

Ice burn \Rightarrow The mildest form consist of appearance of erythema and tenderness of the skin, a few hours after the application of ice, subsiding in a day or so. This is called ice burn.

A more severe form of ice burn ^{with} white cell necrosis show bruising as well as more tenderness and can last upto three weeks. This occur where there thick subcutaneous fat which becomes cool rapidly.

Frost bite / cold injury \Rightarrow Slower cooling tends to cause freezing of extracellular fluid and with drawl water from cells this is known as frost bite. Rapid cooling causing ice crystal formation inside the cell which may lead to cell death.

After 5 minutes of cold application the skin should be marked by erythema indicating that the circulatory system delivering the warm blood.

Cryoglobulinemia \Rightarrow It is an abnormal protein present in blood and it can form a precipitate at low temperature blocking the blood vessels and thus causing local ischemia.

Cold urticaria \Rightarrow Cold causes release of histamine from the mast cells leading to cold wheal and erythema and sometimes general symptoms such lowered bp and increased pulse rate.