

Science for Environment Policy

How green spaces could reduce risk of heart disease

Regular use of green space in a city setting may be linked to reduced risk of heart disease, a new Lithuanian study suggests. The authors found that people who lived closer to green spaces suffered fewer symptoms of heart disease over a four-year period, and that regular park users were at lower risk based on factors such as weight, physical activity and diabetes.

When considering lifestyle factors that reduce the risk of heart disease, the public might list a change in diet, stopping smoking or taking more exercise. They are unlikely to mention how far they live from the nearest [park](#). However, scientists are increasingly realising that our risk of heart attack, stroke and other [health](#) problems are associated with access to green spaces. Green spaces may satisfy some inherent need to be close to nature – providing mental health benefits – or simply offer better opportunities for regular exercise.

This research, part of the EC-funded [PHENOTYPE](#) project¹, is the first large-scale study to explore the link between green spaces and risk of heart disease in central and eastern Europe. Heart disease is more common in Lithuania than in many other developed countries, possibly due to unhealthy lifestyles.

The study was based on 5 112 people living in the [city](#) of Kaunas, Lithuania. The researchers defined parks as larger than 1 hectare and at least 65% covered by trees. They split the participants into three equal groups based on how far they lived from green spaces, with the closest living less than 350 m away and the furthest living over 630 m away. The researchers note that they were unable to explore the reasons behind any causal links between green spaces and risk of heart disease and did not account for income.

Four years after initial data were collected in 2006–2008, the researchers compared heart disease rates between the three groups. Men in the group living furthest away from green spaces were more likely to have died from, or suffered symptoms of, heart disease. Men and women living in the intermediate and furthest groups were more likely than those in the closest group to have suffered non-fatal symptoms of heart disease, such as angina. Altogether, 83 people had died from heart disease and 364 had suffered non-fatal symptoms.

The researchers also used data collected in a previous health survey. All the participants had taken part in this survey, which provided information about blood pressure, body mass index, cholesterol and blood sugar levels (all factors that can affect the risk of heart disease), as well as scores on numeracy, memory and concentration tests. In addition, participants answered questions about their health and lifestyle, including the amount of time they spent in city parks.

Those living closest to green spaces were more likely to be park users and those who considered themselves park users were at lower risk of heart disease based on a number of factors. For instance, park users were less likely to be obese, physically inactive or to smoke. They were also less likely to have diabetes or high blood sugar levels. Park users also rated their health and quality of life as higher.



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1.The study was part of the Positive Health Effects of the Natural Outdoor Environment in Typical Populations in Different Regions in Europe (PHENOTYPE) project funded by the European Commission. See: <http://www.phenotype.eu/>