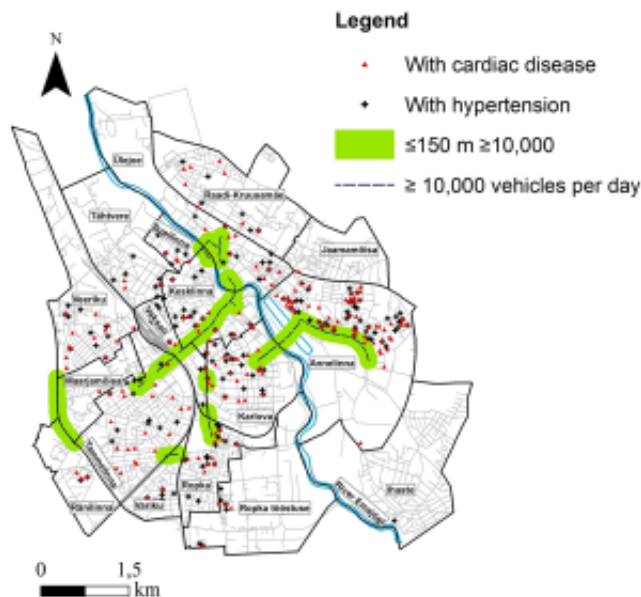
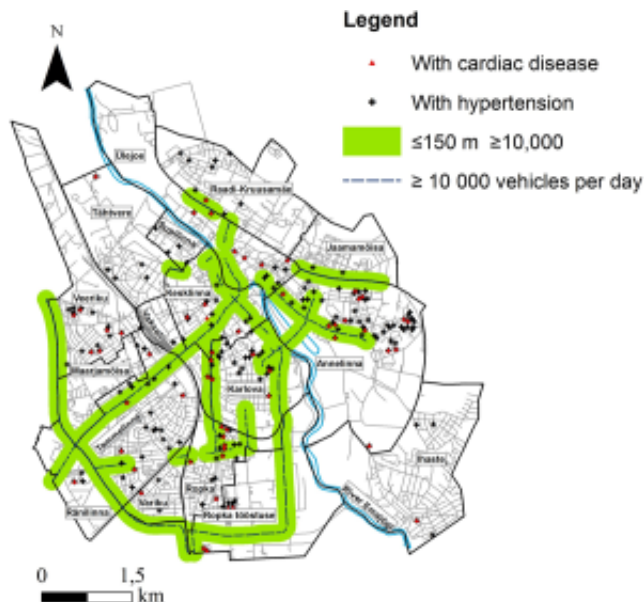


Busy traffic – risk of having cardiac disease



Air pollution from vehicles has been related to cause respiratory and cardiovascular diseases. There are many pollutants; most harmful of them is considered to be particulate matter (PM). Small in size, they are composed of toxic heavy metals and when inhaled, cause respiratory problems and inflammation. The severity of health problems depends on the duration of exposure and also concentration size. Several scientific studies have proved that in higher concentrations PM can cause serious health effects. Few studies however have reported that PM below limit values set by the WHO has an effect on cardiovascular and respiratory system. In Northern Europe cities traffic is one of main sources of air pollution. Tyre, break wear and road abrasive particles consist of heavy metals. Concentrations remain high as close to 150 meters from busy roads. More sensitive people with chronic respiratory diseases and cardiac problems may have more attacks if exposed to PM in longer period.

Recent study in small city of Tartu in Estonia analysed same people living close to busy traffic closer than 150 meters in year 2000 and again in 2012. We believe that studied health symptoms are mostly affected by traffic-related PM in different fractions. Concentration in time had increased. New diagnoses of cardiac diseases developed more on people who lived close to roads, where 10,000 or more vehicles pass every day. When looking heavy duty vehicles, risk of having cardiovascular disease show increasing trends as the vehicle numbers grow. Risks of having analysed diseases have fact slightly decreased over time by 30%, because people started to move further from the city centre. That again caused traffic volume increase in suburb.



Data of this study was retrieved from postal questionnaire RHINE (Respiratory Health in Northern Europe). Distance 150 meters was based on other studies that measured traffic pollutants concentrations in different distances from the road. They found that after 150 meters, particulate matter concentrations drop considerably. Distances were measured using GIS. Traffic volumes have increased and there were more road segments with busy traffic.

Continuous support on public transport system and building more bicycle roads are the motivate people to use cars in their day to day activities. Increasing knowledge about air pollution health effects to general public is also important. People still aren't convinced that air pollution has any effects on their health if the levels are below limit. When some health problem develops, it's difficult to relate it to be caused by air pollution, because there are also other factors that can cause to develop the disease.

Publication

[Close proximity to busy roads increases the prevalence and onset of cardiac disease - Results from RHINE Tartu.](#)

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