

This leaflet has been written to help you understand more about your cryotherapy treatment. It tells you what cryotherapy is, what is involved and what potential side effects there are. The following information has been endorsed by the British Association of Dermatologists.

WHAT IS CRYOTHERAPY?:

The term 'cryotherapy' literally means 'treatment using a low temperature', and refers to the removal of skin lesions by freezing them. Liquid nitrogen is the most common product used by clinicians.

WHAT IS LIQUID NITROGEN?

Liquid nitrogen is the liquid state of gaseous nitrogen, which occupies 78% of the air we breathe. Liquid nitrogen is extremely cold, boiling at minus 196°C. It is necessary to store and transport it in special storage tanks or flasks.

WHAT CONDITIONS CAN BE TREATED WITH CRYOTHERAPY?

A wide variety of superficial benign (non-cancerous) lesions can be treated with liquid nitrogen. In sexual health services it is most commonly used to remove viral warts on the genital skin caused by the human papilloma virus (HPV)

WHAT DOES THE PROCEDURE INVOLVE?

Cryotherapy can be done during the course of a routine clinic appointment without any special preparation.

Liquid nitrogen is applied to the skin by using a very fine spray nozzle attached to the flask containing the liquid nitrogen.

During application there is typically, none or only slight local discomfort felt and cryotherapy treatment does not normally require a local anaesthetic.

The procedure itself lasts a matter of seconds; the precise time depends on the thickness, size and number of lesions being treated. The frozen skin becomes white and takes normally between 20-60 seconds to thaw to normal skin temperature. Your clinician may suggest that the process be repeated once the skin has thawed out.

Over the succeeding few days the treated area/s will dry, a scab will form and it will take between one to two weeks to fall off. Usually the treated area will eventually look normal, although scarring and discolouration is possible.

Depending on the nature and extent of the lesion/s, more than one application of liquid nitrogen may be required and you may be asked to return for a course of treatments to remove the lesion/s. Your clinician will advise you regarding this.

HOW SHOULD THE TREATED AREA BE CARED FOR?

Your clinician will explain how they would like you to care for the treated area.

It is important to keep the area clean and not to pick at any scab as this will encourage infection and potential scarring. Avoiding shaving or waxing the genital area whilst receiving treatment will help prevent potential spread of the warts. Bathing the treated area regularly with saline (salt water solution) helps prevent infection and aides the healing process.

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WHAT ARE THE SIDE EFFECTS OF THIS TREATMENT?

Immediate Side Effects:

- **Pain** - cryotherapy is usually well-tolerated, but can sometimes be painful if a deeper freeze has been necessary. This discomfort can occur both at the time of treatment and for a variable time thereafter. Painkillers (such as paracetamol) taken for the first 24 hours may relieve that discomfort; also taking a painkiller an hour or so prior to anticipated treatment can reduce the discomfort
- **Swelling and redness** - this is a normal immediate response to freezing the skin, and usually settles after two to three days. For a short while the treated area may be moist and ooze a little watery fluid
- **Blistering** - this is also a common consequence of cryotherapy and blisters settle after a few days as the scab forms. Some people blister more easily than others and the development of blisters does not necessarily mean that the skin has been frozen too much
- **Infection** - uncommonly, infection can occur, resulting in increased pain and the formation of pus: this may require topical antiseptic or antibiotic therapy

Subsequent side effects:

- **Scarring** - rarely, a scar will form, especially if a deeper freeze has been necessary
- **Pigmentation changes** - the skin at and around the treatment site may lighten or darken in colour, especially in dark-skinned people. This usually improves with time, but may be permanent
- **Numbness** - if a superficial nerve is frozen, it may result in numbness of the area of skin supplied by that nerve. Normal feeling usually returns within a matter of months
- Treatment may not be effective, or the condition may recur

WHERE CAN I GET MORE INFORMATION ABOUT CRYOTHERAPY?

<http://www.patient.co.uk/health/liquid-nitrogen-treatment>

<http://dermnetnz.org/procedures/cryotherapy.html>

If you have a concern about any aspect of your care please call **Essex Sexual Health Service Intelligence Centre** central booking number on ☎ **0300 003 1212** to book a review appointment.

Please refer to the Essex Sexual Health Service website for further information including clinic locations and opening times: www.essexsexualhealthservice.org.uk