



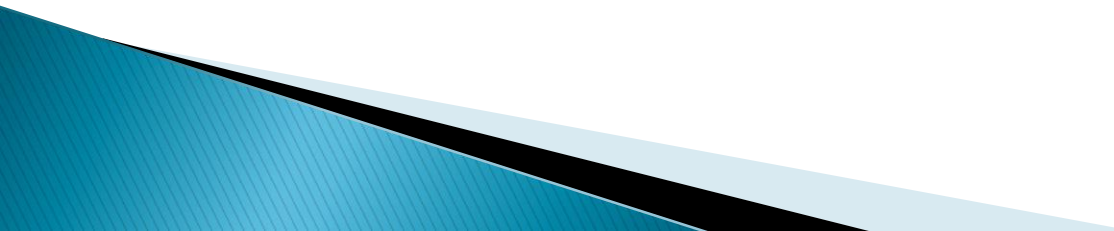
Department of Environmental Health  
Sustainable housing, 2016, 4th Year

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# Housing and Human Health



# Structure

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# Housing and Health



# What is Health

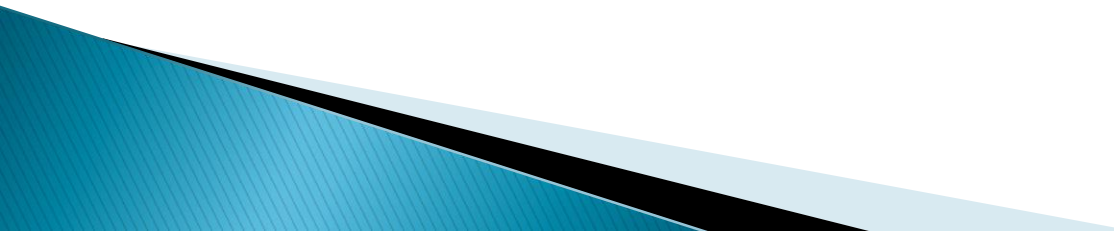
The World Health Organisation (WHO) defines health as being “a state of complete physical, mental and social; well-being, and not merely the absence of disease or infirmity” (WHO 2000).

A healthy body needs to be in a state of equilibrium, so that it can cope with changes to



its external environment.

Illness, then, is the body's response to harmful environment forces such as poor housing and a poor local environment. A person's housing conditions plays a crucial role in their physical and mental well-being, the better the housing the better the health. Conversely, the worse the housing, the worse the health is likely to be.






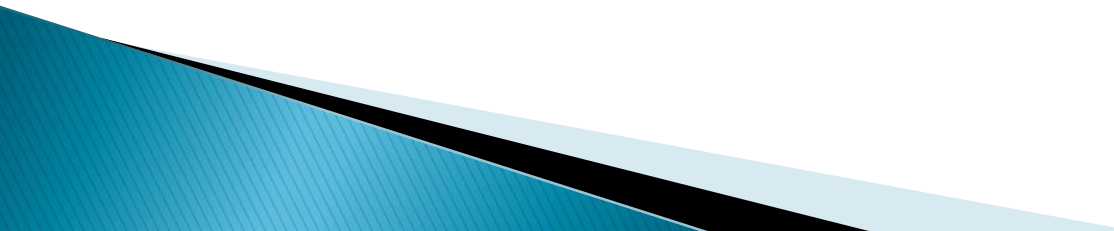
# The Links Between Housing Quality and Health

The WHO report based on European Region 2011, under “*disease associated with inadequate housing*”, using European data, linked housing conditions to health.

The studies found links between damp housing, the presence of mould and high rates of asthma and respiratory illness, especially among children.



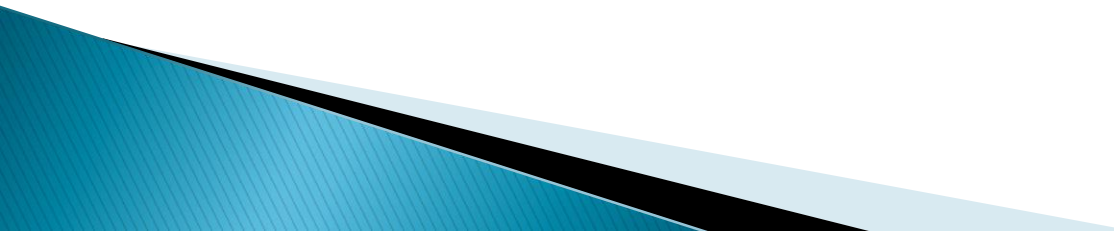
In the case of elderly people it has been argued that damp, cold houses are an important factor in excess winter death in Britain, and not just in the extreme form of hypothermia, but also in increases susceptibility to coronary and cerebral thrombosis and respiratory disease.





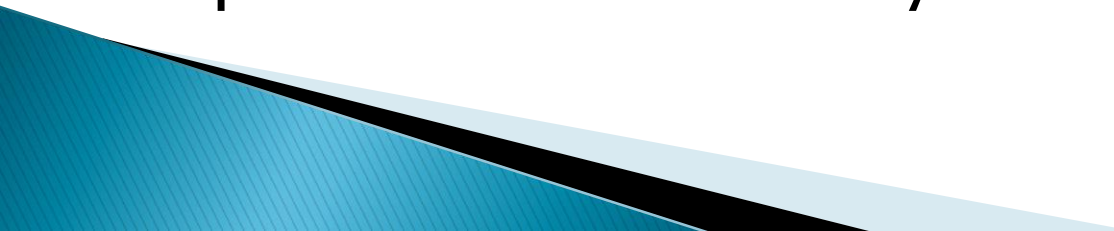
A research was carried out in UK in 2011, shows that, the quality of the home has a substantial impact on health; a warm, dry and secure home is associated with better health.

In addition to basic housing requirements, other factors that help to improve well-being include the neighbourhood, security of tenure and modifications for those with disabilities.



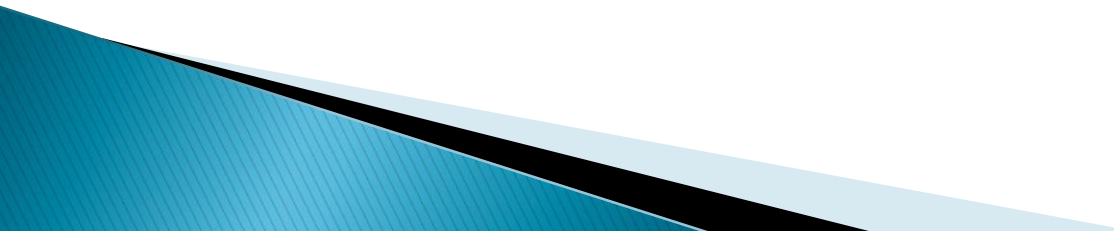
The Building Research Establishment (BRE) in UK has calculated that **poor housing** costs the National Health Services (NHS) at least £600 million per year.

Further research based on the various sources of housing and health data suggests that, poor housing is associated with increased risk of cardiovascular diseases, respiratory diseases, depression and anxiety.



Housing-related hazards that increase the risk of illness are damp, mould, excess cold and structural defects that increase the risk of an accident (such as poor lighting, or lack of stair handrails). The strength of the evidence linking such factors to ill health varies.


Studies using population data suggest that the strongest hazard links are for:



1– **Accidents**, 45% of accidents in UK occur in the home, and accidents are in the top 10 causes of death for all ages.

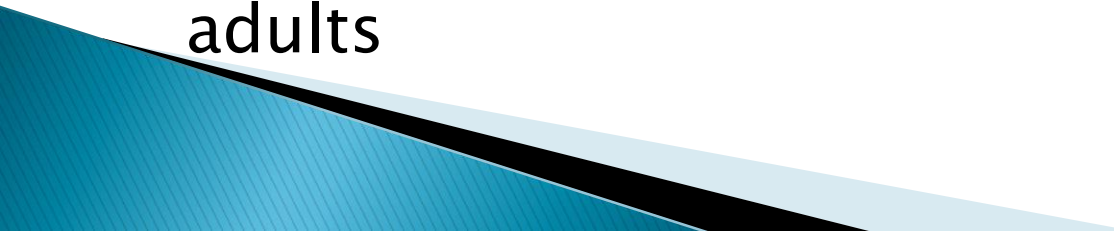
2– **Cold**, cold homes are linked to increased risk of cardio-vascular, respiratory and rheumatoid diseases, as well as hypothermia and poorer mental health.

There were an estimated 36,450 excess winter deaths attributable to all causes in England and Wales in 2008/09.



Since the 1990s dampness, moisture and mould in indoor environments have been associated with adverse health effects in population studies in Europe, North America and elsewhere.

Most commonly reported health effects are airways symptoms, such as cough and wheeze, but other respiratory effects, and skin and general symptoms have also been reported. Associations with both new-onset asthma and asthma exacerbations have been documented especially in children and also in adults



# **Factors causes unhealthy housing**

Evidence suggests that physical and mental health problems relate to human-modified places such as homes, schools, workplaces, parks, industrial areas, farms, roads and highways.

Table-1 and 2, Shows factors causes unhealthy houses is connected to poor health





# Figure 1-Factors cause unhealthy housing

This Cause:	Can Become this Illness or Condition:	How to Prevent this Illness or Condition:
In homes built before 1978: • Peeling paint • Sloppy repair/paint work	Lead poisoning – causes lower IQ and other learning and behavior problems in children	<ul style="list-style-type: none"> <li>• Fix lead hazards</li> <li>• Work safely and check for dust</li> <li>• Clean up the site after any work is finished</li> </ul>
Smoking, secondhand smoke	Asthma, respiratory problems, sudden infant death syndrome (SIDS), lung cancer, <u>and</u> deaths from fires	<ul style="list-style-type: none"> <li>• Don't smoke in the home</li> <li>• Don't let anyone else smoke in the home</li> </ul>
Radon	Lung cancer	<ul style="list-style-type: none"> <li>• Install fan systems that can remove radon or vapor barriers that can block radon</li> </ul>
Lack of a working smoke alarm	Fire injuries and deaths	<ul style="list-style-type: none"> <li>• Install smoke alarms on every floor of the home</li> <li>• Use long-life smoke alarms with lithium-powered batteries</li> <li>• Test all smoke alarms every month</li> </ul>
Moisture and mold	Asthma and respiratory problems	<ul style="list-style-type: none"> <li>• Fix water leaks</li> <li>• Keep house well ventilated</li> </ul>

## Figure 2-Factors cause unhealthy housing

This Cause	Can become this	How to Prevent this Illness or Condition:
Pesticide use	Acute poisonings and possible chronic such as cancer, low birth weight	<ul style="list-style-type: none"><li>• Keep pests out by cutting off their water, food, and access conditions</li><li>• Use pesticides wisely</li><li>• Store pesticides properly and prematurity</li></ul>

# Importance of housing for health, safety and sustainability

Housing is an important determinant of health. Substandard existing housing has been identified as a major public health issue in New Zealand, the UK, the USA and Europe.

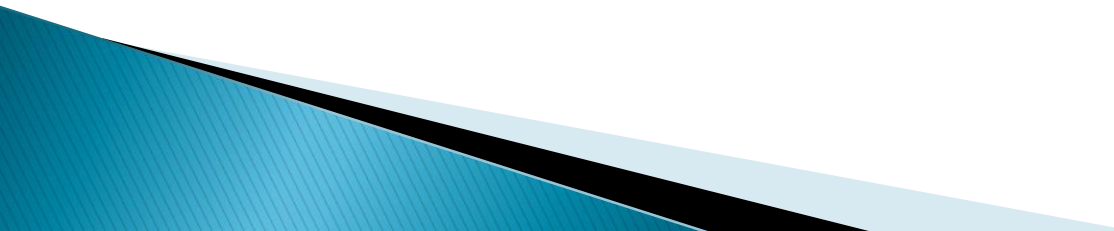
Direct effects of poor housing have been identified on:

injuries in the home, deaths from house fires,




respiratory symptoms, coronary events and mental health problems.

The importance of housing for health and safety is partly driven by the prolonged exposure people have to the home environment, an average of close to 16 hours daily, a figure that is quite similar across different developed countries.




Features of substandard housing that have been identified as major concerns include: structural defects, inadequate insulation leading to dampness and mould; lack of heating and ventilation; lead; asbestos exposure (from deteriorating wall linings and cladding); volatile organic compounds (eg, from new carpeting); lack of safe drinking-water; ineffective waste disposal; inadequate facilities for food storage and preparation; household pests, such as ants, cockroaches, mice and rats; noise; and radon.



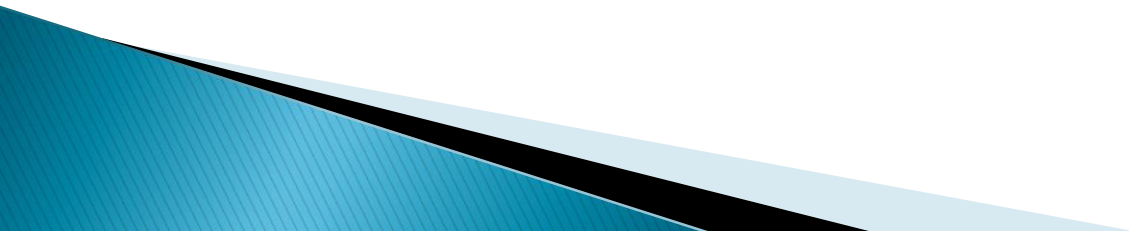
The insulation and heating of a house, along with the prevailing weather, determines the efficiency with which a house can generate and retain heat for the occupants, as well as affecting mould growth and other respiratory hazards. Insulating housing is considered one of the most cost-effective measures to reduce carbon emissions, as insulated houses can reduce the demand for energy.

Sustainability is an important health issue because of the potentially disastrous health effects of climate change, to which housing contributes.

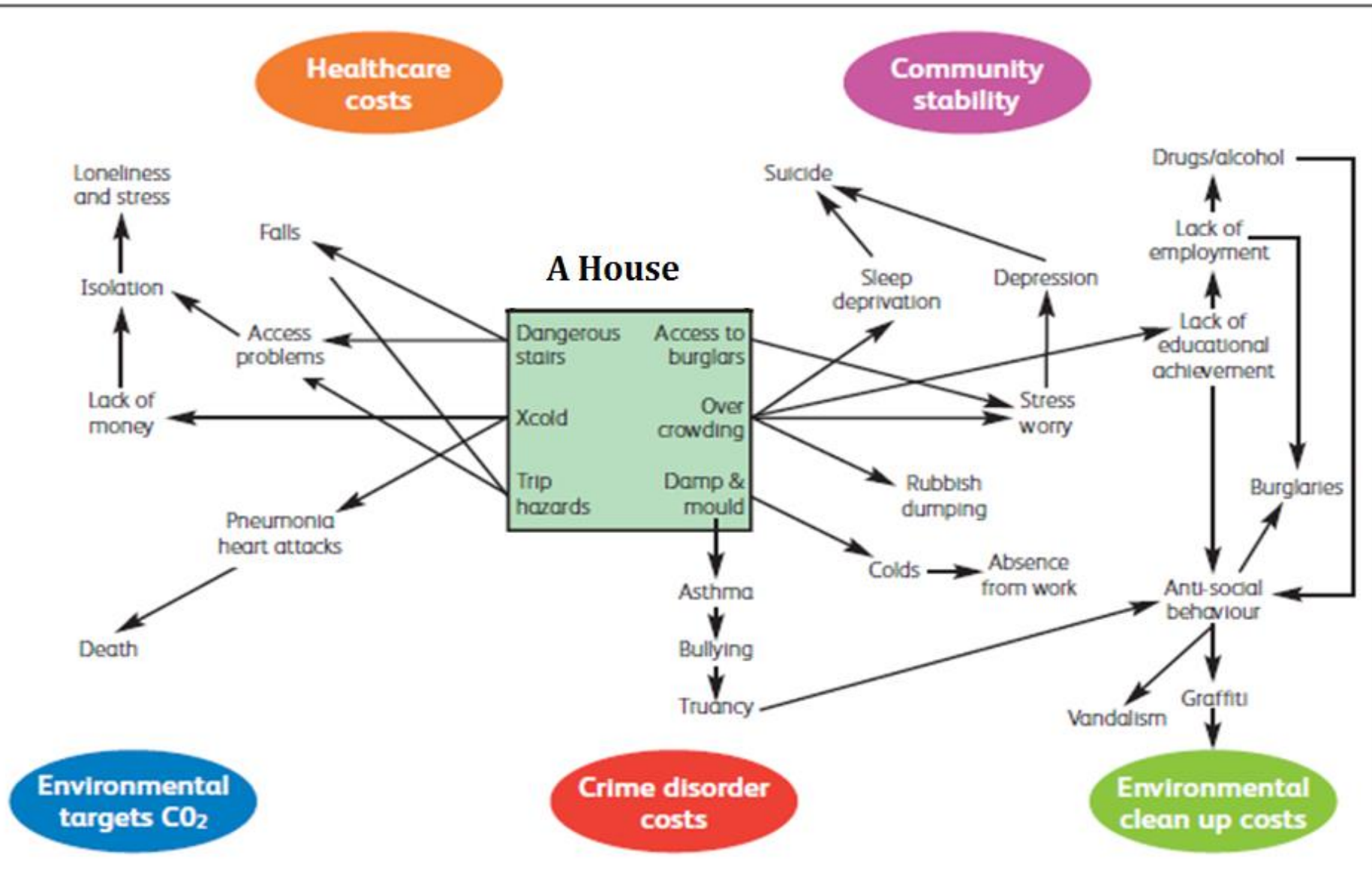




Other important components of sustainability associated with housing include water usage, consumption of finite resources and production of toxic substances in building materials, Figure 3– show The links between public health and housing

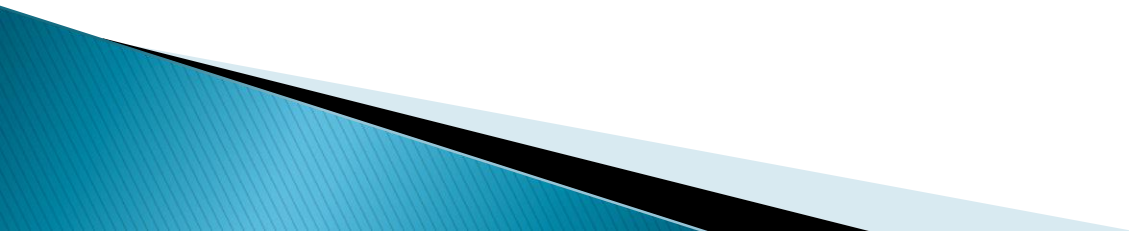


# Figure 3- The links between public health and housing hazards



# What Promote Safe and Healthy Housing

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# Indicative References

- 1) Housing and Health, Houses of Parliament, Parliamentary Office for Science and Technology, Number 371 January 2011, [http://www.parliament.uk/documents/post/postpn\\_371-housing\\_health\\_h.pdf](http://www.parliament.uk/documents/post/postpn_371-housing_health_h.pdf)
- 2) Burrridge R. and Ormandy D., 2nd edition 2005, Unhealthy housing, page 30, University of Warwick, published by Chapman and Hall UK
- 3) Houses Of Parliament, Parliament Office Of Science and Technology Number 371 January 2011, UK  
[http://www.parliament.uk/documents/post/postpn\\_371-housing\\_health\\_h.pdf](http://www.parliament.uk/documents/post/postpn_371-housing_health_h.pdf)

# Indicative References

- 4) Shobha Srinivasan, PhD, Liam R. O'Fallon, MA, and Allen Dearry, PhD, Creating Healthy Communities, Healthy Homes, Healthy People: Initiating a Research Agenda on the Built Environment and Public Health  
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1447991/pdf/0931446.pdf>
- 5) Keall M. and etal, 2010, Assessing housing quality and its impact on health, safety and sustainability, Page 765 J Epidemiol Community Health 2010;64:765e771.  
doi:10.1136/jech.2009.100701
- 6) Good Housing Leads to good health, 2008, Chartered Institute of Environmental Health (CIEH), UK  
[http://www.cieh.org/uploadedFiles/Core/Policy/Publications\\_and\\_information\\_services/Policy\\_publications/Publications/Good\\_Housing\\_Leads\\_to\\_Good\\_Health\\_2008.pdf](http://www.cieh.org/uploadedFiles/Core/Policy/Publications_and_information_services/Policy_publications/Publications/Good_Housing_Leads_to_Good_Health_2008.pdf)