

CRYOTHERAPY

Background Information

For years, cryotherapy has been the standard treatment for the removal of warts, however it is also used for many other benign skin disorders. Use of liquid nitrogen is the most frequently applied method. In second-line medical care, excochleation is also practised, and sometimes treatment with laser therapy. Both treatment methods are performed with local anaesthesia. For several years, a different method has been available as an alternative for liquid nitrogen, i.e. a mixture of dimethyl ether and propane (DMEP). In scientific research, liquid nitrogen has been compared with DMEP for the treatment of benign skin disorders. No differences were found between these two methods with regard to effectiveness, tolerance or safety.

Product Information

Wartner Medical Products has developed Wartner Pro for the treatment of warts.

The Wartner Pro Kit consists of:

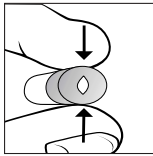
- a 125 ml aerosol containing a mixture of dimethyl ether and propane
- 42 applicators in three different sizes (6, 7 and 8 mm)
- holder for the applicators
- information booklet

Wartner Pro is designed for external use only. Only use Wartner Pro in combination with the special applicators. These applicators have different sizes that can be used for warts of various dimensions. Each size has its own colour. Use one applicator for each wart and use it only once. Wartner Pro can be stored for three years and has no unfavourable effect on the environment. The use-by date can be found on the packaging and on the underside of the aerosol. The contents of Wartner Pro are inflammable, so protracted exposure to the sun or extreme heat is dangerous. Do not smoke while applying Wartner Pro. Store in a safe place and out of reach of children.

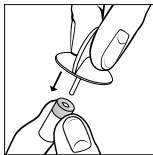
Use of Wartner Pro®

Wartner Pro freezes the skin where the applicator has made contact with the skin. The skin turns white and a painful stinging sensation will be felt as a result of the freezing process. As soon as the applicator is removed, both the colour change and the painful stinging sensation will diminish rapidly. A blister will develop under the wart as a result of the freezing process. In places with a thick keratotic layer, this will not always be visible to the naked eye. After about 10 days, the frozen skin with the treated wart will be shed. By this time, new skin will have developed under the blister.

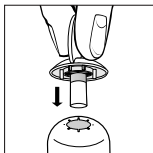
Only one treatment is necessary for each wart. With refractory warts, a second treatment may be performed after 10 days. Do not treat a wart more than three times with Wartner Pro. With warts on the upper surface of hands and feet, slow movement of the fingers or toes is advised during treatment. If more than one wart is present on a finger or toe, only treat one wart at a time. Treat the other warts individually with a two-week period between each treatment.



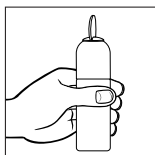
1 Hold the foam applicator on the coloured side between the thumb and index finger and squeeze until a small opening appears. You will find the foam applicators in the three different boxes.



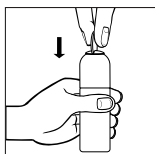
2 Slide the opening of the foam applicator over the stick of the holder until the stick is no longer visible. You will find the holder in the box.



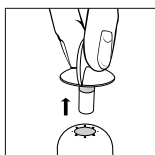
3 Place the holder with the foam applicator in the opening on the top of the cap so that the foam applicator is no longer visible.



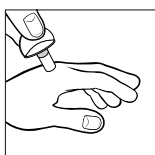
4 Place the aerosol spray can on a table or other sturdy surface. **CAUTION!** Do not hold the spray can near your face, over parts of your body or clothing!



5 Holding the can firmly at the bottom, press down the valve strongly for two to three seconds. You will hear a hissing sound.



6 Remove the holder with the foam applicator from the valve. The foam applicator is saturated with cold liquid and condensation will form. This condensation is harmless.



7 Leave the applicator on the holder and then lightly place the tip of the foam applicator on the wart or verruca that is to be frozen. With molluscum contagiosum, flat warts and common warts, do not keep the applicator longer than 20 seconds on the wart, and with plantar warts no longer than 40 seconds (see Diagram A, on the next page). The practitioner can vary the freezing time per individual, based on own experience, assessment of the lesions and skin strength. There will be an aching, stinging sensation. Discard the foam applicator after single use.

Range of application

Warts are quite common and are very contagious. The shape of warts may vary from flat to pointed and from broad to narrow. There is also considerable variation with regard to consistency and colour. Nearly all warts are caused by viruses. The involved virus, human papilloma virus (HPV), is found all over the world and there are different types. Wartner Pro can be used to remove the following types of warts.

Diagram A

Condition	Description	Max. freezing time
Verruca vulgaris (common wart)	Round, sharply demarcated, extremely cornified with cauliflower-like surface. May grow to pea size. Found particularly on hands, but also on knees, elbows and face.	20 seconds
Molluscum contagiosum	Smooth, skin-coloured (translucent or white) small bump, firm to the touch. Seen particularly in children on trunk, arms and legs. N.B. This wart is not caused by HPV but by a large poxvirus.	20 seconds
Verruca plana (flat wart)	Smooth, flat and only a few millimetres in diameter. Skin-coloured or light brown. Often present in large numbers and particularly seen on face, arms and legs.	20 seconds
Verruca plantaris (plantar wart)	Induration on the sole of the foot. Discernment is made between the mosaic wart with a superficial spreading pattern and the 'thorny wart' that grows deep into the skin and can be very painful.	40 seconds