

# Individuals who feel safe where they live lose more weight, study finds

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Feeling safe where you live may be key to weight loss, the European Congress on Obesity ([ECO](#)) in Dublin, Ireland (May 17-20) will hear.

Preliminary Dutch research has shown that the feeling of [safety](#) in one's neighborhood is linked to greater [weight loss](#) when taking part in lifestyle interventions.

The term "neighborhood safety" covered four dimensions: not feeling afraid of crime or harassment while walking through the neighborhood, feeling safe while walking or cycling due to heavy traffic, adequate street lighting during the evening and at night and the absence of youths loitering in the area.

In contrast, no significant association was found between access to grocery stores or sports facilities and weight loss.

Lower social economic status, often measured using neighborhood characteristics or postcodes, is a known risk factor for obesity. Lifestyle interventions, such as diet and exercise programs, can play an important role in addressing obesity. However, little is known about the effect of neighborhood characteristics on the success of such interventions.

To find out more, Boëlle Brouwer, of the University Medical Center Rotterdam, Rotterdam, the Netherlands, studied the relationship between neighborhood characteristics and changes in waist circumference and weight in people taking part in 1.5-year multidisciplinary combined lifestyle intervention.

The study involved 122 individuals living with obesity (74.6 percent women, average BMI = 39 kg/m<sup>2</sup>) who participated in the intervention, which included dietary advice combined with exercise and cognitive behavioral therapy, between October 2011 and April 2012.

Before the start of the program, the participants were asked to complete a questionnaire assessing neighborhood characteristics focusing on five factors: neighborhood safety (four items—see above), neighborhood

attractiveness (four items—the presence of trees along the road, the existence of a nearby park, a clean and tidy appearance of the neighborhood and the general appeal of the area as a desirable place to live), [social cohesion](#) (three items—feeling lonely when in the neighborhood, people in the neighborhood having positive social interactions with each other and people in the neighborhood being willing to help each other), access to grocery stores (one item—the ability to do daily grocery shopping in the neighborhood) and access to sports facilities (one item —having sports facilities nearby).

Height, weight and waist circumference were measured before the start of the program, after 10 weeks and after 1.5 years.

The study found that individuals who scored higher on a scale of neighborhood safety, (with a possible total score ranging from 1 to 5, 5 indicating the highest feeling of safety), experienced greater decreases in both weight and waist circumference.

Higher scores on neighborhood safety were associated with more weight loss after 10 weeks. Specifically, a one-point increase in the neighborhood safety score was associated with a 1.3% greater initial weight loss.

Similarly, greater feelings of safety in one's neighborhood were linked with [greater weight loss](#) and greater decrease in waist circumference at the end of the program (after 1.5 years). A one-point increase in the neighborhood safety score over the long term was associated with an average decrease of 3.2% in weight and an average decrease of 2.6% in waist circumference (the latter indicates a favorable change in body composition towards less abdominal fat accumulation).

Brouwer says, "Remarkably, these findings were independent of sex, age and educational level."

"There are several possible reasons why neighborhood safety is important. People may be less willing to go outside if they feel unsafe, resulting in them having less physical activity. Another explanation could be that feelings of insecurity increase levels of stress which can contribute to unhealthy eating behavior and weight gain. We also cannot rule out that neighborhood safety is associated with other factors, e.g. poverty, which may be important for the association we found."

The study also indicated that a one-point increase in social cohesion score (ranged from 1 to 5 with 5 indicating the highest feeling of social cohesion), tended to give an average decrease of 1.3 percent in waist circumference during the initial 10 weeks. Again, this was independent of sex, age and educational level.

Brouwer says, "In general, it is known that social cohesion can provide [social support](#) and motivation to participants. Feeling connected to and supported by people in your surroundings can increase adherence to healthy behaviors and improve overall outcomes of lifestyle interventions."

No other significant associations were found between social cohesion and weight and waist circumference.

No significant associations were found between access to [grocery stores](#) or sports facilities and changes in weight or waist circumference.

However, there were indications of a potential link between neighborhood attractiveness and long-term weight loss and waist circumference changes, when adjusting for sex, age, and education level.

Brouwer says, "Our results indicate that if you feel unsafe where you live, it may reduce your chances of successful weight loss in response to combined [lifestyle interventions](#)."

"We need more research to determine how neighborhood safety may affect weight and [waist circumference](#) and if feelings of safety are linked to other factors such as housing, stress or poverty."

Study co-author, Professor Elisabeth van Rossum, also of the University Medical Center Rotterdam, adds, "We often focus on individuals in the context of a lifestyle intervention for persons with obesity. In this study we found indications that the social and physical environment they live in may play a role in the success of the intervention, although we need more research to see whether this is causally related."

"If it turns out that these environmental and social factors indeed are drivers of the success of a guided lifestyle intervention, then we need to study to what extent this also applies to individuals who try to lose [weight](#) by themselves."

Provided by European Association for the Study of Obesity

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