

## Consent for Treatment of the Skin With Cryotherapy (Liquid Nitrogen)

Dr Michael McGuinness, or Qualified Agent Acting as Medical Provider

**What is Cryotherapy** Cryotherapy, for our purposes in dermatology, is treatment of the skin with liquid nitrogen. Liquid nitrogen is nitrogen gas that has been compressed and turned into liquid. Keep in mind that the air we breathe is about 80% nitrogen gas. The treatment with liquid nitrogen is done by spraying it onto your skin with a special canister, or by using a Q-tip. Liquid nitrogen is extremely cold (approx. -300 F), and when it is applied to the skin by spray or Q-tip, it usually is painful to some degree for a few minutes to hours, and a blister usually forms at the site treated, that day or the next.

**Purpose/Benefits of Cryotherapy** it is used to treat/remove/destroy numerous benign, precancerous, and cancerous skin conditions. Some of these include skin tags, warts, seborrheic keratosis, angiomas, sun spots, actinic keratosis, superficial basal or squamous cell skin cancer. Treatment with cryotherapy is usually successful, but may require multiple treatments, and in some cases, may not work at all.

**Risks of Cryotherapy Treatment** overall the risks from this treatment are minor. The most common and/or important risks include, but are not limited to:

**Pain** After the treatment, there will be some degree of pain. This could last from a few minutes to days. The pain is usual minor, but could, rarely, be severe, requiring pain medication for a day or two. If this were to happen, you should call us. Tylenol (acetaminophen) is the usual pain reliever of choice. We generally recommend avoiding aspirin, Advil, Motrin, ibuprofen, naproxen type pain relievers, since they thin the blood, and can lead to sizeable blood blister formation.

**Blister and scab formation** are very common and should be expected.

**Infection** is possible, but is uncommon. If you notice increased pain days after the treatment, yellowish fluid or pus, reddish streaks from the treated site, please contact us.

**Cryotherapy can result in permanent changes in the color of the treated skin, and these changes, if they occur, could be very visible.** This usually means white areas, but in some cases, the skin could be darker in color. We realize this is possible, and are careful to try and minimize this risk, but it can still happen. If a white spot results from cryotherapy, it could be especially visible if the surrounding skin is reddish brown from sun damage, as is commonly seen on the chest, neck, arms, and legs.

**Cryotherapy can, rarely, lead to nerve damage in the area treated.** This would be noticed usually as numbness. Numbness, if it occurs, is usually temporary, but could be permanent.

**Cryotherapy can result in scars that are raised, red, itchy, or tender, and could be permanent.** There are treatments that can improve the appearance of these type of scars, in most cases however.

**Wound Care After Cryotherapy Treatment** Immediately after treatment with cryotherapy, the body area treated will be sore, or painful, to some degree. The pain usually subsides over 5-15 minutes, but it can last for a day or two. It will be painful to put pressure on the treated area, to some degree. The area treated will initially be reddish in color, and somewhat swollen for a variable period of time (minutes to days), and usually, a blister forms in a day or two. The blister is usually normal looking, although it could be purple/black in color, if bleeding in the blister occurred. Bleeding in the blister may occur, if you were taking blood thinners before treatment, the area had a lot of superficial blood vessels, or there was some type of trauma to the area treated. The blister may be popped if it is sore, or getting rubbed/traumatized repeatedly. Make sure, if you pop

the blister yourself, that you make a good size slice into the blister, as they have a tendency to reform and refill, if too small a hole is put in the blister. No covering or dressing is needed on the treated area, or blister, unless the area just feels better covered, or if there is an open wound from the blister having popped. There are two ways to take care of the treated area, after cryotherapy. The one you choose, is simply your preference. The first way consists of applying a simple bandaid and antibiotic cream/ointment to the site for only several days, then doing nothing for it. A brown scab which may be a bit itchy or tender, will usually form and remain in place on the treated area, for a few weeks to months. Do not pick the scab off, as this will lead to greater scarring. When the scab falls off, the site will remain pink/red for weeks to months, before fully healing.

The second method of caring for the treated site takes more work, but ultimately may lead to faster healing, and possibly less scarring. With this method. keep the site covered at all times, with a bandaid/bandage and antibiotic cream/petrolatum until full healing occurs. A waterproof bandaid could be used, which might only have to be changed every 2-5 days. Keeping the wound covered while healing, will usually prevent the typical brown scab, seen on most healing skin trauma, including healing blisters, from forming. This process is a bit more work and inconvenience, but may be worth it to some people. Probably the major downside to keeping the site covered until it heals, is that a lot of people can get significant rashes from wearing a bandaid or adhesive for a prolonged time. Such rashes, also tend to be itchy or tender.

After cryotherapy treatment, the wound can get wet in the shower or pool, but lakes and rivers should be avoided for at least a week or two. On certain thick skinned body areas, like the palms or soles, even when a blister forms, it may not be obvious as the usual fluid filled “bubble” that is seen on most body areas, but may appear to be just a minor swelling of the area.

**Alternatives to Cryotherapy** Depending on what is being treated with cryotherapy, there are several alternative treatments available, including doing nothing, laser, chemical peels, prescription and non prescription creams, surgery, ED&C (scraping and burning), etc.

**Payment for Cryotherapy** For the vast majority of medical conditions, and insurance companies, cryotherapy is considered medically reasonable, and is a “covered” procedure. However, depending on how your specific insurance company categorizes cryotherapy, the procedure may be subject to copays and/or deductibles that you would be required to pay out of pocket before your insurance coverage begins. There are skin conditions for which cryotherapy is effective, which may be considered “cosmetic” by insurance companies, which will not be covered at all, and may require you to pay for completely. Skin tags are an example.

I acknowledge that I understand written and spoken English, and that Dr McGuiness and/or his staff has given me the time to read this “consent for cryotherapy” document. I have read this document, and understand it. All my questions have been answered to my satisfaction. In particular, I understand that cryotherapy will cause some degree of pain, there is some time for healing to occur, and that there is often a permanent scar left behind. I give my informed consent for treatment with cryotherapy, and agree to proceed with treatment with cryotherapy.

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patient signature

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medical provider

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witness

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