

## Temperature Control

A normal, healthy human is able to maintain a constant body temperature of approximately 98.6F (37°C) despite the temperature of the environment.

When it is hot, the body sends a signal to the brain via the spinal cord to say the body is too hot. The brain then sends a signal back down the spinal cord and tells the body to cool itself by sweating which evaporates and cools the skin. Blood vessels also expand, bringing more blood to the surface, then the heat from the blood is lost through a process called radiation.

In cold weather, the body sends a signal to the brain via the spinal cord to say the body is too cold. The body senses the lower temperature and our brain tells the body to warm itself by narrowing the blood vessels, therefore reducing blood flow to the skin and reducing heat loss. At the same time goose bumps appear and the hairs stand on end (in hairy people this can help save heat). Shivering also generates heat.

We also have to put more clothes on to warm ourselves up and also warm our environment e.g. turn the heating on.

### After Spinal Cord Injury

After injury it's unlikely you will be able to control your body temperature below the level of your injury and this will be much more affected by changes in environmental temperatures (either indoors or out). The higher the injury, the more likely this will affect you.

If temperature control affects you:

### Raised temperature (hyperthermia) ... how to cool down

One of the best ways for a person with a spinal cord injury to cool down is to have a cold wet towel wrapped around the back of the neck. The skin should also be damped down to allow the water to evaporate from the skin, and hence cool the

body down. It's a bit like artificial sweat, but it does work. A cold water spray on the head and shoulders will help reduce the body temperature.

The most obvious way to keep cool is to sit in the shade!

Some of the symptoms of overheating that tetraplegics may suffer from are a headache, nasal congestion, tiredness and reduced concentration.

### Lowered temperature (hypothermia) ... how to warm up

If a person gets too cold, they should wear layers of clothing, and drink warm fluids to bring their core temperature back up to normal. If using heaters be careful to avoid skin burning and overheating.

If you become too hot or cold and have problems correcting this; this could lead to serious medical complications. Get medical advice if necessary.