## **Beijing air quality critical for Olympians**

Air pollution levels in Beijing during the Olympics could be over three times the amount deemed safe by the World Health Organization, causing health problems and affecting the performance of endurance athletes

### Pollutants that affect performance



Particulate matter (PM<sub>10</sub> and PM25): Vehicle emissions, coal dust from power plants. Particles penetrate trachea and lungs - can pass into bloodstream.

Linked to stroke. Alzheimer's and cardiopulmonary diseases and cancer



Ozone: Photochemical smog formed by action of ultra-violet light on nitrogen oxides.

Directly affects lungs, respiratory tract and eyes, increasing susceptibility to inhaled allergens - at high levels can cause oedema (fluid in lungs)



#### Carbon monoxide:

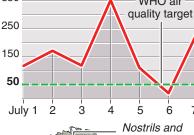
Vehicle emissions. Binds to haemoglobin in bloodstream, stops

transport of oxygen to cells

# Particulate matter: July 1-7, 2008 350

Trachea

PM<sub>10</sub> - micrograms per cubic metre\* WHO air



Breathing through mouth allows higher concentration of pollutants to enter lungs

sinuses filter air



#### From burning fossil

fuels and heavy oil. Combines with water to form sulphuric acid. Causes inflammation of respiratory tract



Nitrogen dioxide:

Vehicle emissions. Irritates lungs, lowers resistance to respiratory infections

\*Margin of error: 20%