

COLD WEATHER AND HEART DISEASE

It is October and winter is round the corner and so is our challenge of facing cold wave, chilly winds and even snow in many parts of the country. Cold weather ushers in more of bad throat, nose running, bronchitis, flu and pneumonia. Why do heart disease, increased blood pressure and stroke also occur more frequently in this season? Senior citizens are especially vulnerable to heart disease in cold weather. Can they avoid it? These are some of the questions that need answers. It is commonly observed that the rate of heart disease related deaths (as well as deaths from other causes) rise sharply in winter months.

Body changes in cold weather among older persons

Cold temperature causes vasoconstriction and patient feels shivering (opposite is vasodilatation and patient feels sweaty as in hot weather). Vasoconstriction causes arteries to tighten raising the blood pressure and restricting blood flow to the body which is therefore unable to preserve body heat. Hence endurance to cold is diminished. Even cold weather and small drops in temperature can lead to hypothermia manifested as diminished alertness, stiff arms/legs, incoordination, sleepiness and confusion. Body's response to cold is further lowered if there is a condition like diabetes or one is taking some kind of medicines. Ephedrine containing drugs which are used as decongestants for common cold and running nose also raise blood pressure which is not good for heart. Lowering of blood flow also reduces the oxygen supply to the heart which can set the stage for heart attack. In cold weather, there is more oxygen demand by the heart because it is working harder to do the work and maintain body heat. Besides cold temperature, high winds, snow, and rain can lower body heat; wind is especially dangerous, because it removes the layer of heated air from around your body, increasing your risk of hypothermia. In cold weather, because vessels constrict and pressure goes up, so if a person already has high blood pressure, this extra constriction causes problems. Finally, as your body ages, its ability to heat and cool itself becomes less efficient, meaning that you will be more susceptible to temperature changes as you grow older.

Cold weather and heart disease

In addition to changes described above, during the winter months, there is a change in the ratio of daylight hours to dark hours, which changes the hormonal balance, and the hormones involved, such as cortisol, can lower the threshold for a cardiovascular event. Some observers feel heart attacks and complications related to heart disease occur more frequently in the morning hours. Research suggests that the early morning rise in blood pressure, or "a.m. surge," that occurs in most people may dramatically increase the risk of having a heart attack or stroke. In the winter, people tend to exert themselves or do carry out their work in the morning because it gets darker earlier. This shift of activities to morning hours adds to the normal circadian

variation in mornings – further increasing heart rate, blood pressure, and the hormones that lower the threshold for a cardiovascular event. When cross referenced for timings of the heart attacks with weather temperatures during the same two year period, it was discovered that not only were heart attacks more common during the cold weather, but that sudden temperature changes from the day before to the day of heart attack, such as drops of 5 or more degrees in a single day, also spiked increases in heart attacks in people with high blood pressure. These sudden weather changes are associated with a more than 60% increase in risk in people with high blood pressure.

Cold temperature also raises the stress level on the wall of the heart and makes your blood thicker and stickier, which may cause blood clots to form and block blood flow to the arteries in the heart. During the cold weather the number of respiratory infections increases, which can contribute to respiratory difficulties and put added pressure on your heart – leading to increased heart attack risks.

Exercise and heart disease

Exercise is often prescribed for preventing several diseases including heart disease but exercise in cold weather can place added stress on your heart, multiplying the risks associated with the cold weather and heart disease. However, in mild winter, walking program can continue with proper coverage of body by warm clothing. The colder it is, the more careful you need to be about exercising outside, particularly if you have a history of heart disease. If temperature is extreme or snow or ice makes walking difficult, consider walking on an indoor treadmill or visiting gym where you can exercise in controlled temperatures. When you go inside to warm up DON'T have a cup of coffee or smoke a cigarette – because caffeine and nicotine just put that much more burden on the heart. When you plan to go out in cold weather, DON'T consume alcohol because the vasodilatation provided by alcohol gives an initial warmth but the heat is then drained away from body's vital organs like heart and brain.

Safeguards against heart disease in cold weather

- When it is extremely cold, stay inside.
- Remain well hydrated but avoid alcohol. Warm drinks are good.
- Don't engage in an outdoor activity that you are not accustomed.
- If your clothes become sweaty or damp by physical activity, change them.
- If you go outside, wear multiple layers of clothing which forms a protective insulation.
- Be sure to wear a hat or head scarf. Body's heat can be lost through your head.
- Keep your hands (gloves) and feet (socks) warm too, as they tend to lose heat rapidly.
- Keep emergency kit (blanket, candles, and matches) in car and a cell phone.

(AISCCON-18th National Conference of Senior Citizens, November, 2018 Souvenir, 2018; 34-35).