

Environmental Epidemiology:

Heat, Air Pollution and Health

DATE	Tuesday 3 November 2026, 09:00–12:00
VENUE	Franklinsalen , Tomtebodavägen 6, (Våningsplan 3 i Scheele-lab A-hus) Karolinska Institutet, Solna — in-person only
COST	Free of charge. Fika included.
REGISTER	Register here by October 26 · Places are limited; you will receive a confirmation by email.

WHAT TO EXPECT

Environmental epidemiology asks how the air we breathe, the heat we live through, the noise around us and the green space we can reach affect health. Answering those questions well takes a particular toolkit: exposures that no one can measure directly on each person, designs built for populations rather than patients, and analyses that handle temporal latencies, non-linearity and potential synergy between correlated exposures.

In three hours we will walk through two real studies end to end — one short-term, one long-term. You will see where the exposure data come from, why each design was chosen, how the analysis was set up, and what the findings do and do not support. The sessions are conversational rather than technical: no software, no code, no prior exposure-assessment experience needed.

PROGRAMME

09:00–09:10	Welcome and introduction Why environmental epidemiology, and why now.
09:10–09:55	Case 1 — Heat and health A worked example of a short-term exposure study: how temperature data are assigned to people, how time-series designs handle lagged and non-linear effects, and what the results mean. 30 min presentation, 15 min discussion.
09:55–10:15	Fika
10:15–11:00	Case 2 — Long-term air pollution and health A worked example of a long-term exposure study: modelled exposure surfaces from land-use regression and satellite data, cohort design to estimate exposure-response functions. 30 min presentation, 15 min discussion.
11:00–11:30	The planned doctoral course What a full week would cover — exposure assessment, short- and long-term effects, multiple exposures and the exposome, health impact assessment — and how it would be taught and examined.
11:30–12:00	Your turn — survey and open discussion A short structured survey and an open conversation. What would make this course worth a week of your time?

WHO IS THIS FOR

Doctoral students at KI in epidemiology, public health, biostatistics, environmental medicine, and clinical and health-related fields — and equally their supervisors. Postdocs, junior and senior researchers, and clinicians with a research interest are all welcome.

Introductory-level epidemiology and biostatistics (Epidemiology I and Biostatistics I, or equivalent) is enough. Bring curiosity, not a laptop.

A new doctoral course — and your chance to shape it

This workshop is a pilot for **Environmental Epidemiology**, a one-week doctoral course proposed within the Doctoral Programme in Epidemiology, with a first run planned for autumn 2027. Not one of KI's 242 doctoral courses currently covers this field, even though air pollution ranks among the largest global risk factors for disease burden and a changing climate is reshaping the questions we ask.

The full week would cover application of environmental exposures (monitoring data, land-use regression, dispersion models, satellite data), short-term designs (time-series, case-crossover, distributed lag non-linear models), long-term cohort designs, multiple exposures and interaction, and health impact assessment — with hands-on R practicals and a group study proposal throughout. 1.5 higher-education credits.

The last half hour of the workshop is yours. We want to know whether the content is pitched right, what is missing, and whether you would sign up. Your feedback goes straight into the syllabus we submit in February 2027.

TEACHERS

Petter Ljungman, MD, PhD, Associate Professor, Institute of Environmental Medicine, Karolinska Institutet; consultant cardiologist, Danderyd Hospital. Proposed course director.

Massimo Stafoggia, PhD, Adjunct Senior Lecturer, Institute of Environmental Medicine, Karolinska Institutet; Senior biostatistician, Department of Epidemiology, Lazio Regional Health Service, Rome.

Organised within the Doctoral Programme in Epidemiology and supported by KEEN, the Karolinska External Exposome Network.

REGISTRATION AND CONTACT

Register by [DATE] at [REGISTRATION LINK]. Places are limited and allocated in order of registration; you will receive a confirmation by email.

Questions? Contact Petter Ljungman petter.ljungman@ki.se, Institute of Environmental Medicine, Karolinska Institutet.