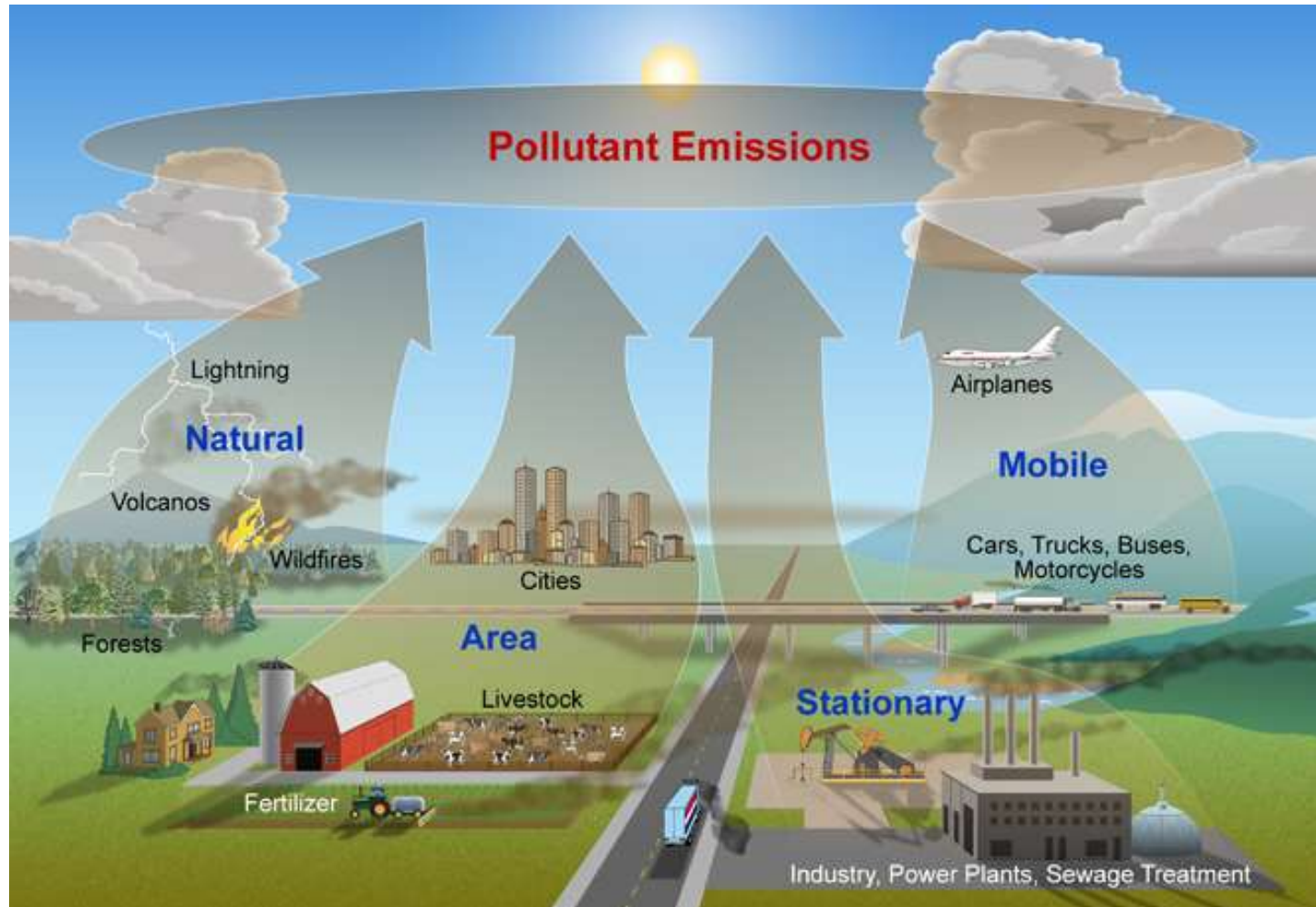




Lijdt het hart ook onder
vervuilde lucht?

Prof dr Marc Claeys
Dienst cardiologie, UZA

Air pollution: sources – fossil fuels

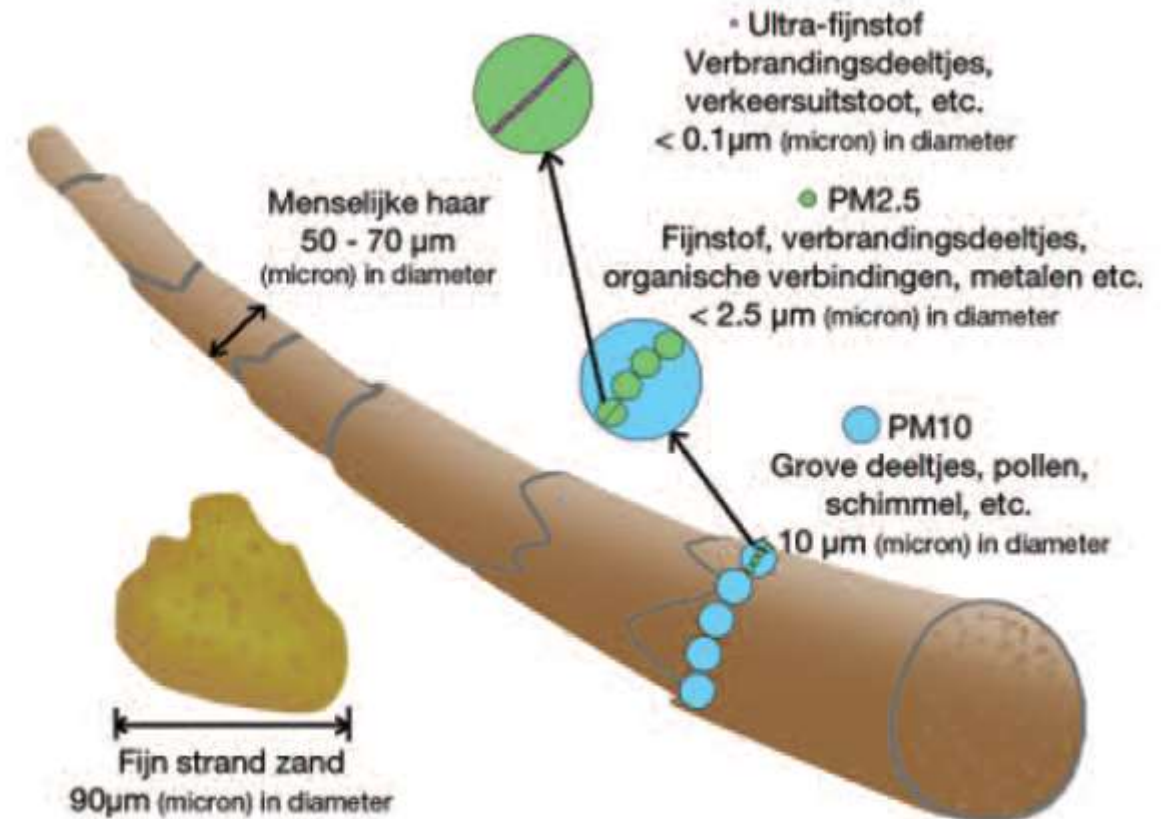


Air pollution: most important pollutants

Fossil Fuel



Particulate matter: fijn stof



CO₂: no pollutants but greenhouse gas !!!

Global warming and climate change

Air pollution in London: Claude Monet (1904)

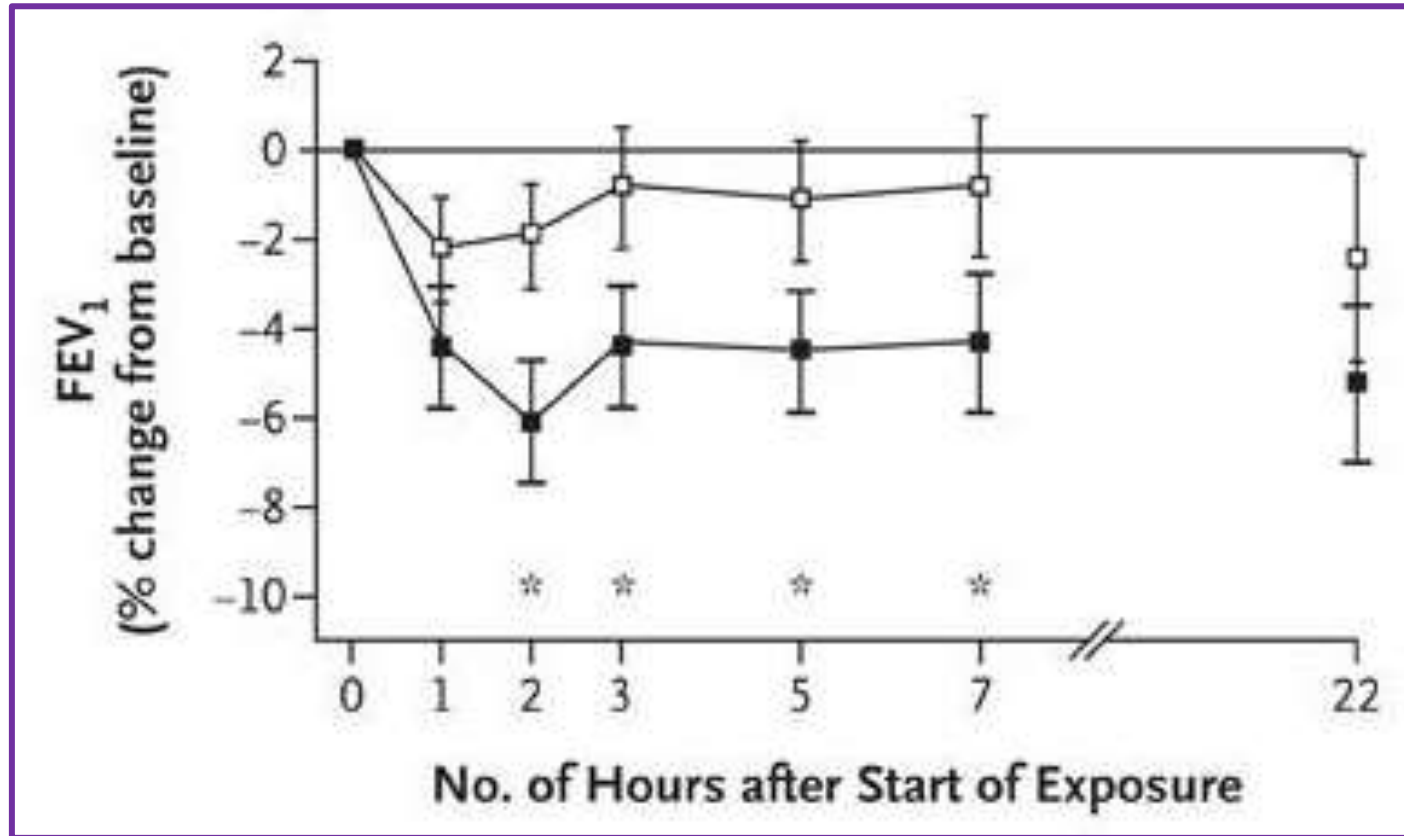


Great Smog (5-9 dec 1952)

4000 premature death's !!!

House of Parliament: the sun shining through the smog

Diesel traffic and lung function in asthma patients



2 h walking in Hyde park

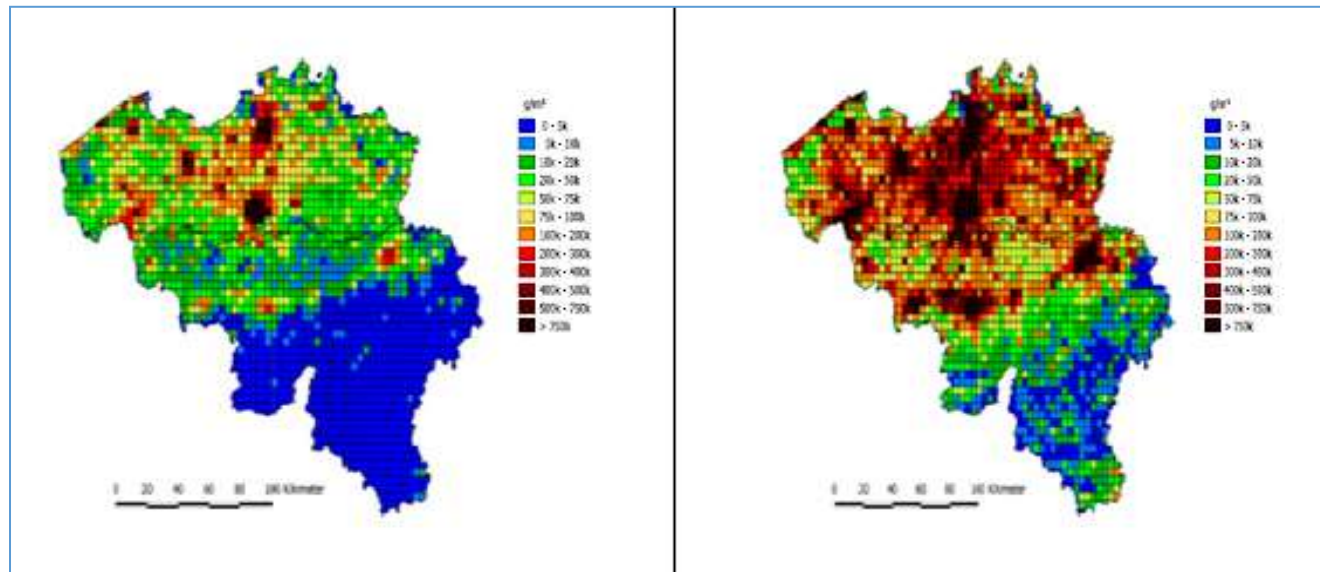
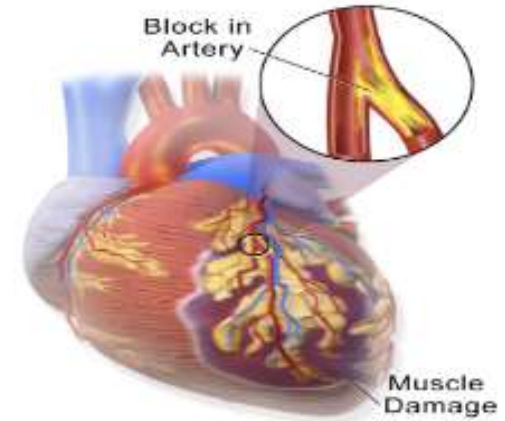
2 h walking in Oxford street

Airpollution and acute heart attack in Belgium

A case-crossover study (2009-2013)

5 January 2012
PM= 10
n= 3 STEMI

17 January 2012
PM=47
n= 11 STEMI

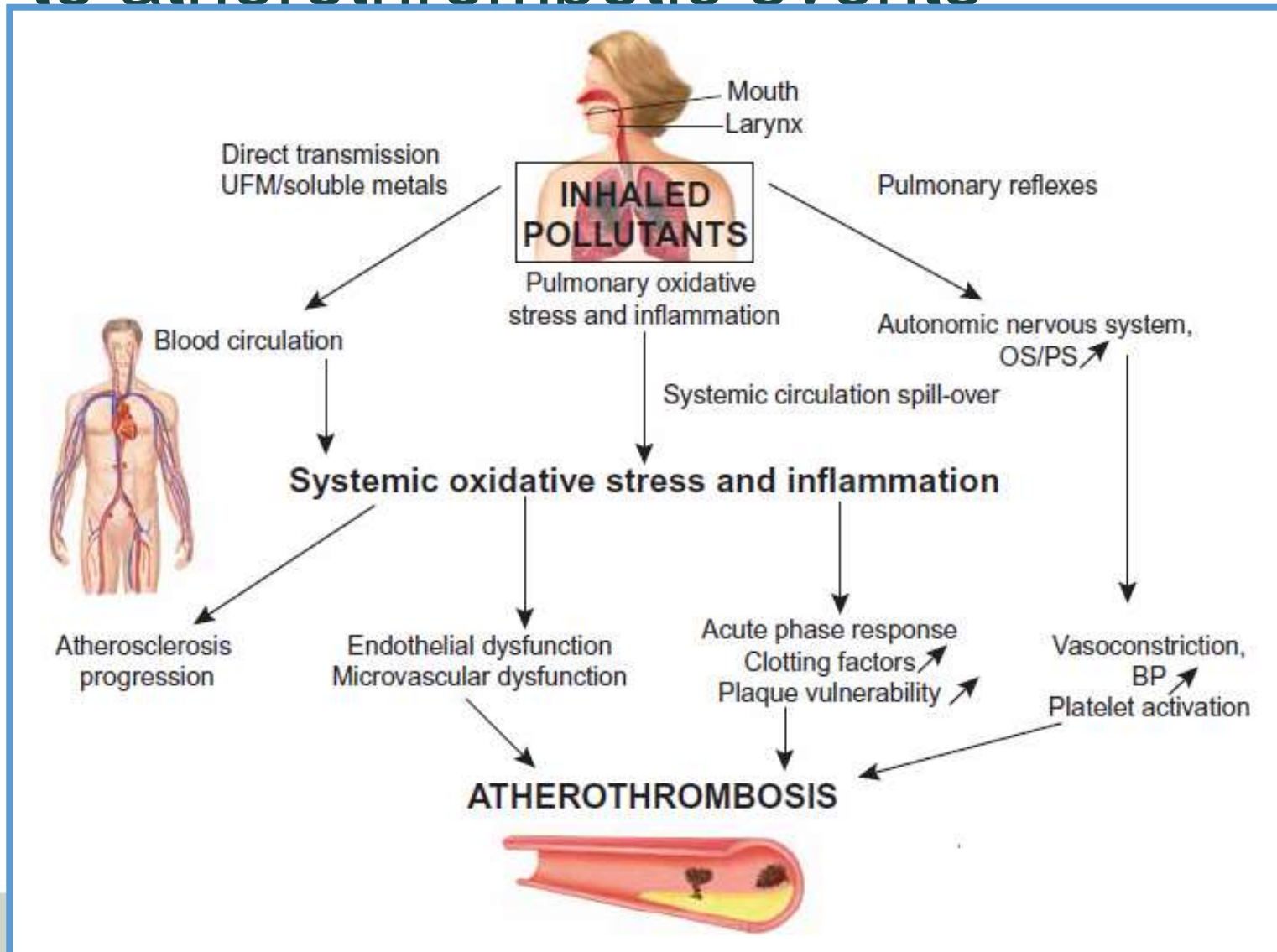


PM_{2,5} : OR 1,03

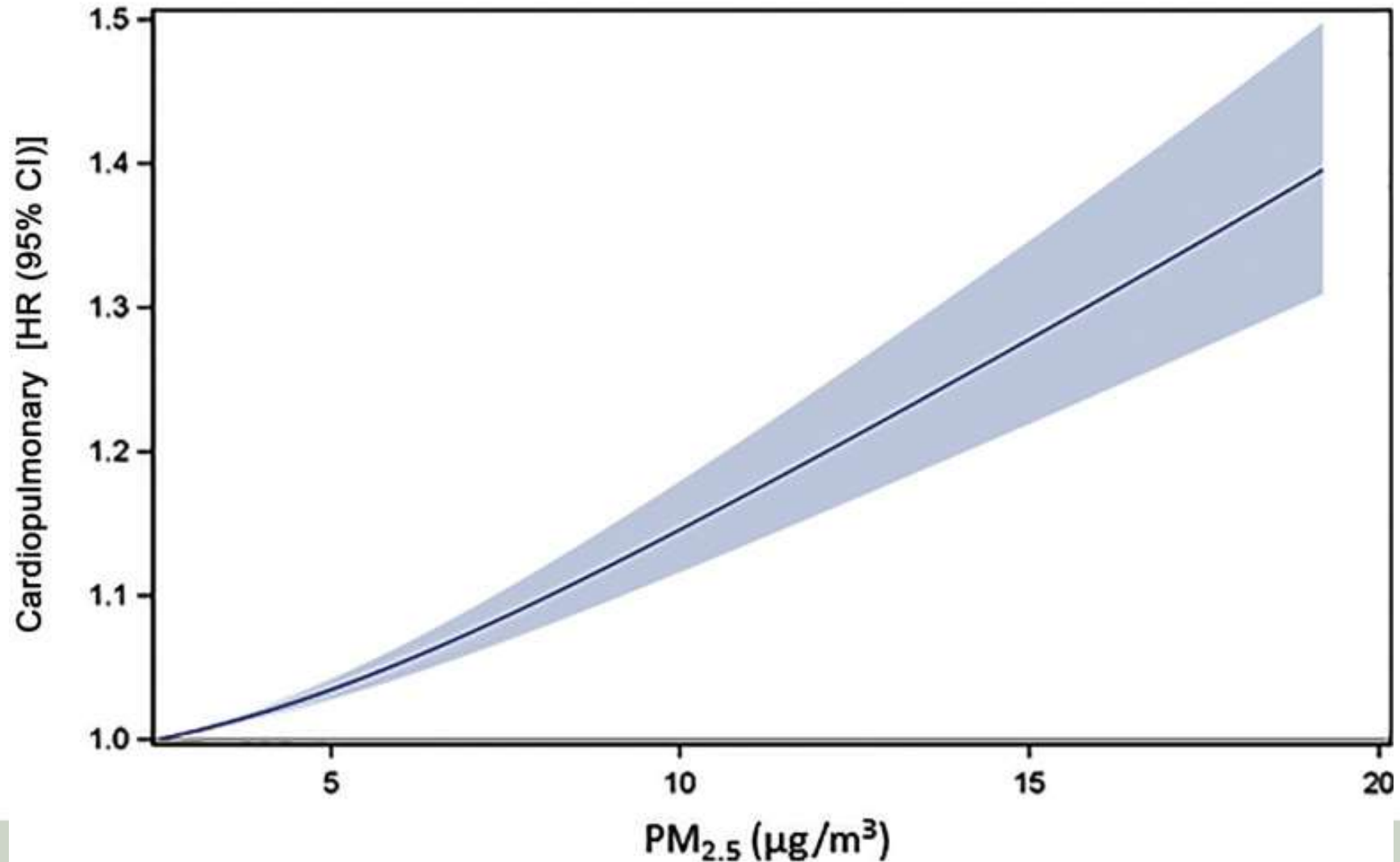
NO₂ : OR 1,05

Δ 10 μg/m³

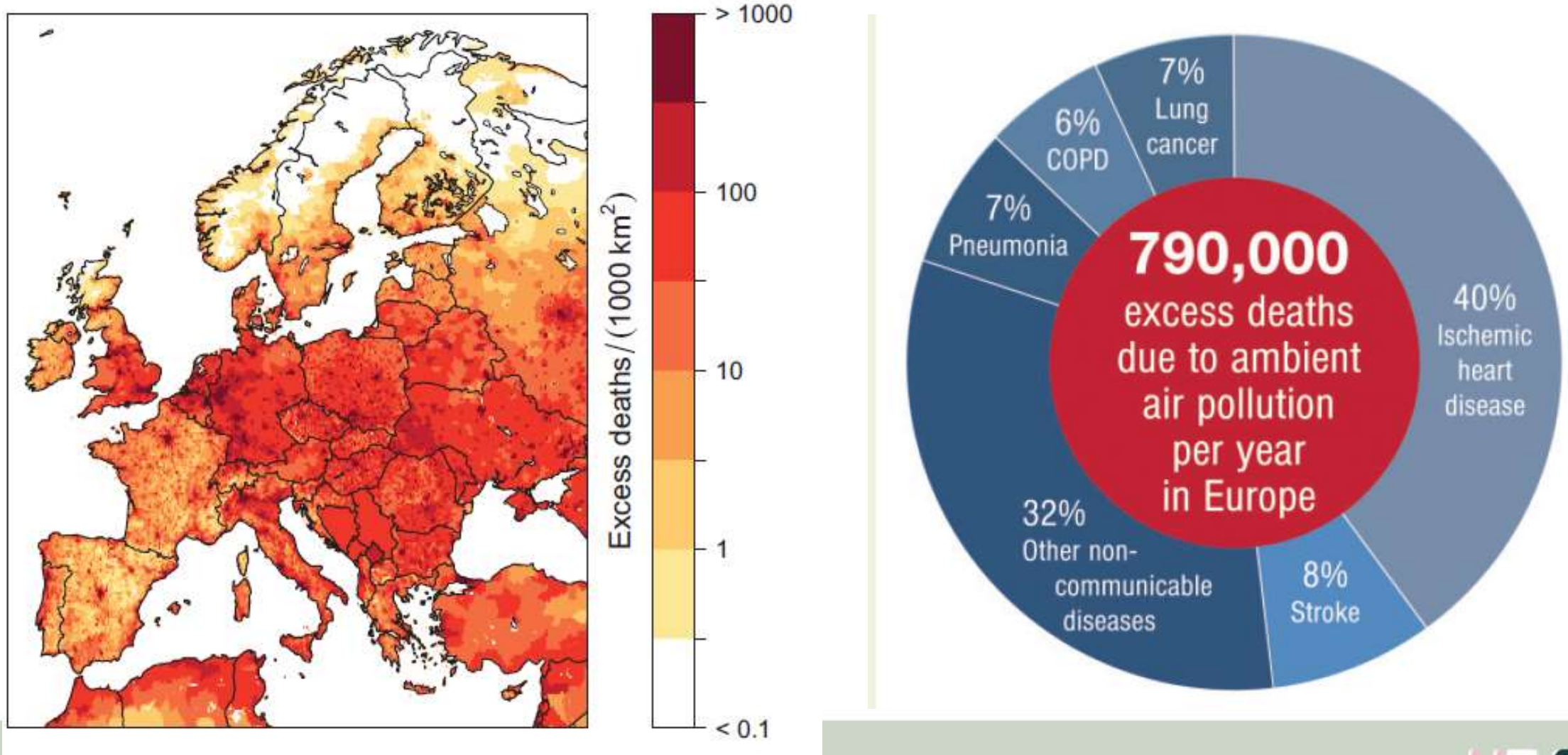
Plausible biological mechanisms linking air pollution to atherothrombotic events



Air pollution and cardio-pulmonary mortality

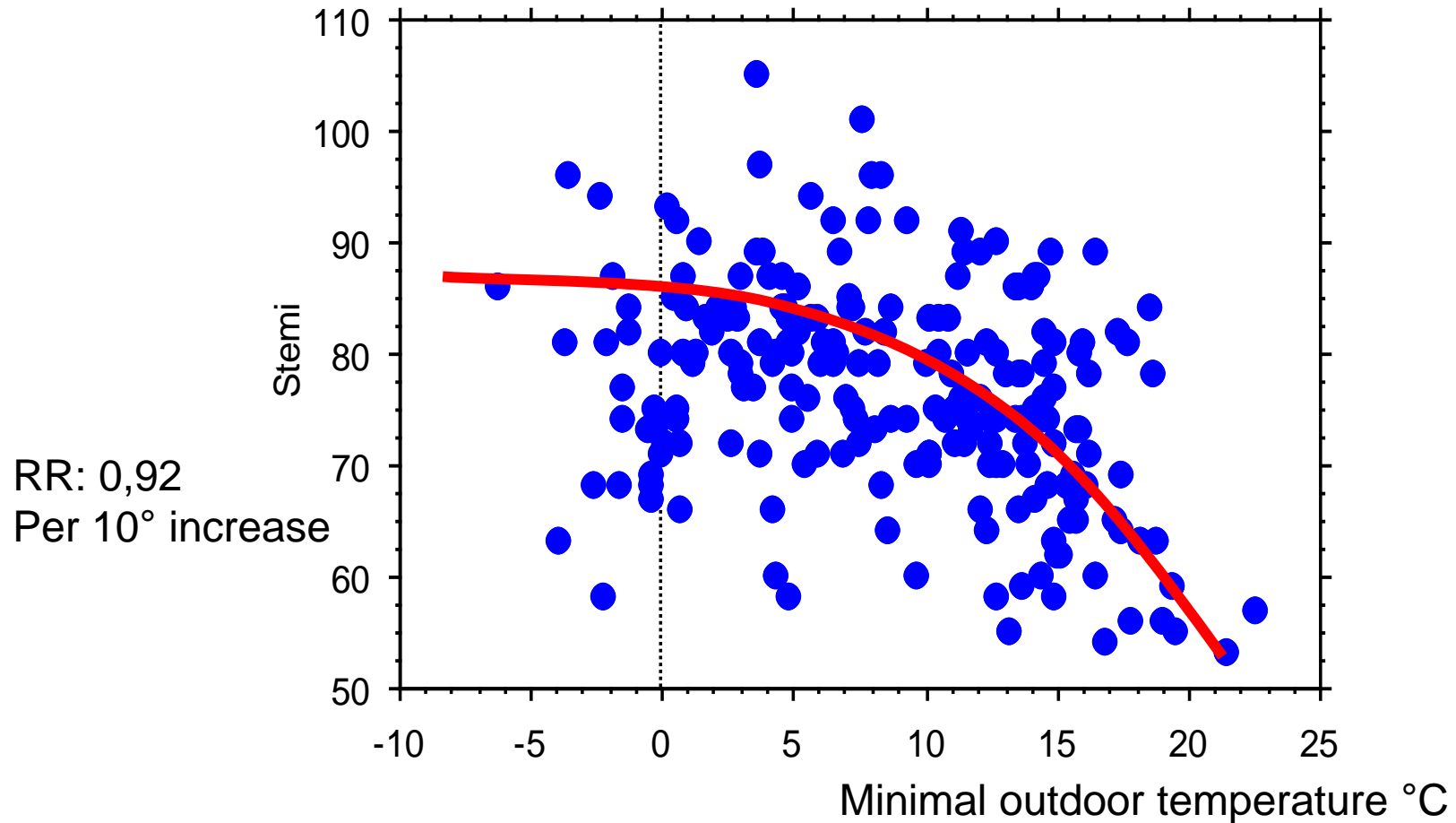


Air pollution and attributable excess of deaths

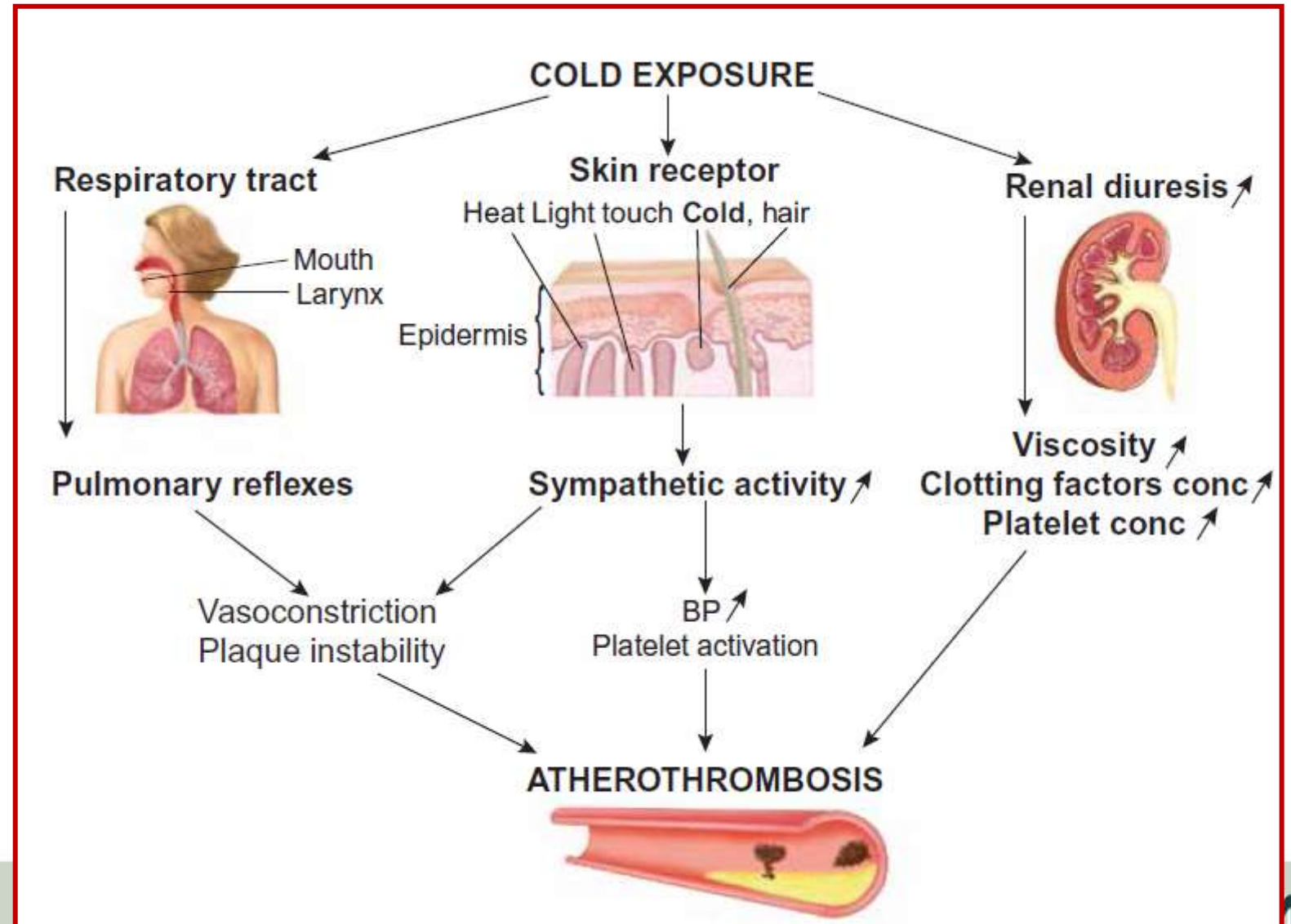


Environmental triggers: temperature !!

Number of STEMI/week N=15964 Belgian STEMI treated with pPCI (2006-2009)

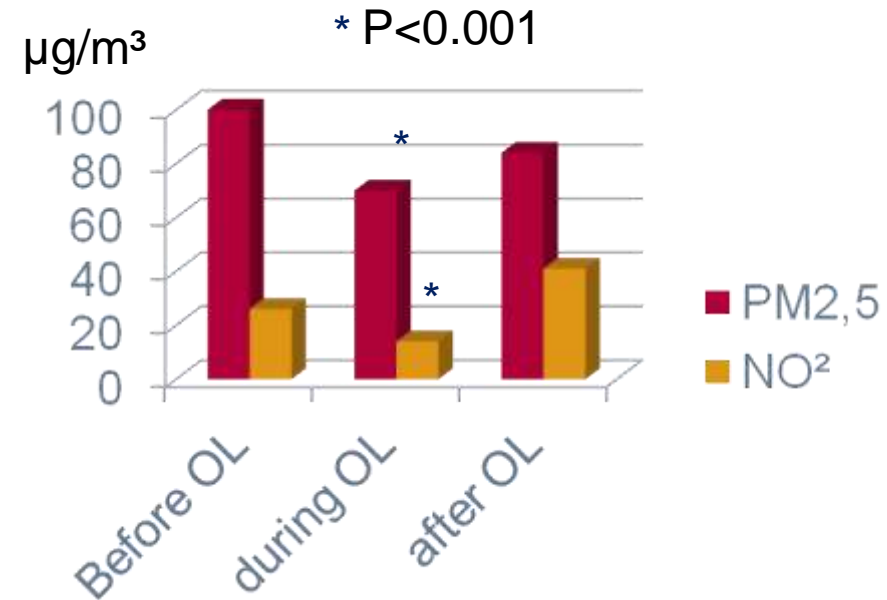


Plausible biological mechanisms linking cold exposure to atherothrombotic events

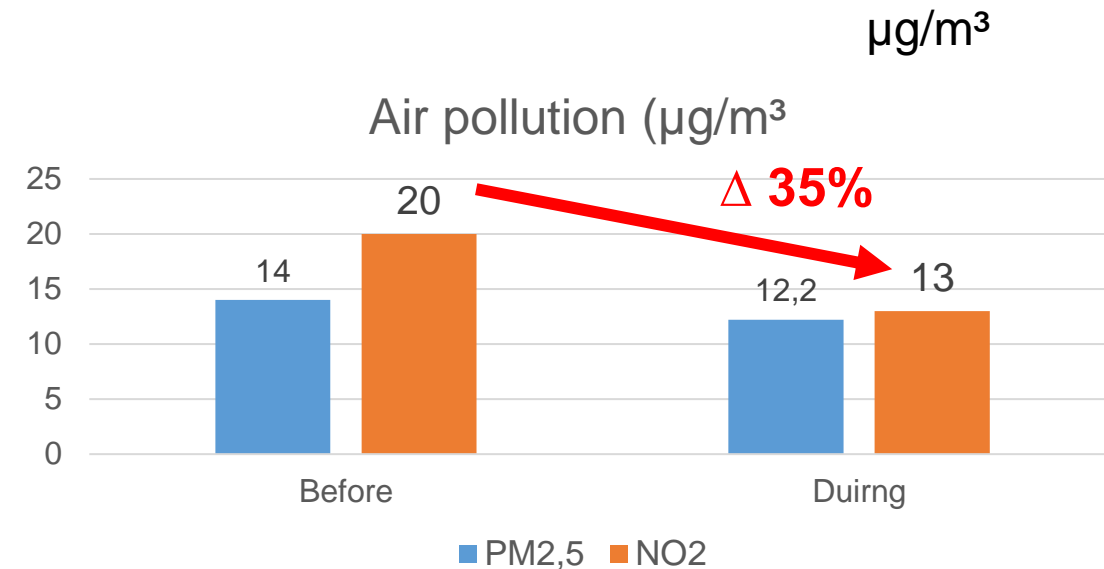
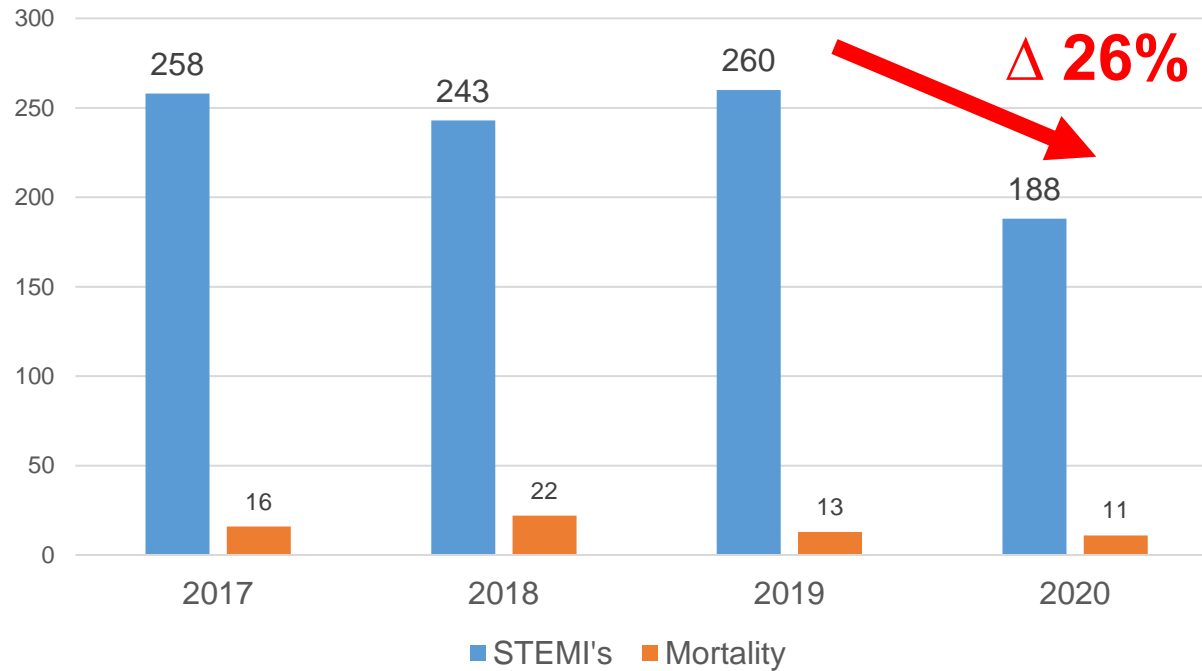


Solutions for air pollution: stop use of fossil fuel

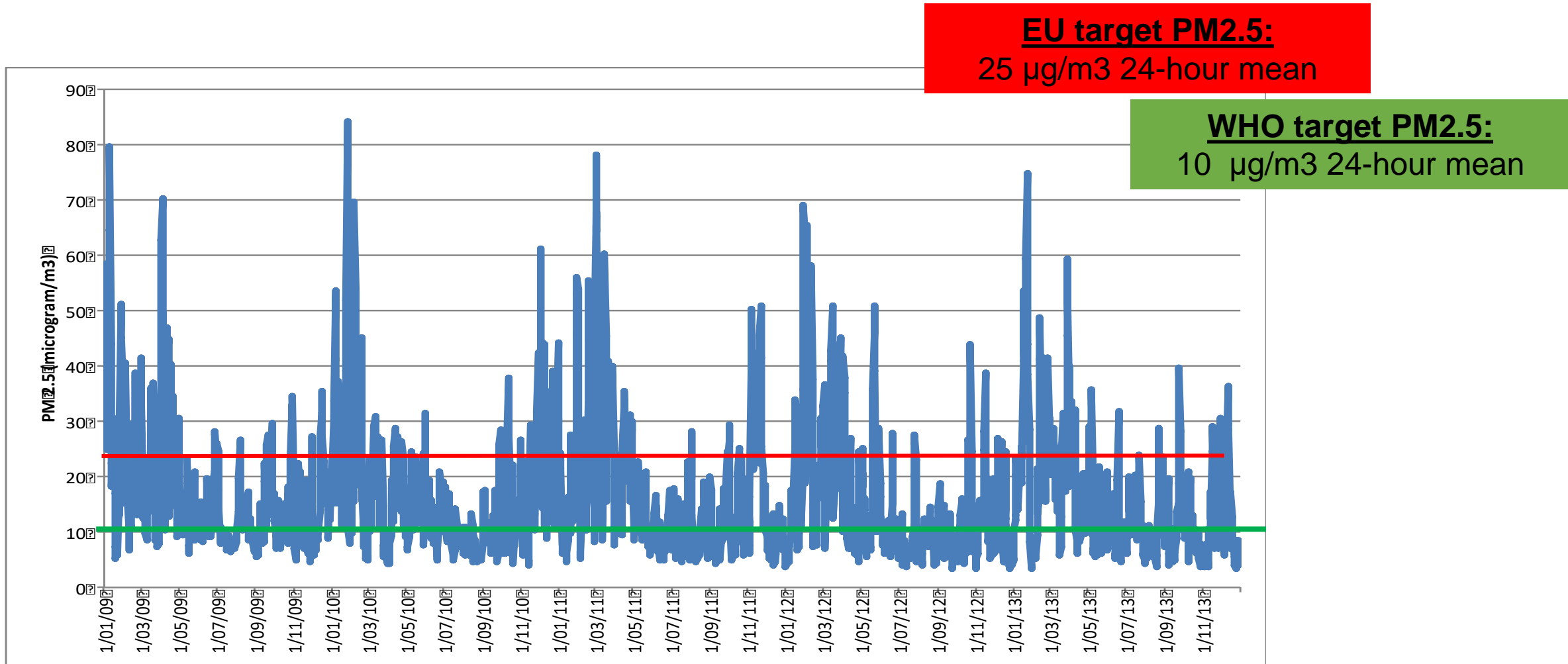
Beijing Olympics 2008



STEMI epidemics during corona lock down in Belgium



Air pollution: national daily mean of PM_{2,5} (2009-2013)



➤ In Belgium, 17.5 % of days > PM 2.5 daily limit of EU target

Solution for air pollution

