

Cryosurgery

Dr Sharad Mutalik

What is cryosurgery?

Cryosurgery involves application or spraying of a cold gas in order to freeze or destroy a tissue.

In earlier days Carbon dioxide ice or Nitrous oxide was used for this purpose.

Now, Liquid Nitrogen is used routinely. The lowest freezing temperature of Liquid

Nitrogen is minus 195.8 degrees C. It is a safe, inexpensive and effective method of treating a variety of skin conditions.

In which skin conditions this treatment is used?

It is useful in treating many benign, precancerous as well as cancerous skin lesions.

These include warts, genital warts, seborrhoeic keratosis, lentigens, mucous cysts, basal cell carcinoma

How is this treatment carried out?

Liquid Nitrogen can be directly applied to the skin with the help of cotton tipped applicator or dipstick. This method causes slow freezing of the tissue, and does not have control over the spread of freeze / thaw.

Better way of delivering nitrogen to the skin is by using a Cryogun (Spray gun).

These cryoguns are equipped with detachable spray tips and probes of various sizes.

Cones are used to restrict the spray to the desired area.

How much time is required for this treatment?

This treatment can be accomplished in a few minutes.

How painful it is? Is anesthesia essential?

It is painful to some extent. It is advisable to use local anesthesia for sensitive areas like face, fingers, toes.

Any medications after the treatment?

Antibiotic cream and oral medicines to relieve the pain and swelling for 3 to 5 days.

What is expected after the treatment?

The treated area becomes red, swollen and a blister is formed. If the blister is bigger in size, it should be punctured and drained with a sterile needle. A crust forms and falls off within 7 – 10 days.

Is it necessary to repeat the treatment?

If the skin lesion is partially removed, the procedure could be repeated after 4 to 6 weeks

What are the complications of this technique?

Rarely infection (pus formation) and discoloration of the treated area can occur. This can be prevented by using antibiotic cream. Melanocytes (Pigment cells) are destroyed at minus 4 degrees C, leading to hypopigmentation of the treated area. This could be prevented by shortening the freezing time.

If the discoloration persists, it is advisable to consult your dermatologist. Sometimes cryotherapy can result in a scar and numbness over the treated part.

Are there any other uses / applications of this technique?

Yes. Carbon Dioxide ice mixed with Acetone and Sulfur is used as Slush for treating Acne scars. Similarly, liquid nitrogen gas applied with a gauze ball or roller can be used for treating cystic acne. This is known as Cryoslush or Cryo peel. Keloids can be treated by using Liquid Nitrogen, which is transferred into the keloid with the help of a wide bore needle (Intralesional cryotherapy).

Cryotherapy is an office based, safe, simple, economical and effective technique used to treat various skin conditions, and the treatment time is very short.