

Urban Green (Infra)structure for Pedestrian Health

Urban green space is an important element of the community environment linked with walking and many other mental and physical health benefits (e.g. stress reduction, thermal comfort). However, empirical studies on the specific elements, measures, and amounts of urban green space that can elicit meaningful health benefits are limited – especially in the context of how pedestrians experience the urban environment.



What is the research about?

The objective of the proposed research is to explore if and how urban nature may be linked with health of urban residents. The specific aims are:

- **Aim 1:** To develop a valid measurement method to **quantify urban nature**, in terms of type, quality, and amount captured in both aerial view and eye-level view environments.
- **Aim 2:** To understand the **specific structures of urban nature** in Texas communities associated with pedestrian activities (i.e. amount and frequency of walking and social encounters) and pedestrian health outcomes (i.e. safety, thermal comfort, mood, and stress).

How will the research be conducted?

Part 1 is a 1-hour activity to walk, bike and drive along a pre-specified route, while wearing small devices (GPS, accelerometer, E4 wristband, and a mini-camera) and carrying a trip recording app.

Part 2 is a 2-day study to wear two small devices (GPS and accelerometer) and complete a daily travel log for two weekdays. These activities typically take about 20 minutes per day.

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