Actions to reduce health risks from extreme heat – Interventions and effectiveness

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1st Global Heat Health Forum

Building Heat Health Management Networks: Partnerships and capacity

Understanding Risk and Predicting Health Outcomes

Observations, forecasts, early warnings and information to inform action

Actions to manage heat risks - interventions and effectiveness

Taking Action: Engagement, Outreach, and communications
Extreme heat – a global health concern

WORLDWIDE HEAT
2017 RANKINGS

Source: NOAA/NCEI Climate at a Glance
Extreme heat – a global health concern

Source: Antti Lipponen - https://anttilip.net/
Actions to reduce the health risk from extreme heat

Country
City
Built environment
Community
Individuals

More agencies
Longer time scales
Examples of prior work on evaluating heat interventions

<table>
<thead>
<tr>
<th>Measure</th>
<th>Examples</th>
<th>Advantages</th>
<th>Disadvantages</th>
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</thead>
<tbody>
<tr>
<td>Short-term measures</td>
<td>Advice on behaviour, Access to cool spaces, Mobile evaporative coolers, Room air conditioners</td>
<td>Cheap, immediate benefit, Can be implemented by individuals</td>
<td>Inherently inequitable increase in energy use and greenhouse gas emissions. May be of limited public health benefit. Potential adverse health impacts of room air conditioners, e.g. airborne infections.</td>
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<td>Medium-term measures</td>
<td>Increased albedo of building envelope, External shading, Insulation, Decreasing internal heat load, Passive cooling technologies, Efficient active cooling</td>
<td>Can be designed without increase in energy consumption and implemented at building or city scales, Synergetic effects throughout the year.</td>
<td>Advance planning needed. Selection of measures at the building scale needs to consider local circumstances. Moderately expensive. Potential risk to “design buildings for the heat-wave” forgetting the rest of the year.</td>
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<td>Long-term measures</td>
<td>Building regulations, Urban planning, Land-use changes, Mitigation of climate change</td>
<td>Reduced energy consumption and greenhouse gas emissions, Can be combined with active mobility and air pollution reductions, Inherently equitable, with major potential health benefits</td>
<td>Costly. Long lead times. Requires political will (in the case of climate change mitigation, even at international level).</td>
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Evaluations of actions to reduce heat risk

**Effectiveness**

- Monitoring health outcomes
- Attributing change in health to the action
- Determining the right time interval to observe change
- Incorporating local context

**Cost**

- Identifying the agency responsible for implementation
- Estimating costs for the specific elements
- Life cycle of the program
Developing and implementing heat action plans

- Lead body (for example national/regional health authority)
- Real-time surveillance system
- Accurate and timely alert system: national meteorological services
- Health sector (hospitals, care homes, general practitioners, pharmacies, etc.)
- Local government
- Social services
- Retirement homes
- Schools and kindergartens
- Civil protection
- Transport
- Energy
- etc.
- Media
- General public, vulnerable population groups
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