

Blood thickens

To decrease the temperature of the blood, water in the blood vaporises from the blood vessels and the moisture gets stored in the spaces outside cells of the body, or extracellular spaces. Blood thickens and its flow decreases

• Signs of heatstroke

- ▶ High core temperature (the temperature of the body's internal organs: best measured with a rectal thermometer) of up to 106°F (41°C).
- ▶ Hot, red, dry skin; rapid pulse; rapid, shallow breathing. Headache, nausea, dizziness, confusion, strange behaviour, possible loss of consciousness

Brain

Decrease of blood supply to the brain leads to loss of orientation

Hypothalamus

When temperature of the body rises above normal (98.6°F or 37°C), hypothalamus, a part of the brain triggers a process of heat regulation. The body tries to get rid of heat by sweating or by opening up the pores of the skin through inflammation. But the hypothalamus fails to activate the heat control system of the body if the temperature rises beyond 102°F (39°C) in healthy individuals. The failure may occur at a lower temperature in aged or diseased people.

Heart

Due to thickening of blood, its supply to the heart or the brain may be choked leading to death

Liver

The thickened blood may clot in organs like liver, pancreas.

Pancreas

Kidneys

Decrease of blood supply to the kidneys leads to reduction of flow of urine and increase of creatinine in the kidney and blood. This leads to kidney failure

- ▶ Loss of fluid can also produce dangerously low blood pressure. Sometimes death occurs because the heart stops pumping effectively

- ▶ Along with the water, salts like sodium chloride are also lost from the blood. The loss of salts makes the red and white blood cells weak. The body too becomes weak

• Steps to be taken

Cool the heatstroke victim immediately by removing the patient from the sun, dousing him/her with water or wrapping in wet sheets and fanning vigorously. If the person is conscious offer water or other fluids. Avoid caffeinated or alcoholic drinks because they dehydrate the body.

If the victim starts shivering, slow down the cooling treatment, because shivering raises core temperature. Take the person's temperature every 10 minutes if there is a thermometer handy. You should not let the core temperature fall below 100°F (38°C) because this can result in an uncontrollable slide towards dangerously low temperatures. Take the victim to hospital or a doctor at the earliest.