

Snowstorm 'Stella' : Say No to Hypothermia and Frostbite



By *Jamie Wells, M.D.* — March 13, 2017



Credit: Shutterstock [1]

As the grocery stores start to sell out, school districts and offices announce closures and group discussions become preoccupied with the arrival of Snowstorm Stella, there is no better time to remind everyone of ways to avoid unnecessary injury and hardship.

Of the weather-induced causes of death that amounted to 2,000 per year between 2006-2010, 63% were due to excessive natural cold, hypothermia or both. For further review of winter hazards and how to avoid them, read [Winter is No Wonderland](#) [2].

Let's address some basics for the purpose of prevention:

What is Hypothermia?

It is a dangerous, medically urgent condition where the body temperature has dropped too low as a result of very cold environments (e.g. weather, cold water) usually after a protracted period of time. Basically, the person is losing heat faster than he/she is able to generate it. Your organ systems can't work appropriately. There is an early phase where intervention is readily effective. As the abnormal state advances and the extent progresses, death can be a reality if aggressive action is not taken.

Who is at risk?

Anyone in extreme enough of conditions without appropriate precautions in place can suffer the consequences of hypothermia. Those at more likelihood of developing it include the most vulnerable in our population.

Infants lose a lot of heat at birth per body surface area and can have issues—especially—with regulating their core temperature. Covered in vernix and body fluids upon entry into the world, they are wet and exposed. This is why blankets are swiftly used to dry them and they benefit from the skin-to-skin contact of their mother or a radiant warmer. It is also why they require appropriate clothing to stay warm and their living spaces to be well-controlled.

For this reason, the very young—in general—lose heat more rapidly than adults. Children may also be less inclined to come in from the cold when symptoms develop.

As we age, we lose body fat. Therefore, we lose our protective insulation. Additionally, our immunity becomes less robust while co-morbidities (aka other diseases, diagnoses) arise impairing many of us from fully accessing the world. The elderly, in particular, for these and other reasons are at greater risk since there may be impediments to storing food, supplies and maintaining optimal heating or cooling when storms like these present themselves. Their indoor conditions can cause symptoms as well, regardless of the outdoor ones. They may be unable to communicate their needs, for example.

Those who abuse substances, albeit alcohol or other drugs and the homeless are at high risk. People who hike, hunt or whose jobs put them outdoors for long periods. Medical diseases like strokes, dementia and mental illness can compromise a person even further as can being profoundly underweight due to malnourishment or anorexia. Medications as well can interfere with a person's metabolism and ability to withstand stressors.

What are the signs or symptoms?

Infants will often appear lethargic or very weak with cold, bright red skin and a poor cry in the context of hypothermia. In general, signs a baby is well and thriving include a strong cry, being vigorous with supple skin and able to feed, void and stool normally and with relative ease. If any of these functions is off, then it is always ideal to seek medical care without delay. Speak to your pediatrician about appropriate levels of clothing for your baby as overbundling can do harm as well in the opposite extreme.

Adults early on will shiver, appear confused, have rapid heart and respiratory rates, experience poor coordination, hunger and be tired. As hypothermia worsens, you will stop shivering, become increasingly clumsy, slur speech, become disoriented exercising impaired judgement. You can become unaware of the severity of your condition. Fatigue intensifies as your pulse and breathing weaken. Symptoms are gradual. The person can place themselves in harm's way as they lack awareness of their compromised state and become more and more combative and disordered in their thinking. Losing consciousness and death can be an eventuality if allowed to continue.

Symptoms can present differently in varying populations, so if it is a thought in your mind then seeking immediate medical care is your safest bet.

How can it be prevented?

When storms like this arise, consider who you know who might require some assistance and monitoring to prepare and plan for if problems ensue—the elderly, very young and those with disabilities and chronic medical conditions should be among your first thoughts. Check to see that

acceptable heating and cooling is in effect in yours and their homes. Too cold of air-conditioning or inadequate heating, can be an issue for them in particular.

Be sure to wear appropriate clothing to keep you warm. Attempt to avoid getting stuck in situations that would expose you to large bodies of cold water or freezing conditions. Keeping wet clothes on and remaining in the cold will enhance your chances of hypothermia. Remove wet items when possible and get to a warmer location.

What is Frostbite?

[Frostbite](#) [3] occurs when body tissues are harmed from such freezing and if severe enough amputation can be of necessity. The goal is to avoid ever progressing to this stage as that will best ensure retention of a whole and healthy body.

What to do if you think Hypothermia exists?

Call 911 to seek emergency medical services. Act early! The [Mayo Clinic provides excellent instructions here](#) [4] on first aid care while waiting for help to arrive including why being gentle is so important in hypothermia. So does the Centers for Disease Control and Prevention (CDC) along with many fact sheets on [winter preparation and prevention here](#) [5].

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Links

[1] <https://www.shutterstock.com>

[2] <http://acsh.org/news/2016/12/01/winter-no-wonderland-10514>

[3] <https://www.cdc.gov/disasters/winter/staysafe/frostbite.html>

[4] <http://www.mayoclinic.org/diseases-conditions/hypothermia/basics/treatment/con-20020453>

[5] <https://www.cdc.gov/disasters/winter/staysafe/hypothermia.html>