located within walking distance
- Sprawling development
- Distance between schools and built environment
- Neighborhood safety (transforming vacant lots, run-down yards and developments)

- Presence of trees (mitigate urban heat island effect, reduce airborne pollutants, capture storm runoff in root systems, positively affect emotional health, enhance job satisfaction, and increase quality of life)
- Total area of impervious surfaces (stormwater runoff and water contamination)
- Degree of connection between impervious surfaces and storm drainage system (less runoff from surfaces that drain directly to vegetated areas)