

Health Effects of Living in a Cold Home

We spend more than 90% of our time indoors. For that reason, the indoor environment and its effect on our health are more important than is often assumed.

Effects of Cold on Body

When exposed to cold temperatures, our bodies begin to lose heat faster than it can be produced. Prolonged exposure to cold will eventually use up the body's stored energy. The result is hypothermia, or abnormally low body temperature. Hypothermia is most likely at very cold temperatures, but it can occur even at cool temperatures (below 60°F.)

Hypothermia means "*low heat*" and is a potentially serious health condition. When the body temperature drops below the normal 98.6° F to around 95° F, the onset of symptoms normally begins. The person begins to shiver and stomp feet in order to generate heat. As the body temperature continues to fall, slurred speech, lack of coordination and memory loss develop and the person will stop shivering. Once the body temperature falls to around 85° F, the person may become unconscious, and at 78°, the person could die.

Shivering is the first and most common symptom. It's also the most often ignored. When the body drops below 98.6 degrees, most of your body's energy is used to keep your internal temperature warm. Over time, your body will begin to shift blood flow from your extremities (hands, feet, arms, and legs) and outer skin to the core (chest and abdomen). This allows exposed skin and the extremities to cool rapidly

Body temperature that is too low affects the brain, making the victim unable to think clearly or move well. This makes hypothermia particularly dangerous because a person may not know it is happening and won't be able to do anything about it.

Associated Health Problems

Cardio-Vascular: The body's reactions to low temperatures put stress on the cardiovascular system. These reactions include constriction of blood vessels in the skin, shallow breathing through the mouth, and slight thickening of the blood, all of which can lead indirectly to angina (chest pain) in people with heart disease. Severe hypothermia can also result in arrhythmias, an abnormal beating of the heart.

Even in people who don't have heart disease, cold exposure can raise blood pressure. To conserve heat, the muscles contract to obstruct the flow of blood to the arms and legs. This reroutes extra blood to the vital organs and boosts the blood pressure.

Asthma is another condition that can worsen in the winter. Inhaling cold, dry winter air can trigger bronchospasms -- contractions of the air passages in the lungs. If house temperatures fall below 60°F, the risk of other respiratory illnesses increases. This is because cold houses are also usually damp, which can lead to respiratory symptoms.

Other Conditions: Many health conditions are aggravated by the cold, and often people with disabilities are unable to keep active during the winter months. People with long-term health conditions such as lung or kidney disease are also at risk.

Who is at risk?

Extreme cold is a dangerous situation that can bring on health emergencies in susceptible people, such as those without shelter or who are stranded, or who live in a home that is poorly insulated or without heat. People can suffer from hypothermia even in the Southeast. Any ambient temperature below 60 can cause hypothermia. The risk of hypothermia increases as the temperature goes down.

Older People: Among the elderly, those most likely to develop hypothermia are the sick, the frail, the very old, the poor who can't afford enough heat, and those medically vulnerable individuals who do not know how to keep warm when exposed to the cold. Elderly people living in unweatherized homes may keep the heat low because they cannot afford a high power bill.

Drugs deserve special mention because they are thought to be a major predisposing factor to hypothermia in older adults, who, while comprising little more than 10 percent of the population, consume 25 percent of the nation's prescription drugs. Of greatest concern are those that take certain medications that prevent the body from regulating temperatures normally, such as anti-depressants, sedatives, tranquilizers, and cardiovascular drugs.

Babies: Because they are less able to regulate their body temperature than adults, babies can quickly develop a dangerously low body temperature. Newborn infants are prone to hypothermia because of their large body surface area, small amount of subcutaneous fat, and decreased ability to shiver. At greatest risk are children sleeping in cold or unheated bedrooms.

Prepared by

Louise Gorenflo

TN Interfaith Power and Light

lgorenflo@gmail.com