

## CRYOTHERAPY or COLD THERAPY

**Cryotherapy** is the removal of neoplasms using liquid nitrogen, the temperature of which is at minus 196 °C in the cryo container. Liquid nitrogen freezes the water in the skin cells and as it melts, intercellular bonds are broken, skin cells break and form a blister. Freezing may result in swelling and painful sensations in the area and it may affect the functionality of the area.

Cryotherapy is painful and people endure it to varying degrees. Most adults and children over the age of 10 are able to withstand the procedure for at least 10 seconds.

Cryotherapy **must not be performed** on patients with

- cold urticaria i.e. who are 'allergic' to cold;
- Raynaud syndrome or coldness and colouration of fingers and toes.

Cryotherapy **cannot be performed** if the liquid nitrogen cannot be targeted to the neoplasm (if the patient is frightened, kicking around, etc.) The parent must prepare his/her children for the treatment to ensure they remain calm during the procedure.

Cryotherapy may have the following **results**:

Often:

- a blister will form, but it is not large enough to ensure the removal of the neoplasm, meaning that the procedure will have to be repeated;
- a blister – could even be a blood blister – will form that is of sufficient size, you will feel swelling and pain in the treated area and recovery will take at least 30 days. This reaction is necessary for the removal of corns and warts.

Occasionally:

- skin colourisation will appear in the treated area, depleting the area of colour or making it darker than the surrounding skin.

Extremely rare:

- no reaction, no blister;
- treatment will result in excrescence;
- the blister will develop a secondary bacterial infection or impetigo;
- the contact area will be scarred.

After the procedure, a dull pain may occur in the area of the formation that was frozen. This is usually temporary and tolerable. You can take painkillers on the same evening if the pain is intense and lasts for a longer period of time. There is no need to apply anything to the area that was frozen on the same evening.

You can care for the blister the same way you would a burn blister and tend to it daily with an antiseptic solution (brilliant green, calendula tincture, Asept) until it is healed. It is recommended to contact the person who carried out the procedure or your nurse/family doctor if the blister becomes inflamed.

It can take 10–14 days for the blister to disappear, or longer if it's in an area where the skin is thicker. If necessary, the procedure can be repeated in 2–3 weeks.

This leaflet is based on the materials of Dr Liina Tedremets and Dr Ama Lehtmetts.