

HEALTHY HOMES – EXCESS COLD

FACT SHEET

Excess Cold

A healthy indoor temperature is around 21°C, although cold is not generally perceived until the temperature drops below 18°C.

A small risk of adverse health effects begins once the temperature falls below 19°C.

Serious health risks occur below 16°C with a substantially increased risk of respiratory and cardiovascular conditions.

Below 10°C the risk of hypothermia becomes appreciable, especially for the elderly.

Deaths from Cold

Excess winter deaths

There are approximately 40,000 more deaths between December and March than expected from the death rates in other months of the year. This seasonal fluctuation, Excess Winter Deaths, is greater in Britain than in most other countries of continental Europe and Scandinavia.

Cardiovascular and Respiratory Disease

Cardiovascular conditions (e.g. heart attacks and stroke) account for half the excess winter deaths, and respiratory diseases (e.g. influenza, pneumonia and bronchitis), account for another third. The increase in deaths from heart attacks occurs about 2 days following the onset of a cold spell; the delay is about 5 days for deaths from stroke, and about 12 days for respiratory deaths.

The Main Causal Factor for excess winter deaths appears to be changes in ambient (outdoor) temperature, but seasonal infections, and changes in behavioural patterns, air pollution levels and micronutrient intake may also account for some of the seasonal pattern.

Cold Homes

- The extent to which housing contributes is not clearly known, but the indication is that people living in dwellings that are poorly heated are at significantly greater risk.
- There is less evidence on the relationship between housing characteristics and health other than mortality. However, it is very probable that the findings in relation to cold-related mortality can be extended in broad terms to cardio-respiratory morbidity and health related quality of life.
- The percentage rise in deaths in winter is greater in dwellings with low energy efficiency ratings.
- Cold related illness is in part determined by the characteristics of the dwelling and in part by occupation factors. For example, under-occupation can mean either excessive heating costs or low indoor temperatures.
- There is a gradient of risk with age of the property, the risk being greatest in dwellings built before 1950 and lowest in the more energy efficient dwellings built after 1980.
- Absence of central heating and dissatisfaction with the heating system also show some association with increased risk of excess winter death.

Potential for Harm

Thermoregulatory system

Low temperatures can impair the thermoregulatory system of the elderly, and the very young whose thermoregulatory system is immature. Both these groups may spend a greater time indoors in cold weather and both will not move about as much as other groups in the cold.

Blood Pressure

Cold air streams may affect the respiratory tract and can slow the heart temporarily, increasing cardiovascular strain. When the whole body is cooled, blood pressure increases.

Resistance to infection

The effect of cold air on the bronchial lining and immune system can reduce resistance to infection. Thus, sleeping in cold bedrooms has been shown to substantially increase the health risk.

Rheumatoid arthritis

The symptoms of rheumatoid arthritis can be worsened by cold. Low temperatures also aggravate sickle cell anaemia and the related thalassaemia, and can affect the healing of leg skin ulcers.

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