

The Home Air Filtration for Traffic-Related Air Pollution (HAFTRAP) Study

HDI Staff on Study:

Linda Sprague Martinez, PhD
Melanie Rocco, MSW, MPH
Gillian Betz, MPH

Study Period: 2020 - 2025

Study Partners:



Olin College
of Engineering

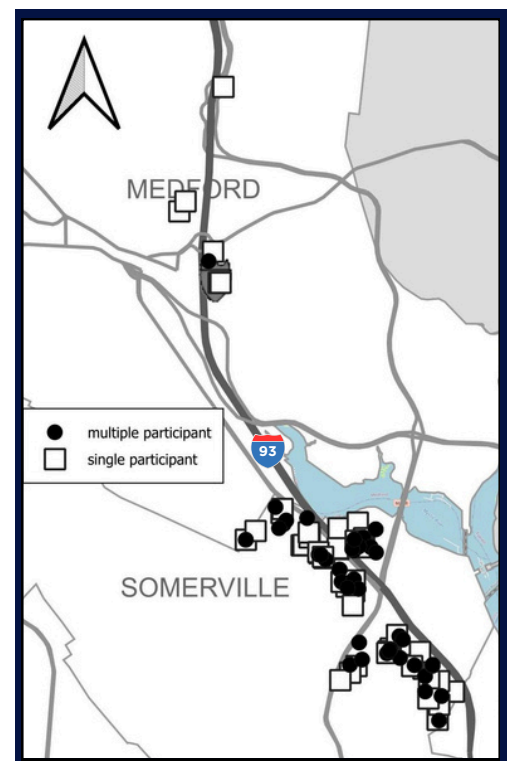
UConn
HEALTH

Why this Study Matters

- Indoor concentrations of particulate matter can be several times higher than outdoor environment levels, posing significant health risks (Cheek et al., 2021).
- PM exposure contributes has been linked to: aggravated asthma, decreased lung function, and elevated blood pressure (GBD 2021 Risk Factors Collaborators, 2024; Kim et al., 2015).
- People who live near highways and other highly-trafficked roads are especially vulnerable to particulate and other air pollutants (Brugge et al., 2007).

Study Overview

The HAFTRAP Study is a randomized crossover trial testing the efficacy of portable in-home air purifiers in reducing traffic-related air pollution and cardiovascular risk. 156 individuals participated in the study and were given high efficiency particulate air (HEPA) filters to use in their homes for two periods of 30 days each. Before and after each period, the study team collected blood pressure and blood samples from participants, or health markers. In addition to checking health markers, devices were used to measure the amount of tiny particles in the air, especially those that can be easily inhaled. At the end of the 30 days, the study team interviewed participants to hear their feedback about using the air filters in their homes.



HAFTRAP study participants lived in the Somerville/Medford, Massachusetts area, close to Interstate-93 and Route 38.

[Click here to access the HAFTRAP Study website to learn more and read about the study's findings.](#)

