



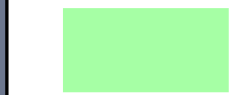
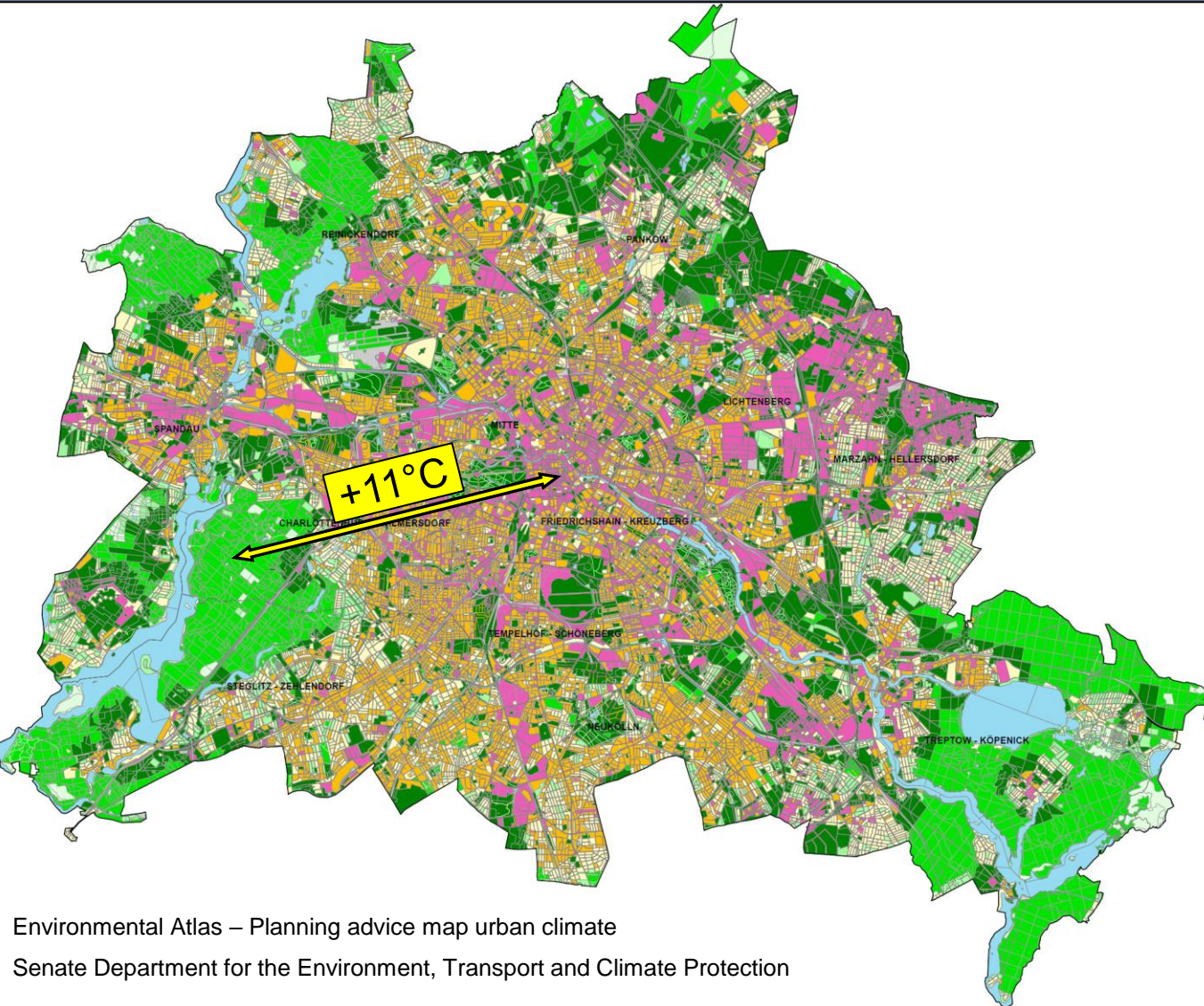
Institute of Laboratory
Medicine, Clinical Chemistry
and Pathobiochemistry

Dr. Christina Hoffmann

christina.schlaak@charite.de

Urban heat in Berlin

Settlement areas – Thermal conditions



most favorable



favorable



less favorable

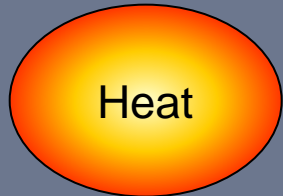


unfavorable

Environmental Atlas – Planning advice map urban climate

Senate Department for the Environment, Transport and Climate Protection

Health effects of heat



Heat

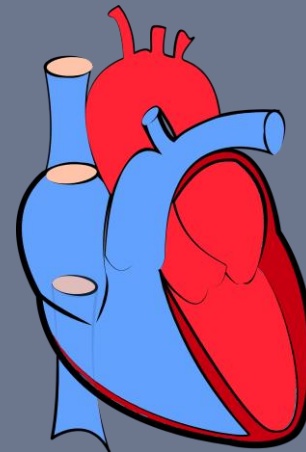
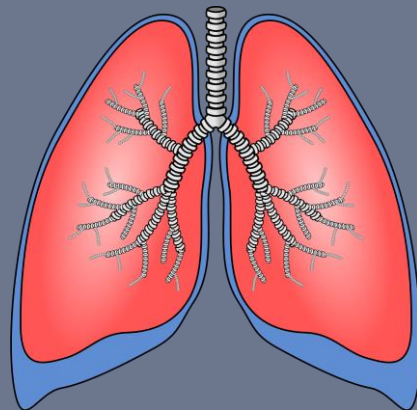


Heat emission of the body

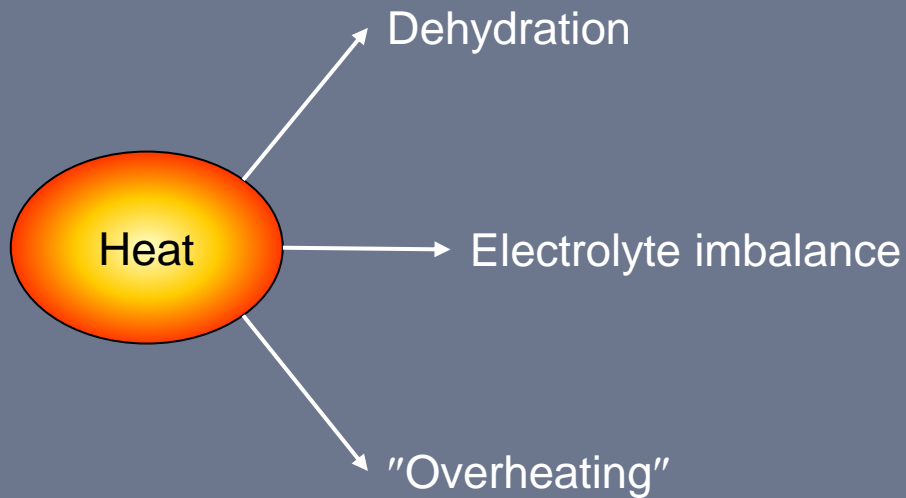
- Increased blood circulation in the skin
- Sweating



- Increased heart rate
- Increased respiratory rate



Acute health effects of heat



→ Heat rash

→ Sunburn

→ Heat cramps

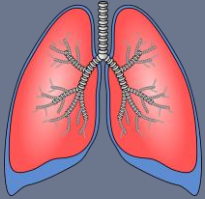
→ Sunstroke

→ Heat exhaustion

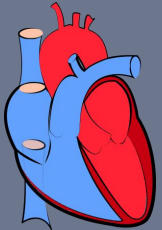
→ Heat stroke

Vulnerable groups and risk factors

- Newborns and children
- Elderly people



Respiratory disease



Cardiac disease



Smoking



Obesity



Medication

Reduced capacity to adapt to high temperatures

Urban design and health

- Changes to the urban design take time
- How to measure health improvements caused by urban design changes?
 - First approach: questionnaires