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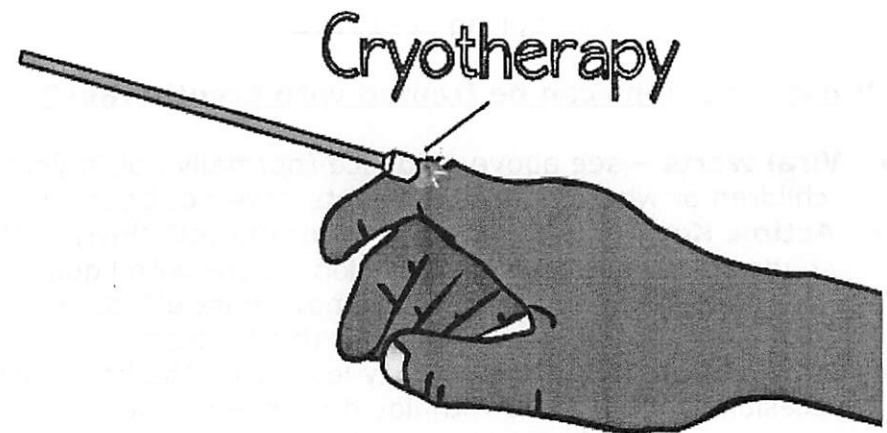
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# Cryotherapy with Liquid Nitrogen Information Guide



## Cryotherapy with Liquid Nitrogen

- Cryotherapy has never been shown to be any more effective in clearing common foot warts than self treatment with salicylic acid
- Cryotherapy has more side effects. It is often painful, can lead to side effects and has the potential to scar. It is also much more expensive and would involve multiple visits to the Doctors surgery.
- It can be occasionally effective for hand warts or raised warts on the face.
  - A maximum of 4 treatments per wart are given.

### What is Cryotherapy?

The term "cryotherapy" literally means "treatment using low temperature" and refers to the removal of skin lesions by freezing them. The most common agent used by doctors is liquid nitrogen.

### 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 -196°C

### What conditions can be treated with Cryotherapy?

- **Viral warts** – see above guidance (normally not in young children or where other treatments have not been tried)
- **Actinic Keratosis (areas of sun damaged skin)** – We do still treat pre-cancerous skin lesions with liquid nitrogen although there are now more effective treatments available for this problem
- **Seborrhoeic Keratosis** - warty lesions on the body, may occasionally be treated with liquid nitrogen if they become irritated or troublesome
  - **Basal cell carcinoma and Bowen's disease** – Cryotherapy may be used to treat small skin cancers

## What can I expect?

Liquid nitrogen is usually applied to the skin by using a spray gun. The frozen area of skin becomes white and takes 1-2 minutes to thaw out. The procedure lasts seconds but can be painful and will cause some swelling and redness for a few days and occasionally the formation of a blister in the treated area. Uncommonly, infection can occur.

### Subsequent Side effects

- **Scarring** – rarely, a scar will form, especially if a deep freeze has been necessary (i.e. to treat a basal cell carcinoma)
- **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.**

### Helpful website

[www.bad.org.uk/site/1192/default.aspx](http://www.bad.org.uk/site/1192/default.aspx)

