



## **CryoPen**

### **Frequently Asked Questions**

**Question: What is cryosurgery?**

Cryosurgery is a procedure that uses extreme cold to destroy tissue.

**Question: How are tissues destroyed during cryosurgery?**

Cell destruction occurs when a cell is rapidly brought down to a very low temperature and ice crystals form. The ice crystals destroy the cell organelles and protein matrixes. Water then rushes into the surrounding area causing a blister and a disruption of the local blood supply.

**Question: How long does the blister last after treatment?**

A blister forms 2-24 hours after the being frozen. Blisters may take several days to dissolve. Once a blister breaks, a crust will form over the lesion. Healing occurs from 1 to 6 weeks, depending on depth of freeze and size of lesion.

**Question: Can you describe the procedure in full detail?**

During the procedure, the area freezes and turns white. After this white area thaws, a flushing occurs and the area will turn red. This thawing is associated with a pinching sensation as a wheal is formed. This wheal will typically turn into a blister which may last for 3 to 5 days before it scabs. The scab will fall off within 2 weeks. Depending on the extent of freeze, a new scab may form and repeat the process. The lesion will be completely healed in 2 to 6 weeks. After primary healing occurs, the area will be lighter than the surrounding area due to loss of melanocytes.

**Question: How is cryosurgery better than other methods of removing skin lesions?**

Cryosurgery requires no anesthesia and has less scarring than other techniques of skin lesion removal with minimal post-op care.

**Question: Will there be scarring?**

Typically cryosurgery leaves the least amount of scarring of any form of lesion removal because it causes the least damage to the connective tissue. A hypo-pigmented lesion will be noted until it darkens with new tanning.

**Question: Is there pain with the procedure?**

There may be some tingling with the initial freezing, but most patients get an anesthetic effect from the extreme freezing temperatures. More of a pinching sensation occurs when the area thaws out. Some patients have some discomfort for the first day after the procedure. Acetaminophen and Ibuprofen are usually adequate to make the pain go away.

**Question: How permanent is the cure?**

For most lesions, cryosurgery is a permanent removal. Some lesions are harder to remove than others. In more delicate places a shorter freeze time with repeat procedures may be required to get a final result with the least damage to the surrounding skin. In other instances a deep lesion may take several aggressive treatments to get final results. In particular, warts that don't have pre-treatment may take multiple freezes.

**Question: Will there be permanent discoloration?**

Since melanocytes are the most sensitive cell type, persons with dark pigmentation or prolonged freeze times in any individual may cause extremely long color recovery or permanent color loss, even after the lesion is healed in other respects.

**Question: Will my wart fall off after one treatment?**

Most small common warts will respond to a single treatment. However, certain types and very large ones can be very difficult to remove and may take more than one treatment.

**Question: Will my activities be limited, and for how long, after the procedure?**

There are no limitations on activity except to protect the treated area from damage or abrasion. Activity should be limited as one would for a second degree burn with a blister.

**Question: How do I take care of the blister?**

Keep it protected best as possible and do not break the blister unless it leaks, then apply antibiotic ointment and keep it covered.

**Question: What if the blister pops?**

If the blister pops, the use of an antibiotic cleaning solution and ointment is recommended. Cover the area with a bandage also promotes healing.

**Question: What are the most common complications after cryosurgery?**

An early blister that pops could potentially become infected if not cleaned properly.

**Question: What type of skin abnormalities are most appropriate to freeze?**

Almost any unwanted skin lesions are appropriate such as warts, moles, actinic keratosis, seborrheic keratosis, keloids, lentigos, dermatofibromas and hemangiomas.

**Question: What types of lesions should not be frozen?**

All melanomas and recurrent basal cell carcinomas. Melanoma can spread by any of several means including local, lymphatic and blood. Additionally, Melanoma will change to a much more aggressive form if part of the lesion is left behind undetected. Basal cell carcinoma is typically spread by local extension and you may need more extensive surgery if recurrence is suspected.

**Question: Where on the body can skin abnormalities be removed from?**

Care should be taken around areas of very thick skin and areas in which color may be cosmetically important. These areas may include the face, ears, scrotum and lateral surface of fingers.

**Question: Can anyone have cryosurgery?**

Yes, cautions about skin type and location should be considered prior to deciding on freeze times. People with high levels of cryoglobulins should be treated with caution. If you have really dark skin, you may not want to have cryosurgery, as it will kill the melanocytes around the treated area, making the skin in that area lighter.

**Question: Can the CryoPen be used on children?**

Yes. Children are most commonly treated for Nevi and Molluscum contagiosum with the CryoPen.