

Cryotherapy for Treating Skin Lesions Training Manual



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Welcome to...



With over 40 years experience in the beauty industry, I've dedicated my career to helping people feel confidence and empowered to be the very best version of themselves. As both an experienced therapist and educator, I am passionate about ongoing learning and embracing new technology and technologies, while maintaining high standards and commitment to excellence.

My mission has always been clear:
to uplift others through expert treatments, thoughtful guidance, and educations that inspires. Whether I'm working hands-on with clients, or training the next generation of beauty professionals, I bring a blend of experience, empathy and up-to-date knowledge that makes a real difference.

Your beauty and aesthetics journey starts here and I look forward to helping you achieve your training goals.



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Introduction

Cryotherapy is a widely used, minimally invasive dermatologic procedure that employs extreme cold to treat a variety of benign, premalignant, and selected malignant skin lesions. This technique, typically involving the application of liquid nitrogen, causes targeted cellular destruction through rapid freezing and thawing, leading to tissue necrosis and subsequent lesion removal.

In clinical practice, cryotherapy is valued for its simplicity, cost-effectiveness, and high success rate with minimal patient downtime. It is commonly used to treat conditions such as skin tags,, common and plantar warts, and cherry angiomas

This training aims to provide aesthetic practitioners with a comprehensive understanding of the principles, indications, contraindications, and practical techniques of cryotherapy. Emphasis will be placed on client selection, equipment handling, safety precautions, and post treatment care to ensure both efficacy and client comfort.

By the end of this training, participants will be equipped with the knowledge and skills necessary to confidently perform cryotherapy for common dermatologic conditions within their scope of practice.

What you will cover on this course:

- Relevant skin anatomy, physiology
- Identify Skin lesions and their causes
- Client consultation
- Health & safety and treatment preparation
- Treatment procedure
- Relevant contra indications and contra actions
- Treatment planning, pricing and promotional ideas

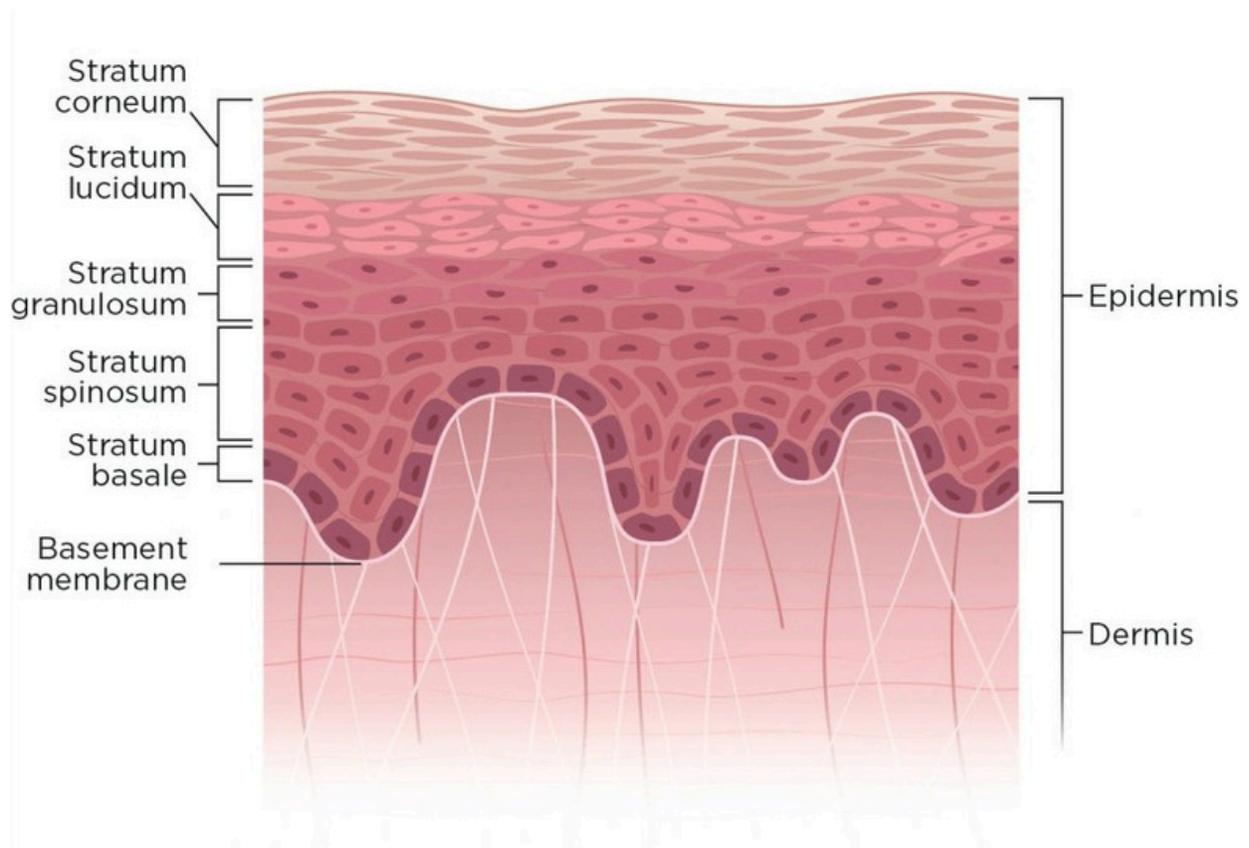
Training Objectives:

- To learn and understand the effects and benefits of cryotherapy on skin lesions
- Understand relative skin anatomy relating to cryotherapy
- Demonstrate competence of the treatment & complete written assessment.



Anatomy & Physiology

To help us understand how Cryotherapy works we need to understand the skin structures and functions, the wound healing cascade and identify different skin lesions.



The Skin:

The skin is the largest organ of the body and highly intricate in design. The skin is packed with cells that consume and use energy all the time. These cells eventually die and rise to the surface of the epidermis where they shed.

The skin consists of three distinct layers:

- The Epidermis
- The Dermis
- The Subcutaneous layer



Skin facts:

- The average person's skin covers an area of 2 square meters.
- Skin accounts for about 15% of your body weight.
- The average adult has approximately 21 square feet of skin, which weighs 9 lbs and contains more than 11 miles of blood vessels.
- The average person has about 300 million skin cells.

The skin plays an important part in regulating temperature, protecting us from damage from the environment, protects the underlying tissues and organs from disease, removes waste products, makes us aware of our surroundings and produces Vitamin D which is vital to the maintenance of strong bones. The skin is relatively waterproof, however, it is a permeable membrane, which will allow for some absorption of water and oil. The skin varies in thickness depending upon what its main function is, i.e. it will be thicker on the soles of the feet to allow for walking.



Functions of the Skin

The functions of the skin are:

1. Sensation
2. Heat Regulation
3. Absorption
4. Protection
5. Excretion
6. Secretion

REMEMBER:

S . H . A . P . E . S

Sensation

Sensory nerve endings are found in the dermis and make us aware of our surrounding, heat, touch, hot and cold and pain.

Heat regulation

The adipose tissue helps the body to regulate and maintain a healthy body temperature of 39 degrees Celsius

Absorption

The skin has the ability to absorb some chemicals, essential oils and active products through the layers. The amount the skin absorb is governed by the overall health and condition of the skin and genetics.

Protection

The acid mantle helps to protect skin from microbes and bacterial infections. Melanin helps to protect the skin from UV and sensory nerve endings warn the body of possible danger or trauma through reflex action.

Excretion/Elimination

The skin has the ability to excrete sweat to help regulate body temperature

Secretion

The skin has the ability to secrete sebum from the sebaceous gland to help form part of the acid mantle. Sebum also keeps the skin and hair lubricated and is made from fatty acids and cholesterol.



The Epidermis

Stratum Corneum

This is the outer most layer where the scale like cells are made up of almost entirely Keratin. These cells are completely dead and are constantly being worn away and replaced by cells from below. It's primarily responsible for forming a barrier to protect underlying tissue from infection, dehydration, chemicals, and mechanical stress. This layer is composed of dead skin cells that the body naturally sheds as new cells push up from below. It's a crucial part of your skin's health and plays a significant role in how the skin looks and feels.

Stratum Lucidum

Found on the soles of the feet, the lips and the palms of the hands, these are clear cells that allow light to pass through. They do not contain a nucleus

Granular Layer:

This layer is 5 – 6 layers thick, the cells are still living and continue to flatten and fill with Keratin but then gradually lose their nuclei to become dead cells as they move through the layers to reach the Stratum Corneum.

Basal layer:

Cells here are attached to the basement membrane, which separates the Dermis from the Epidermis. Basal cells continually divide and grow to produce more new cells that gradually move up through the epidermal layers to the surface. The cells in the Basal Layer receive oxygen and nutrients via the dermis. The Basal Layer also contains specialised cells, called Melanocytes that produce the pigment melanin, and Langerhans cells that act as the skin's defence mechanism. Keratin stem cells are also present in this layer.

Spinous Layer:

Here the cells rise up from the Basal Layer and start to flatten out. A tough protein, Keratin, starts to invade the cells to protect the body from harm. Although the cells are still living in this layer, the nucleus has started to shrink and they receive little to no oxygen or nutrients.

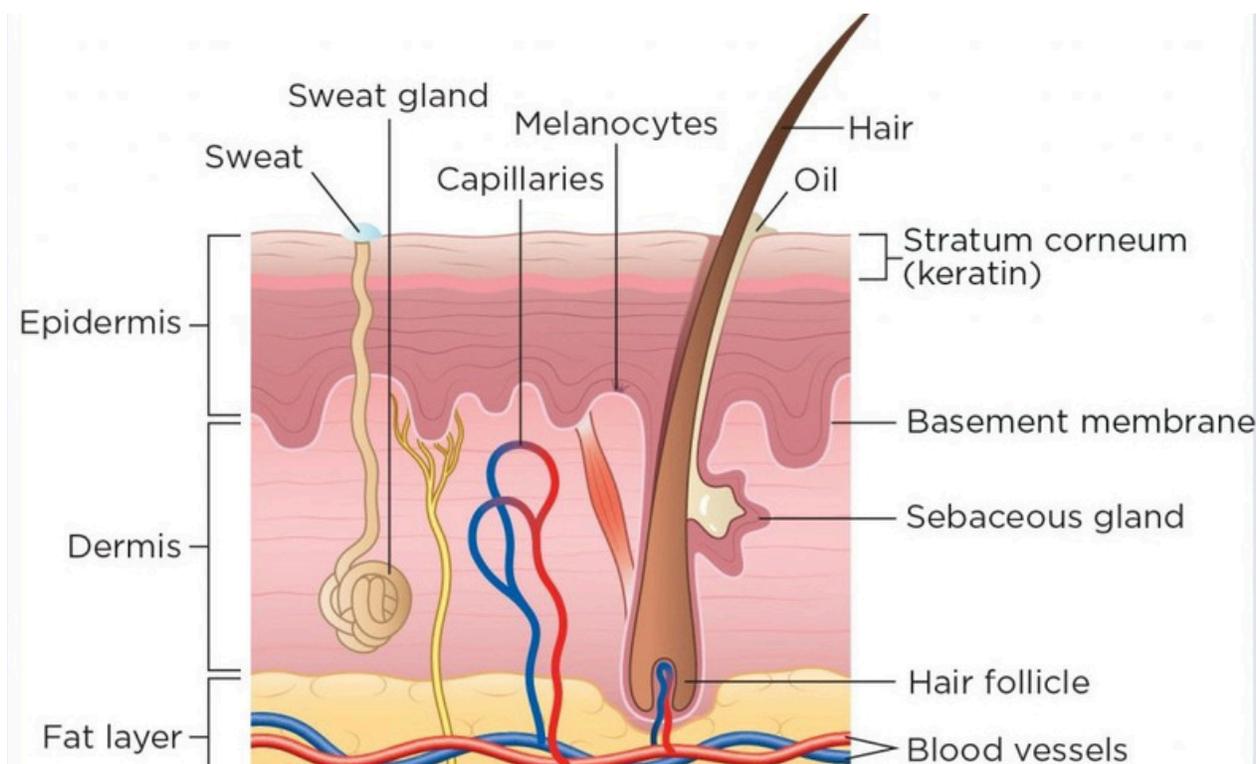


The Dermis:

The Dermis is thicker than the Epidermis consisting of mainly connective tissue that is made up of fibres, the proteins Collagen and Elastin and a non-fibrous gel type consistency called Extra Cellular Matrix, (ECM) fills the spaces between the fibres.

The Dermis contains blood vessels that supply oxygen and nutrients to the skin and basal layer, and remove waste products, as well as special skin structures such as sensory receptors, nerve endings, sweat glands and hair follicles. The skin is very often the last organ to receive any oxygen and nutrients from the body especially if the individual has recently been ill. As we age the blood supply to the skin slows down and therefore oxygen and nutrient supply becomes compromised.

The skin plays an important part in regulating temperature, protecting us from damage from the environment, protects the underlying tissues and organs from disease, removes waste products, makes us aware of our surroundings and produces Vitamin D which is vital to the maintenance of strong bones. The skin is relatively waterproof, however, it is a permeable membrane, which will allow for some absorption of water and oil. The skin varies in thickness depending upon what its main function is, i.e. it will be thicker on the soles of the feet to allow for walking.



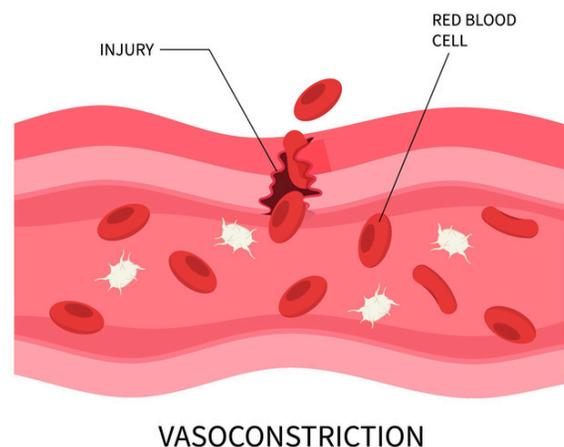
The Wound Healing Response

Knowing how the skin heals after cryotherapy helps you choose appropriate freeze times, number of cycles, and whether repeat treatments will be necessary. The intensity of tissue destruction must be balanced with the skin's capacity to regenerate, especially in sensitive or cosmetically important areas.

the healing phase is a critical part of the treatment process. A sound understanding of the wound healing response ensures safe, effective, and patient-centered care.

Hemostasis:

Is the first stage and is initiated within seconds of injury to the skin. Blood vessels constrict (vasoconstriction) to reduce further blood loss and as blood leaks into the open wound, the platelets are exposed to collagen, which then triggers the coagulation cascade, ultimately resulting in the formation of a fibrin clot. The clot formation prevents further bleeding from the damaged blood vessels within the tissue.



Inflammation:

The second stage and lasts approximately 3 days. Growth factors are released by platelets which attract neutrophils, macrophages, monocytes and fibroblasts which are needed for effective wound healing. Neutrophils ingest bacteria and other debris via phagocytosis helping to clean the wound and the pus commonly seen at this stage of the wound healing process is representative of the large number of neutrophils filled with bacteria and debris. Blood vessels are more permeable at this stage due to the release of prostaglandins and histamine, serous fluid also leaks into the wound and surrounding tissue causing oedema. The neutrophils undergo cell death (apoptosis) over the next 2 – 3 days when the monocytes then become activated and further facilitate wound healing by mopping up the neutrophils and further attracting other cell types that are key to the wound healing process, including fibroblasts. The main aim of inflammation at this stage is to control blood loss and clean the wound.

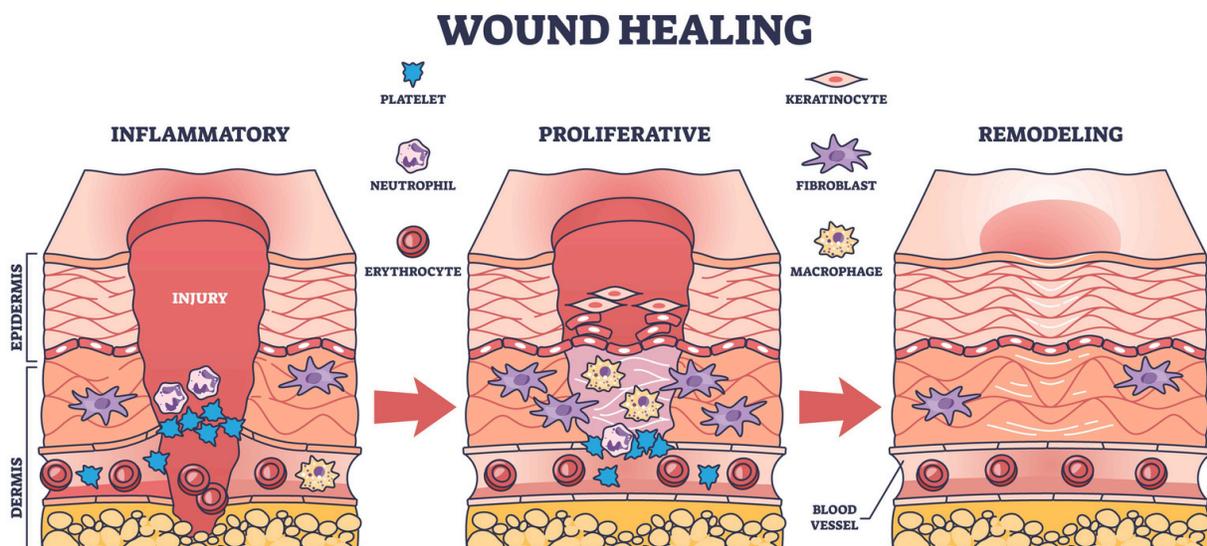


Proliferation

Involves the production of connective tissue which fills the wound and provides a scaffold for further healing. The release of several growth factors such as vascular endothelial growth factor (VEGF) and basic fibroblast factor (bFGF), which help to drive the development of new blood vessels within the wound. Fibroblasts also begin to produce collagen to replace the scaffold that was formed during the proliferative phase. It is thought that the fibroblast activity at this stage causes the skin to contract as the skin heals. Once the wound has been filled with granulation tissue, epithelial cells migrate to the wound edges and require a moist, well vascularised wound surface for this to happen.

Re-modelling

Involves breakdown and rebuilding of the wound's extracellular matrix by matrix metalloproteinases to refine the skin. This process is slow and lasts more than a year. It is during this phase that abnormal scar tissue can form, such as keloid scarring, due to imbalances in the process.



Fitzpatrick Scale

The Fitzpatrick Scale, developed by Harvard Medical School dermatologist Thomas Fitzpatrick in 1975, is a classification system for skin colour. It measures the skin's response to sun exposure and its susceptibility to UV damage, which can help determine the risk of skin cancer and guide appropriate skincare treatments.

Fitzpatrick skin types IV to VI (darker skin tones) have unique considerations when it comes to cryotherapy, due to the higher melanin content in the skin.

Type I	Very fair skin, often with freckles, blue or green eyes, and red or blonde hair. This skin type always burns and never tans in the sun.
Type II	Fair skin, usually with blue eyes and blonde or light brown hair. This skin type usually burns and tans minimally.
Type III	Medium skin, often with brown eyes and hair. This skin type sometimes burns and tans gradually to light brown.
Type IV	Olive skin, typically with brown or dark brown eyes and hair. This skin type rarely burns and tans well to moderate brown.
Type V	Brown skin, usually with dark eyes and hair. This skin type very rarely burns and tans profusely to dark brown.
Type VI	Dark brown or black skin, typically with dark eyes and hair. This skin type is black. Contrary to what we have been lead to believe, black skins can burn, however it is more difficult to notice/see any areas of redness because of the depth of pigmentation that is present. When using any products or treatments that have the potential to induce redness, the therapist will need to be extra vigilant with this this Fitzpatrick type to spot any changes on the skin.

When performing cryotherapy on clients with darker Fitzpatrick skin types (IV–VI), special care must be taken due to the increased risk of post-treatment skin complications



Skin Lesions

Skin lesions are areas of the skin that look different from the surrounding skin due to changes in colour, texture, shape, or appearance and can be categorised by their clinical nature and risk. They can be benign (non-cancerous), premalignant (may become cancerous), or malignant (cancerous).

Lesions are generally categorised as:

Primary lesions – those that develop as a direct result of a disease or condition (e.g., moles, warts, acne).

Secondary lesions – changes that occur due to irritation, infection, scratching, or healing (e.g., crusts, ulcers, scars).

Common Types of Skin Lesions Include:

- Benign: Seborrheic keratoses, warts, skin tags
- Premalignant: Actinic keratoses
- Malignant: Basal cell carcinoma, squamous cell carcinoma, melanoma

Malignant or suspicious lesions should always be referred to a medical professional for diagnosis and management, aesthetic practitioners must NOT treat or attempt to remove them.

Lesions may be flat (macules), raised (papules, nodules), or fluid-filled (vesicles, cysts), and they vary in size, colour, and location.

Remember:

The location, along with the size, shape, colour, and texture, helps determine what type of lesion it is. For example:

- Warts on the feet = verrucae (plantar warts)
- Flat macules in sun exposed areas = possibly solar lentigines or melasma



Primary Skin Lesions:

Primary lesions can appear anywhere on the body, depending on their type, cause, and underlying condition. Their location often provides important clues for diagnosis.

Here's a general guide based on common types of primary lesions and where they tend to occur:

Type	Description	Examples	Where found
Macule	Flat, discolored spot	Freckles, flat moles	Face, arms and areas of sun exposure
Papules	Small, raised bump	Wart, skin tag, mole/nevi	hands, fingers, toes, Anywhere on body
Nodule	Larger, solid lump	Dermatofibroma, cyst	Usually legs following trauma from insect bites
Plaque	Raised, flat-topped lesion	Psoriasis	Scalp, elbows, knees,
Vesicle	Small, fluid-filled blister	Chickenpox, cold sores	Around the mouth, body, hands and feet
Pustule	Pus-filled lesion	Acne, infected follicle	Face and back are common areas
Wheal	Swollen, itchy area	Hives, insect bite	Anywhere
Bulla	Large fluid-filled blister	Severe burn blister	Anywhere, or where the skin is continuously rubbed, eg, heels.



Skin Tags:

A skin tag is a small, soft, benign growth that hangs off the skin. They are typically flesh coloured, though they can be slightly darker. Skin tags are not dangerous and are very common, especially in adults. They appear most often in areas where the skin experiences friction, such as the neck, under the arms, eyelids, groin area and under the breasts. Skin tags are harmless and usually painless and many people choose to have them removed for cosmetic reasons or because they become irritated by clothing or jewellery or frequent rubbing of the skin. Attached to the skin via stalk, called a peduncle, they are made up of fibrous tissue, blood vessels and collagen.



Cherry Angiomas:



A cherry angioma (also known as a Campbell de Morgan spot) is a common benign vascular skin lesion made up of small clusters of dilated blood capillaries. They are usually bright red or burgundy in colour, smooth and slightly raised and oval or round in shape. Typically they are 2 - 5mm diameter and do not usually cause any pain or discomfort although they may bleed if scratched. Usually found on the torso, arms, legs, and scalp and are less commonly found on the face. Should a cherry angioma bleed or start to change, it is advisable to seek medical advice.

The most common causes of Cherry Angiomas are:

- Aging most common in adults over 30, and prevalence increases with age
- Genetics – can run in families
- Hormonal changes – pregnancy or hormonal therapy may contribute
- Sun exposure – may influence development on sun-exposed areas
- Chemical exposure – certain industrial chemicals (e.g., bromides) have been linked
- Liver dysfunction – rarely, can be associated with liver disease (usually in widespread angiomas)

Most cherry angiomas occur without any underlying health issue and are considered a natural part of aging.



Milia



Milia are small, white or yellowish keratin-filled cysts that form just beneath the surface of the skin. They appear as tiny, dome-shaped bumps, typically measuring 1–2 mm in diameter. Milia are benign (non-cancerous) and do not cause pain or itching, though they can be cosmetically bothersome for some individuals. Commonly found around the eyes and eyelids, cheeks, forehead and nose areas of the face. They often appear on the scalp and face in babies and infants.

Usually caused by underdeveloped sweat ducts in newborns. Where as in adults it is a result of trapped keratin beneath the skin surface. Other causes can be associated with:

- Heavy occlusive makeup
- Skin trauma (burns)
- Sun damage
- Natural part of skin ageing process.

While milia often resolve on their own [particularly in infants] treatment options for adults include manual extraction by a trained professional, chemical exfoliation, or cryotherapy in some cases.



Warts:

A wart is a non-cancerous skin growth caused by infection with the human papillomavirus (HPV). The virus triggers rapid growth of keratin in the skin's outer layer, forming a rough, raised lesion. Warts are not dangerous, however they are highly contagious and are spread through contact.

There are over 100 different strains of HPV, some are more likely to cause warts than others. The virus can spread through contact such as:

- Skin to skin contact
- Swimming pools and changing room floors
- Personal items, such as razors and towels
- Broken skin

Individuals who are immunocompromised are more susceptible, such as the elderly, and young children. There are different types of warts - see table below:

Type of Wart	Appearance	Common Locations
Common Warts (Verruca vulgaris)	Rough, raised, dome-shaped; greyish or flesh-colored	Hands, fingers, around nails, knees
Plantar Warts (Verruca plantaris)	Flat or inward-growing due to pressure; thickened with black dots (capillaries)	Soles of the feet (often painful)
Flat Warts (Verruca plana)	Flat or inward-growing due to pressure; thickened with black dots (capillaries)	Face, forehead, backs of hands, legs (more in children and teens)
Filiform Warts	Long, narrow, thread-like projections	Face, eyelids, lips, neck
Periungual Warts	Rough, irregular growths around nails; can distort nail growth	Around fingernails and toenails
Genital Warts (Condyloma acuminata)	Soft, moist, cauliflower-like clusters; caused by sexually transmitted HPV	Genital and anal areas



Secondary Skin Lesions:

These occur when primary lesions are manipulated, irritated, or have started to heal or break down. Their location is often determined by the location of the original lesion, but some patterns are more common.

Type	Description	Examples	Where found
Crust	Dried serum, blood, or pus (scab)	Impetigo	Face (impetigo), scalp, limbs with healing sores
Scale	Flaky skin	Eczema, psoriasis	Scalp, elbows, knees
Fissure	Crack in the skin	Athlete's foot	Between the toes or corners of the mouth, sometimes between the fingers.
Erosion	Superficial loss of skin	Ruptured blister	At the site of a burst blister, corners of the mouth and mucous membranes.
Ulcer	Deeper loss of skin	Pressure ulcer	Legs (venous), pressure points, diabetic feet.
Scar	Fibrous tissue replacing normal skin	Acne scars, surgical scars	Anywhere on the body where there has been healing

Secondary lesions may indicate underlying chronic conditions, poor wound healing, or infection. You should not attempt to treat ulcers, infected lesions, or active erosions unless medically trained, these will require referral. Recognising secondary lesions helps in identifying skin behaviour over time, guiding decisions on whether cryotherapy or alternative treatments are suitable



Malignant Skin Lesions:

Malignant skin lesions are cancerous growths of the skin that result from abnormal and uncontrolled cell growth. These lesions have the potential to invade surrounding tissue and, in some cases, spread (metastasize) to other parts of the body.

How to Recognise a Malignant Skin Lesion

Aesthetic practitioners should be alert to suspicious or changing skin lesions. Any lesion that looks unusual, is growing, changing, or bleeding should be referred to a medical professional.

Causes of Malignant Skin Lesions

The main cause is DNA damage in skin cells, typically due to:

- Chronic UV exposure (sunlight or tanning beds)
- Fair skin (less melanin protection)
- History of sunburns, especially in childhood
- Family or personal history of skin cancer
- Weakened immune system
- Exposure to carcinogens (e.g., arsenic, radiation)



ABCDEs OF SKIN CANCER



A **ASYMMETRY**
ONE HALF OF A MOLE DOES NOT MATCH THE OTHER.



B **BORDER**
THE EDGES ARE IRREGULAR, RAGGED, NOTCHED OR BLURRED.



C **COLOR**
THE MOLE IS NOT EVENLY COLORED. IT MAY INCLUDE SHADES OF BROWN OR BLACK, OR PATCHES OF RED OR PINK.



D **DIAMETER**
THE SPOT IS LARGER THAN 6 MILLIMETERS ACROSS.



E **EVOLVING**
THE MOLE IS CHANGING IN SIZE, SHAPE OR COLOR.

Other warning signs:

- A sore that doesn't heal
- Itching, bleeding or crusting lesion
- Rapidly growing bump
- Painful or tender spot



Types of Malignant Skin Lesions:

Types of Malignant Skin Lesions

1. Basal Cell Carcinoma (BCC)

Most common type of skin cancer

Appears as a pearly bump, flat scar-like patch, or sore that won't heal

Grows slowly and rarely spreads, but can cause local tissue damage

2. Squamous Cell Carcinoma (SCC)

Appears as a scaly red patch, thickened or crusted bump, or open sore

Often found on sun-exposed areas: face, ears, scalp, hands

Can grow and spread if untreated

3. Malignant Melanoma

Most serious and aggressive form of skin cancer

Can arise from existing moles or appear as a new dark lesion

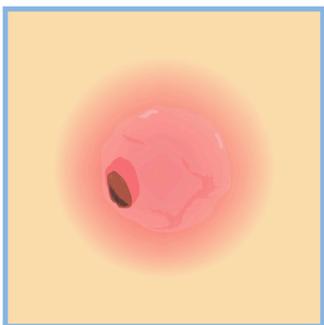
Often dark brown, black, or multicoloured, with irregular borders

Can spread rapidly to other organs

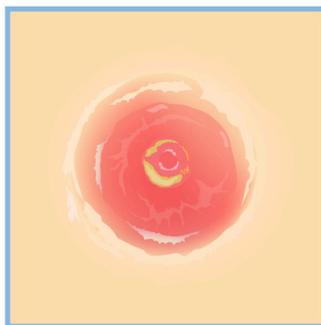
Important for Aesthetic Practitioners:

Malignant lesions must NOT be treated in aesthetic settings. If a client presents with a suspicious or changing lesion, refer immediately to a GP or dermatologist. Document your observations professionally and do not attempt removal.

TYPES OF SKIN CANCER



Basal Cell Carcinoma



Squamous Cell Carcinoma



Melanoma

Principles and Practice of Cryotherapy

Before we can start treating skin tags and other benign growths, we must first understand how the treatment works.



What is Cryotherapy?

A brief history of Cryotherapy:

Cryotherapy is a minimally invasive treatment that uses extreme cold to destroy abnormal or unwanted tissue, such as benign skin lesions, warts, or precancerous spots. It is widely used in both medical and aesthetic practices.

Cold therapy dates back to ancient Egypt and Greece, where ice and snow were used for wound care and inflammation. Hippocrates noticed how using cold compresses controlled bleeding and reduced tissue damage.

In 1907 Dr James Arnott pioneered more focused cryotherapy. He applied a mixture of salt and crushed ice to tumours and skin cancers. He noted that the cold reduced pain, inflammation and tumour growth, while sparing the surrounding healthy tissue. While effective his techniques were limited by the materials available and wasn't able to achieve temperatures cold enough for deeper tissue destruction.

The 60's and 70's saw the introduction of liquid nitrogen and liquid gases and the start of the Cryogenic Revolution. Liquid air and carbon dioxide were first used in early cryosurgical devices and by the 1960's the introduction of liquid nitrogen enabled precise and rapid freezing of the tissue. This marked the beginning of modern cryotherapy. Dermatologists first began using it to treat conditions such as common warts and verrucae, actinic keratoses, seborrheic keratoses and skin tags.

Techniques and devices have been refined over the decades to allow for precise and controlled depth targeting lesions with minimal damage to the surrounding tissue.

Today, cryotherapy is widely used in general practice, dermatology and aesthetics to treat benign skin lesions, it is minimally invasive, quick and cost effective. It has also been adopted in whole body cryotherapy treatments to use alongside sports medicine and pain management, although these uses are more recent and sometime controversial. .



Cryotherapy vs Other Methods

Cryotherapy uses extreme cold, typically liquid nitrogen, to freeze and destroy abnormal skin tissue. It is quick, minimally invasive, and usually requires little to no anaesthesia. One of its main advantages is minimal downtime, most clients can resume normal activities immediately. It is particularly effective for small to medium-sized benign lesions and certain precancerous spots. However, multiple sessions may be needed for larger or deeper lesions, and there is a small risk of temporary pigmentation changes, especially on darker skin tones. In contrast, other methods may include:

Surgical excision (physically cutting out the lesion), often with a margin of healthy skin, making it ideal for larger, suspicious, or malignant lesions that require histological analysis. While it provides a definitive removal in one session, it may leave a scar and requires a longer healing period.

Laser therapy uses targeted light energy to vaporise lesion tissue, offering high precision and minimal damage to surrounding skin. It is effective for certain lesion types and can be combined with other treatments, though it tends to be more expensive.

Electrocautery (cauterisation) uses heat from electrical current to destroy tissue and seal blood vessels; it is fast and effective but can cause more post-treatment redness and scabbing than cryotherapy.

Specialist training must be taken to carry out these treatments.

See the comparisons chart on the next page:



Comparison Chart

Cryotherapy vs other treatments

Method	How It Works	Pros	Cons	Best For
Cryotherapy	Freezes lesion with liquid nitrogen	Quick, minimal downtime, cost-effective	Possible pigmentation changes, may need repeat	Small-medium benign lesions, precancerous spots
Surgical Excision	Cuts out lesion with scalpel	One-session removal, histology possible	Scarring, longer healing	Larger lesions, suspicious/malignant lesions
Laser Therapy	Vaporises tissue with focused light	Precise, minimal damage to surrounding skin	Higher cost, not suitable for all lesion types	Cosmetic removal, vascular lesions, some pigmented
Electrocautery	Destroys tissue with electric current	Quick, seals vessels, reduces bleeding	More redness/scabbing, risk of tissue damage	Warts, seborrheic keratosis, superficial growths



What is Liquid Nitrogen?



Liquid nitrogen (N_2) is nitrogen gas that has been cooled to an extremely low temperature until it becomes a clear, colourless liquid. It is colourless, non toxic, and non flammable. Nitrogen make up about 78% of the air that we breathe so it is naturally abundant. In it's liquid form it is incredibly cold, **-196°C (-321°F)** and must be handled carefully with the correct safety equipment and training.

Liquid nitrogen is produced through a process called fractional distillation of air:

- Air is compressed and cooled until it becomes a liquid.
- The different gases in the air (like oxygen, nitrogen, argon) are then separated based on their boiling points.
- Nitrogen is extracted and kept at extremely cold temperatures to stay in its liquid form.

It's then stored in special containers called Dewar flasks, which are insulated to prevent rapid evaporation.

Liquid nitrogen is used in cryotherapy treatments to freeze and destroy unwanted skin lesions. It causes rapid freezing of skin cells, causing ice crystals to form inside the cells which rupture the cell walls, leading to controlled destruction of the lesion. The freezing cuts the blood flow to the treated area, helping to further destroy the lesion. When used properly it targets the lesion with minimal harm to the surrounding healthy tissue.



How Cryotherapy Works

Cryotherapy devices use N2O cartridges to administer the freeze. To insert a new cartridge into the device, begin by safely discharging any remaining gas from the existing cartridge. Once fully vented, remove the empty cartridge. Take the new cartridge and align it correctly with the device before gently screwing it into place. Rotate until you feel contact with the internal filter or opener. At this point, continue turning quickly –you may hear a brief hiss as the seal is punctured. Tighten the cartridge until you feel resistance and hear a click, then continue twisting until it is fully secured.

Cryotherapy device tips are designed to provide accurate and precise treatment during minor cryosurgical procedures, effectively freezing and destroying unwanted skin imperfections such as skin tags, warts, and age spots. These interchangeable tips enable controlled application of nitrous oxide, allowing practitioners to target lesions as small as 1mm while minimising damage to surrounding healthy tissue.

Various models of the device offer different tip sizes and lengths, allowing for customisation based on the size, depth, and location of the lesion being treated. The device delivers nitrous oxide at high pressure (approximately 725 psi) to ensure rapid and effective tissue freezing.

Specialised applicator tips are available for delicate or hard-to-reach areas, including treatments on the face, eyelids, and other sensitive zones.

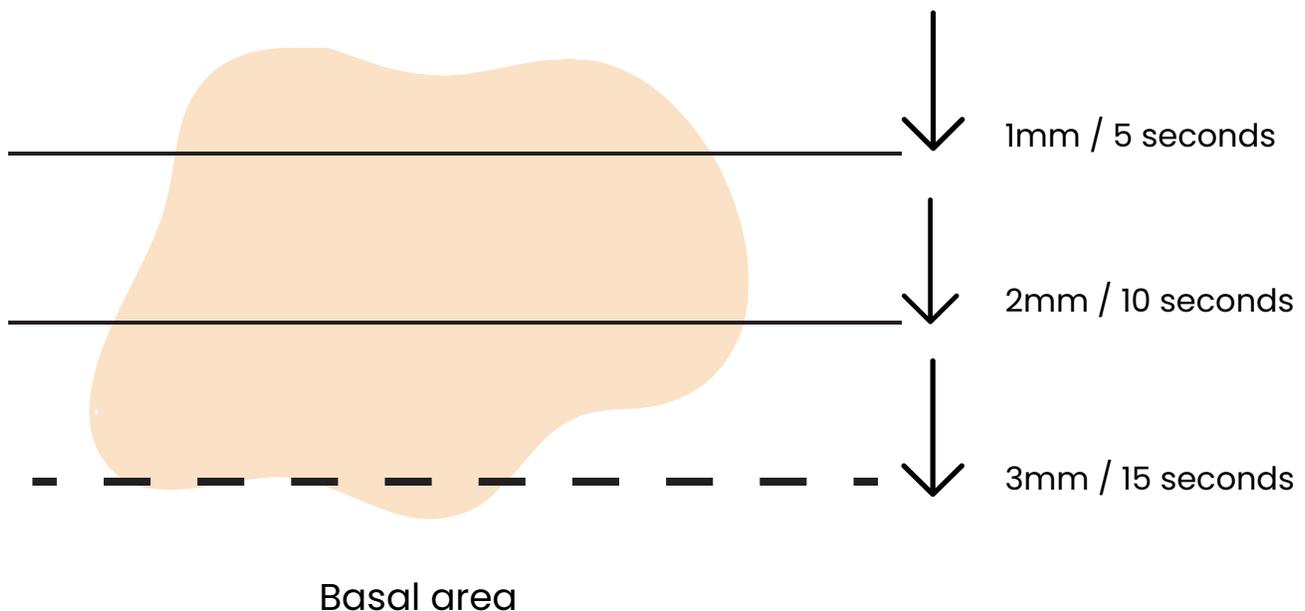


Effective Application & Treatment:

To ensure effective treatment, the applicator tip should be positioned between **0.4 mm and 5 mm** from the lesion, maintaining a precise focal point throughout the procedure. It is essential that the white frost (freeze zone) remains clearly visible and sustained for the entire duration of the treatment. If accurate focus is not achieved, the lesion may not freeze adequately, leading to incomplete or ineffective results.

The intensity of the freeze can be adjusted by moving the applicator slightly closer to or further from the lesion. The penetration rate of nitrous oxide into human tissue is approximately **1 mm for every 5 seconds** of continuous contact. For example, if the lesion is flat or raised by 1 mm, a 5-second freeze is typically sufficient.

For thicker lesions, freeze time should be increased accordingly, for example a 3 mm raised lesion would require around 15 seconds of continuous freeze. The maximum safe freeze time is generally **30 seconds** for a lesion up to **6 mm** in depth, and treatment should never exceed this without clinical justification.



Things to Consider:

Moisture and technique considerations in cryotherapy application:

The presence of condensation or humidity in the atmosphere, or within the treatment area, can lead to the formation of an ice layer over the lesion. This ice barrier can impede proper freeze penetration, resulting in an ineffective treatment. Similarly, if the skin is damp from sweat, washing, or showering, this residual moisture must be thoroughly dried prior to treatment to avoid interference with the freezing process.

In addition, keeping the applicator stationary over the lesion can cause excess ice build-up, which also limits freeze depth. To avoid this, it is essential to keep the applicator moving or apply the pulse technique where appropriate, ensuring even and controlled freezing.

Finally, the angle of application plays a crucial role. Maintain the applicator at an angle no greater than 45 degrees to the lesion. Angling above this may result in the liquid nitrogen not properly covering the internal valve, reducing the effectiveness of the freeze.



The device requires very little maintenance as the treatment is no contact, the device only requires simple cleaning with an alcohol wipe. Depending on which device you are using, be careful when handling the tip as they are usually glass and will break if dropped.

Skin Lesions that can be Treated with Cryotherapy

Aesthetic practitioners are permitted to treat a range of common benign (non-cancerous) skin lesions, provided they are trained, insured, and working within their scope of practice. These typically include lesions that are superficial, non-suspicious, and do not require medical diagnosis or intervention. Examples include skin tags, cherry angiomas, milia, sebaceous hyperplasia, seborrhoeic keratoses, verrucae (plantar warts), and common warts. These lesions are often treated for cosmetic reasons or due to minor irritation. It is essential that practitioners are able to identify and differentiate benign lesions from potentially malignant ones, and refer clients to a medical professional when there are any signs of abnormality or concern. Treatments such as cryotherapy, electrocautery, and advanced electrolysis are commonly used in aesthetic settings for appropriate lesions.

Skin lesions that can be treated by an aesthetic practitioner:

- Skin tags
- Warts
- Verrucae
- Millia
- Cherry angioma
- Flat pigmentation or sun spots / sun damage

You are NOT allowed to treat:

- Moles (plain or coloured)
- Suspicious skin lesions or lesions that you do not know or recognise

Always refer clients to their GP for diagnosis if you suspect anything.

Some insurance companies will underwrite the treatment of benign moles if you have a medical diagnosis.



Treating Skin Lesions:

1. Skin Tags (Acrochordons)

Soft, small, skin-coloured growths that often hang off the skin like a tiny flap. Usually caused through friction where skin or clothes rub against the skin. Hormonal changes and genetics can also contribute and are more common in people with obesity, insulin resistance or during pregnancy.



Treatment:

Small skin tags can be treated similarly to other minor lesions, using a direct freeze based on their height above the skin. If the tag is attached by a pedicle (narrow stalk), the freeze should be focused specifically on the pedicle. The goal is to cut off the blood supply, causing the tag to shrivel and detach naturally.

For optimal results, it is recommended to apply two freeze cycles, targeting the tag from opposite sides to ensure complete closure of the supplying vessels. In the case of larger skin tags, up to four freeze points may be necessary—applied at quarter intervals (like clock face positions) or as a full circular freeze around the base.

Larger tags may also require a follow-up treatment approximately four weeks after the initial procedure to ensure complete removal.

Treating Skin Lesions:

2. Cherry Angiomas (Campbell de Morgan spots)

Small, bright red to purple vascular papules caused by clusters of dilated capillaries. Common causes are ageing, genetics, hormonal changes and occasionally linked to certain medical conditions or chemical exposure.

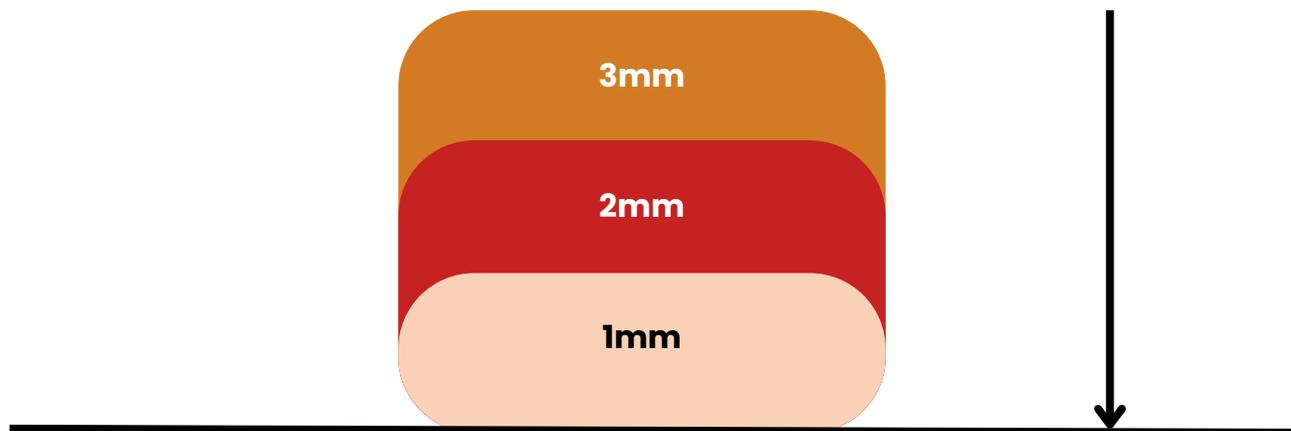


Treatment:

Cryotherapy treatment will usually remove the lesion in one treatment. The lesion should be frozen for the correct time, based on the height above the flat of the skin to freeze the lesion down to the base

1mm = 5 second freeze
2mm = 10 second freeze

Freeze down to the flat of the skin



Treating Skin Lesions:

3. Warts (Verruca Vulgaris)

Caused by the human papillomavirus (HPV); appear as rough, raised growths, often on hands or fingers or on the soles of the feet



Treatment:

For the treatment of warts and verrucae, always use the freeze–thaw–freeze method. Prior to treatment, the client should soak the area and gently file down any hard skin covering the lesion. This can be done using a disposable emery board, which must be discarded immediately after use.

Unlike other lesions, warts and verrucae often vary in depth, making it difficult to determine the full extent of the tissue involved. As a result, treatment should be more aggressive, with the practitioner guided by client feedback during the procedure.

After the initial freeze, allow the lesion to thaw completely (until the frost has fully dissipated), then repeat the freeze for the same duration—ideally up to 30 seconds.

When treating clusters of verrucae, start with the largest lesion. Wait four weeks before reviewing and deciding whether to treat the others, as an immune response is often triggered by the first treatment, potentially helping to clear remaining lesions.

If the client reports a sharp, elastic band–like "twang" sensation, this indicates a nerve response, and the treatment should be stopped immediately.



Treating Skin Lesions:

4. Milia:

Although milia often resolve on their own without intervention, some clients may find them cosmetically undesirable and choose to have them professionally removed.

Milia can be effectively treated with cryotherapy, using a direct freeze technique based on the lesion's height above the surrounding skin.

When treating milia located on the eyelids or within the eye orbit, extra caution is required. The skin in these areas is significantly thinner, so the freeze time must be reduced to half the standard duration—with a maximum freeze of 3 seconds recommended.



Do not treat xanthelasma on the eyelids, as its presence may be a sign of elevated cholesterol or lipid imbalance. Clients presenting with xanthelasma should be referred to their GP for a blood lipid profile and further medical assessment before any aesthetic treatment is considered.

Treating Skin Lesions:

5. Pigmentation:

If the pigmented area is flat and matches the texture of surrounding skin, it can be safely treated with cryotherapy by an aesthetic practitioner. These types of pigmentation are typically caused by UV exposure and are commonly associated with ageing skin.

Before beginning treatment, photograph the pigmented area for your client records and to support treatment monitoring.

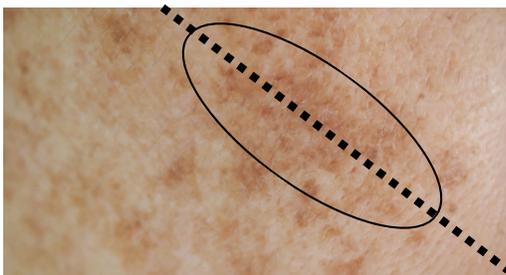
When treating pigmentation, apply a maximum freeze of 5 seconds per area. This is because surface pigmentation usually resides within the first 1mm of the epidermis, making short, targeted freeze times effective.

If the pigmented patch is larger than the treatment tip, use the “colouring-in” technique to gradually cover the entire area. You may slightly overlap the edges to ensure full coverage and to treat adjacent pigment cells effectively.



Assess the area, if it smaller than 5p take off a second or two.

Use the freeze - thaw 5 pence piece maximum area to be treated



DANGER AREA - larger lesions need to be split into two halves - remember to use the freeze-thaw method when freezing the the second half as the centre could be frozen for longer and go deeper.

Treatment Tips:

Larger areas will require more than one treatment

If you are unable to move the tip/applicator use the pulsing technique instead.



Treatment Summary Table

Below is a summary table – check with manufactures instructions and your trainer if you are unsure.

Skin Lesion	Appearance	Treatment
Skin Tags	A skin tag appears as a small, soft, flesh-coloured growth that hangs off the skin.	Apply a direct freeze to the base or pedicle of the tag to cut off the blood supply. Use 2 freeze angles (either side) for small tags, or 4 angles (quarter turns) for larger tags. A second treatment may be needed 4 weeks later for larger or persistent tags.
Cherry Angioma	A small, bright red or purple, dome-shaped bump on the skin.	Apply a direct freeze to the lesion for 5–10 seconds . Avoid over-freezing to prevent skin damage.
Milia	Tiny, white or yellowish cysts that sit just beneath the surface of the skin.	Freeze directly on the lesion for a short duration based on its size. Reduce freeze time to 3 seconds max if within the eye orbit due to thinner skin.
Warts / Verrucae	Rough, raised skin growths that may appear grainy, firm, or cauliflower-like.	Use the freeze–thaw–freeze method. Each freeze can be up to 30 seconds depending on lesion size. Treat aggressively and be guided by client feedback.
Pigmentation	Flat, brown or dark patches of skin, often found on sun-exposed areas.	Apply a maximum 5-second freeze per area of pigment (surface-level). Use the “colouring-in” technique to ensure full lesion coverage and slightly overlap edges.

Precautions When Treating Darker Skin Types

Precautions must be taken when treating Fitzpatrick skin types IV - VI

Risk of Pigment Changes:

Clients with darker skin are more prone to post-inflammatory hyperpigmentation (PIH) or hypopigmentation. These pigment changes can be temporary or permanent and are more likely if over-freezing occurs.

Use Shorter Freeze Times:

Reduce freeze duration to half the standard time, especially on facial or delicate areas. Aim for gentler freezing to minimise tissue trauma.

Avoid Aggressive Treatment:

Do not double-freeze or extend freeze time unnecessarily. Use minimal effective freeze—just enough to treat the lesion without causing excessive skin damage.

Pre-treatment Assessment:

Assess lesion type, skin condition, and client history of pigment issues or scarring. Consider alternative treatments if there's a high risk of adverse pigmentary changes.

Client Education & Consent:

Clearly inform the client about the potential risk of pigment changes or scarring. Obtain informed consent and manage expectations regarding cosmetic outcomes.

Aftercare Advice:

Advise strict sun protection post-treatment to reduce the risk of hyperpigmentation. Recommend using non-irritating moisturisers and avoiding picking or scratching the treated area.



Summary:

How Different Skin Lesions Heal

Most healing will be straightforward and occurs without any issues. Different skin lesions will heal slightly differently.

Skin Tags:

- Turn darker from the base and will dry up and fall off as the skin heals
- Usually takes 4 - 6 weeks
- Larger tags may need a second treatment
- If the healing tag becomes sore and starts rubbing against clothing, then a dressing maybe applied

Milia:

- These should vanish with one single treatment

Pigmentation:

- The area will appear red and raised after treatment but will go down after a few hours.
- The pigment will become darker and a crust will form
- The crust will eventually fall away revealing pink, shiny skin - this is NOT scarring and it is advised that clients use SPF50 on the area to prevent the pigment from returning.

Cherry Angiomas:

- The treated area will become red and raised and will go down after a few hours
- The lesion will shrink and slowly vanish over 2 - 6 week period.

Warts and Verrucae:

- Black spots may appear in the wart or verrucae - this is the verrucae dying and should disappear over the next few weeks
- As warts and verrucae are a virus infection they may need more than one treatment.
- The second treatment can be completed after 4 weeks
- Follow the aftercare advise for blisters should one occur



Healing and Expectations

Most healing is straightforward and will take place over 4 - 6 weeks, but sometimes can take longer depending on the skin, the lesion and the age of the client. Any treatments that are taking longer than 6wks to heal, advise the client seeks medical advice.

There are a few factors that will influence the healing process - these are listed below.

Immune system:

if the client has a compromised immune system then healing will take longer

Tanned skin:

If the skin is tanned in the treatment area then the treatment will remove the tan and the skin will need to re-pigment to the tanned colour. Small dry crusting that forms should come away after 4weeks, if not the client will need to contact the salon/clinic.

Type of skin lesion:

Different skin lesions also vary in how they heal depending on the size, location and type of lesion that was removed. These are listed on the next page



Cryotherapy Treatment Summary:

Always check with manufacture instructions before starting treatment, but as a general rule:

1. Tip Positioning:

- Keep the applicator tip 0.4 mm to 5 mm from the lesion for accurate focus.
- Maintain a steady position throughout the treatment to hold the white frost zone.

2. Freeze Focus:

- The white freeze must be clearly visible and maintained for the full treatment time.
- If focus is lost, the lesion may not freeze properly, leading to ineffective results.

3. Freeze Control:

- Adjust the intensity of the freeze by moving the applicator closer or further away.
- This allows controlled application depending on lesion size and depth.

4. Penetration Rate of Nitrous Oxide (N₂O):

- N₂O penetrates approximately 1 mm of tissue every 5 seconds.
- Flat or slightly raised lesions (1 mm) = 5 seconds of freeze.
- 3 mm thick lesion = 15 seconds of freeze.

Maximum Freeze Time:

- Do not exceed 30 seconds of continuous freeze per lesion.
- Suitable for lesions up to 6 mm in depth.

Hold the applicator tip as close to the lesion as safely possible, as a rapid temperature drop is essential for effective treatment. Always take into account the location of the lesion on the body, as the skin may be thinner in certain areas, such as around the eyes or on elderly clients, requiring greater caution and potentially shorter freeze times.



Consultation Contraindications & Contra actions

Before starting a Cryotherapy treatment, you will need to carry out a full consultation and identify any contraindications and contra-actions relating to cryotherapy treatment.



Consultation

The most important aspect of a consultation is to ensure that it is safe to carry out the treatment. You should gather personal and medical information about your client, including whether they have any allergies or are taking medication. This should help you establish whether there are any contraindications to treatment. Contra actions should also be recorded.

Remember that as a practitioner you are not qualified to diagnose any medical conditions and therefore, if you have any doubt about whether to offer your client the treatment, you must refer them to their GP to obtain written consent prior to the treatment going ahead.

At the consultation stage you must establish the client's suitability for treatment by discussing their needs, medical history and lifestyle. The consultation will also allow you the opportunity to explain the whole treatment process and allow the client time to ask any questions they may have.

During the consultation you must ensure that the client is happy to proceed with the treatment and knows exactly what is expected of them in relation to following the aftercare instructions that you will give them.

Remember a consultation needs to be conducted for every client. This includes pamper parties, craft fairs and taster sessions too. You should have an organised system of requesting clients to fill in basic details. It is not only important for the safety of your client but also acts as an excellent tool for keeping in contact with your new clients. Your client must sign and date the consultation form in front of you.

At every subsequent appointment, you should always establish if anything has changed in relation to the client's health since the last appointment, and the record card should be updated accordingly. The record card is an important document and must be kept up-to-date at all times. There may be an occasion when another therapist in the salon has to treat your client and they must have all the necessary information to hand in order to treat the client safely. This information should be kept confidential at all times to comply with Data Protection Act 2018.

Where a client has an existing medical condition that requires a GP's written consent prior to the treatment going ahead, you must ensure that when this is obtained, it is stored safely with the record card.



Consultation

Under the **DATA PROTECTION ACT 2018** any personal information given to you by the client, such as name, address, phone numbers etc, are confidential.

The consultation is the first step in planning a course of treatments for the client. It is important to ask questions and examine the area to be treated before the treatment starts, this helps to build a rapport with the client and decide if the client can have the treatment.

The consultation should give the client an idea on what to expect such as:

- Total cost of the treatment
- How long it will take
- Client profile
- Existing home care routine
- A treatment plan
- After care advice
- Home care advice
- Future treatments
- Recommended products

As a practitioner you must NOT divulge any personal details of your clients to anyone else.

When you carry out a consultation with your client, you will need to find out information by:-

Questioning

Ask the client about their skin, homecare routine and problems that they may be experiencing with their scalp.

Visual inspection

This is when you look at your client's scalp skin and hair to establish what the treatment requirements are.

Manual inspection

This is when you feel the smoothness, softness, firmness and texture of their hair and scalp skin. This will give you a good idea on their skin type.

Remember that you are the expert. Although the client may know what skin type they think they might have they are not always right and look to you for your expert help and advice.



Contraindications

It is essential to check for contraindications before performing cryotherapy for skin lesion removal to ensure client safety and prevent complications. Contraindications are conditions or factors that make a treatment inadvisable or potentially harmful, and they fall into different categories:

- **Absolute contraindications** mean the treatment must not be performed under any circumstances due to high risk, such as in cases of skin cancer or cold-related disorders.
- **Relative contraindications** require caution, modification of the procedure, or GP approval, as the risks may be manageable with proper care.
- **Local contraindications** apply only to certain treatment areas where cryotherapy could cause harm or unwanted side effects, such as near the eyes or over nerves.

Correct identification of these categories helps the practitioner make safe, informed decisions and maintain professional standards, these will be explained in more detail over the next few pages.



Absolute Contraindications

Absolute contraindications are medical conditions or circumstances where a treatment must never be performed because the risks outweigh any potential benefits. In cryotherapy for skin lesion removal, absolute contraindications include situations where the procedure could cause serious harm, such as treating suspected or confirmed skin cancers, lesions of unknown origin, or clients with severe cold-related conditions like cold urticaria, cryoglobulinemia, or Raynaud's disease. These conditions make the use of extreme cold unsafe, and proceeding with treatment could lead to significant health complications.

Contraindication	Risks / Reasons for NOT Treating
Undiagnosed or suspicious lesions	Risk of treating malignant skin cancer without proper diagnosis; must be referred to a GP or dermatologist.
Skin cancers (melanoma, BCC, SCC)	Requires specialist medical management; cryotherapy alone may be inappropriate or incomplete.
Cold urticaria	Can trigger severe allergic reaction to cold.
Cryoglobulinemia	Cold triggers abnormal protein precipitation in blood, leading to vascular blockages.
Raynaud's disease/phenomenon	Risk of reduced blood supply and tissue damage in affected areas.
Paroxysmal cold hemoglobinuria	Cold exposure causes red blood cell breakdown.
Active skin infection	Cold can worsen infection or spread pathogens.
Poor peripheral circulation	Delayed healing and increased risk of tissue necrosis.
Known hypersensitivity to cold	Can cause severe local or systemic reactions.

Relative Contraindications

Relative contraindications are conditions or circumstances where cryotherapy for skin lesion removal can still be performed, but only with caution, modifications, or medical clearance. They indicate that the treatment carries some risk, which must be weighed against the potential benefits. Examples include clients with poor circulation, diabetes, a history of keloid scarring, or those taking certain medications that affect healing. In these cases, the practitioner may adjust the treatment technique, reduce freeze times, or require GP approval to ensure the procedure is safe and effective.

Contraindication	Risk / Reason for NOT Treating
Pregnancy or breastfeeding	Safety not fully established; avoid unless medically necessary.
History of keloid or hypertrophic scarring	Increased risk of abnormal scar formation post-treatment.
Darker Fitzpatrick skin types (IV–VI)	Higher risk of permanent hypo- or hyperpigmentation.
Compromised immune system	Slower healing, increased infection risk.
Circulatory disorders (mild)	Reduced blood supply may slow recovery.
Neuropathy or reduced sensation	Client may not feel excessive cold, increasing injury risk.
Photosensitising medication use	Can increase skin sensitivity and risk of irritation.
Recent sunburn or inflamed skin	Higher risk of adverse reaction and poor healing.



Local Contraindications

Local contraindications are specific to certain areas of the body where cryotherapy could cause harm, discomfort, or unwanted side effects if performed. These do not prevent treatment elsewhere on the body but mean the practitioner should avoid those particular sites. Examples include areas with very thin or delicate skin (such as the eyelids), regions over superficial nerves, near the eyelash line, or on areas with active infections or wounds. Identifying local contraindications helps prevent unnecessary damage to sensitive tissues while still allowing safe treatment on unaffected areas.

Contraindication	Risk / Reason for NOT Treating
Near eyelash line	Risk of permanent eyelash loss from follicle damage.
Mucous membranes	Sensitive tissue; high risk of damage and poor healing.
Over tattoos	Can cause pigment fading or colour change.

Antihistamines are medicines that work by blocking or reducing the action of histamine, a substance released by the body during allergic reactions. By stopping histamine from attaching to its receptors, these medications help ease symptoms like itching, swelling, redness, watery eyes, sneezing, and a runny nose, and are often used to manage allergies. In the context of cryotherapy, clients are advised to avoid taking antihistamines for at least one week before treatment, as they may affect the body's natural healing response.



Other Conditions to Consider

Although contraindications have been covered there a few other conditions to consider when carrying out a consultation, that the client may reveal.

Autoimmune Disorders:

Any autoimmune condition can impair the body's healing ability, increasing the risk of infection. Examples include lupus and scleroderma.

Kidney Disease:

Clients undergoing dialysis often experience impaired infection control and blood clotting issues due to the medications required for dialysis. They may also have additional underlying health concerns that further complicate healing.

Temporal Arteritis:

This condition involves inflammation or damage to the blood vessels in the temples. An inflammatory response triggered by treatment could worsen the condition, potentially leading to blindness. This is a medical emergency requiring urgent care.

Scleroderma:

A disease characterised by thickening of the skin, connective tissues, and underlying blood vessels. These changes can alter the skin's response to treatment, slow the healing process, and increase susceptibility to infection.

Platelet deficiency/disease:

Any condition that causes the reduction of blood platelets will result in severe bleeding into the tissues, shown as bruising. Conditions such as thrombocytopenia or leukaemia or medications such as Warfarin or Apixaban will affect treatment.

Dermal Fillers:

Treatment over an area of dermal fillers can result in an appearance of denting or pitting where the dermal filler is laying in the skin.



Drugs that are Contraindicated to Cryotherapy Treatment

As an aesthetic practitioner you will need to be aware of certain drugs that will affect the outcome of a cryotherapy treatment.

Drug	Action	Effect
Anticoagulants (warfarin, heparin, Apixaban)	Prevent platelets from sticking and blood clots from forming	May cause bruising
*NSAI's (Asprin, Ibuprofen, Brufen)	Reduces inflammatory response	Slows healing
Immunosuppressants (Prednisolone, Perdiolone, Medrol, Cyclosporin, Azothiaprine)	Prevents white blood cell activity	Prevents healing from taking place
Cyclooxygenase inhibitors (DFI18, Voltarol)	Pain relief / anti-inflammatory	Slows healing
Oral Chemotherapy (methotexate)	Destruction of white blood cells	Prevents healing
Appetite suppressents	Reduces hormonal response to eating and reduces absorption of fats and carbohydrates	Reduced inflammatory response and slow healing

Contra-actions

Cryotherapy treatment for the removal of skin lesions is considered a safe and effective treatment, however there are a few things that can affect the overall outcome and the practitioner will need to manage the client expectations.

After cryotherapy, clients may notice the following temporary effects, which are normal parts of the healing process:

Redness / Erythema:

Mild redness is caused by the initial inflammatory response and is considered a normal treatment end point.

Scabbing:

A small scab may form over the treated area as the skin heals. It is important not to pick or remove the scab, as this can delay healing and increase the risk of scarring. Allow it to fall away naturally.

Itching:

Itching may begin within minutes of treatment and typically lasts only a few minutes, although it can persist for up to 30 minutes. This is due to the release of histamine and is a completely normal reaction.

Blistering:

Blisters can develop following the treatment of any lesion and may occur in anyone. If a blister appears, do not intentionally burst it. If it breaks naturally, cleanse the area with an alcohol wipe, apply a thin layer of antiseptic cream, and protect it with a plaster or dressing.



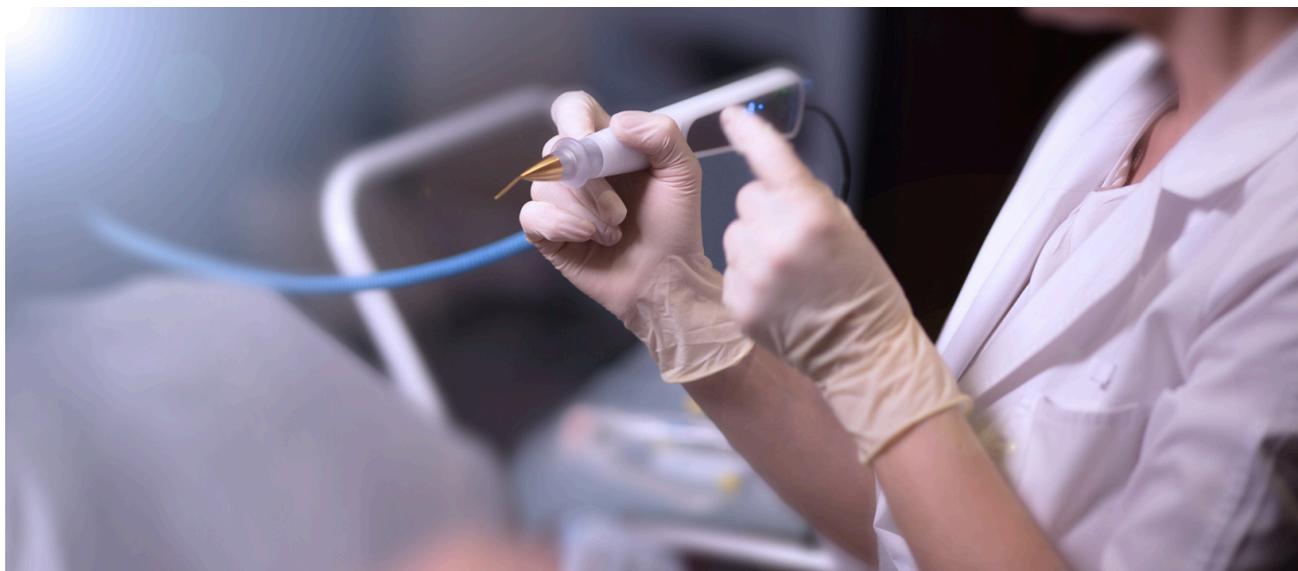
Aftercare Advice

Proper aftercare is essential to support the healing process and achieve the best results.

- Clients may wash and shower as usual during the healing period.
- It is safe to wear makeup, deodorants, and moisturising creams.
- Avoid scratching or picking at the treated area, as this can delay healing and increase the risk of complications.
- Always apply a broad-spectrum SPF 50 sunscreen to any pigmented or treated areas to protect the skin from UV damage.
- After bathing or showering, gently pat the area dry instead of rubbing to prevent irritation.

Following these guidelines will help ensure a smooth and effective recovery providing the client follows the aftercare given.

If the client reports that the treated area is weeping two weeks after the initial treatment they must contact the clinic/salon for further advice.



Precautions to be Aware of Before Starting

When performing cryotherapy, practitioners should keep the following in mind:

- Extended freeze times can cause client discomfort and may result in swelling or blistering.
- Wear protective eyewear when treating lesions at close range, such as verrucae or warts.
- Ensure the client wears protective eyewear when treating lesions on the face, neck, or near the eyes.
- Always follow the manufacturer's instructions for loading and unloading gas canisters.
- Empty gas canisters only in a well-ventilated area.
- Never freeze metal surfaces.
- Avoid using absorbent materials (e.g., cotton wool, gauze) to shield surrounding skin, as these can absorb liquid nitrogen and cause freeze injuries.
- Do not attempt to diagnose skin lesions unless you are medically qualified.
- Only treat conditions within your professional scope of practice.

Safety First

- After completing your training, notify your insurance provider to ensure your cover includes cryotherapy treatments.
- Store nitrous oxide ampoules at room temperature (around 21°C) and keep them away from extreme heat or cold.
- Always wear disposable gloves during treatment, and use protective eyewear when required.
- Conduct a full risk assessment before using a new cryotherapy device.

This training covers only the treatment of superficial skin lesions, which typically respond well to cryotherapy. It is essential that you do not treat any other types of lesions unless you are medically qualified and have received appropriate, specialist training.



Risks of Cryotherapy Treatment

As with any treatment there are some associated risks and side effects that the client needs to be made aware of; these include:

Pigmentary changes:

Hyper and hypo pigmentation can occur after treatment. These are temporary and may last a few months before fading. A 1mm freeze on pigmentation for 5 seconds should re-pigment in 4 - 6 weeks depending on the age and cell renewal of skin.

Nerve damage:

Although uncommon, nerve damage can occur, particularly in areas where lesions lie close to the skin's surface, such as the fingers, wrist, or behind the ear. This is most often associated with freezing warts in non-surgical areas like the fingers. In most reported cases, any nerve-related symptoms resolve naturally within a few months.

Blisters:

Blisters may develop after treatment, lasting anywhere from a few hours to several days, depending on the treated area. Their occurrence is unpredictable, as any lesion can blister, even if it did not during a previous treatment. If a blister accidentally bursts, gently apply a light layer of antiseptic cream to protect the area.

Shards of Frozen Humidity:

When nitrous oxide is applied at high pressure, it can create tiny shards of frozen moisture in the air. These melt instantly upon contact with healthy skin but may pose a risk to the eyes, so protective eyewear should always be worn.

Headaches:

If treating lesions on the scalp or temples, headaches can occur and can last up to 2hrs.

Imperfections on Areas with Coarse Terminal Hair:

Hair follicles are particularly vulnerable to cryotherapy, and permanent hair loss can occur if freezing penetrates deeper than 3 mm, reaching the follicle. To minimise this risk, avoid treating areas near the eyelash line, where follicles are especially delicate and easily damaged.



Treatment Procedure

Cryotherapy Treatment Procedure for Skin Lesion Removal

1. Client Preparation

- Assess the lesion(s) to ensure they are benign and suitable for cryotherapy. Confirm no contraindications.
- Obtain informed consent, discussing risks (pigmentation changes, blistering).
- Take pre-treatment photos for record-keeping and comparison.

2. Skin Preparation

- Use an alcohol wipe or appropriate antiseptic to cleanse the skin.
- Moisture or humidity can create an ice barrier that reduces treatment effectiveness.
- If treating warts/verrucae, ask the client to soak the area and file down any hard skin beforehand.

3. Device Preparation

- Ensure the cryotherapy device is correctly assembled and the cartridge is secure.
- Select the appropriate applicator tip based on lesion size and location.

4. Treatment Technique

- Hold 0.5–5mm from the lesion, depending on size and sensitivity of the area.
- Keep the device below 45° to ensure effective spray flow.
- Use either continuous or pulse spray depending on lesion type and desired control.

5. Freeze Times (Guide)

- Skin tags 5–10 seconds per angle
- Cherry angiomas 5–10 seconds
- Milia (face/eye orbit) Max 3–5 seconds
- Warts/Verrucae 15–30 seconds, then thaw and re-freeze
- Pigmentation Max 5 seconds per area

(Use freeze–thaw–freeze method for warts and verrucae.
Treat skin tag pedicle directly to cut off blood supply).



Treatment Procedure

6. Post-Treatment

- Allow area to thaw naturally.
- Do not touch, pick, or cover with occlusive dressings unless needed.
- Apply gentle antiseptic or soothing product (aloe vera or arnica cream).
- Advise client on side effects

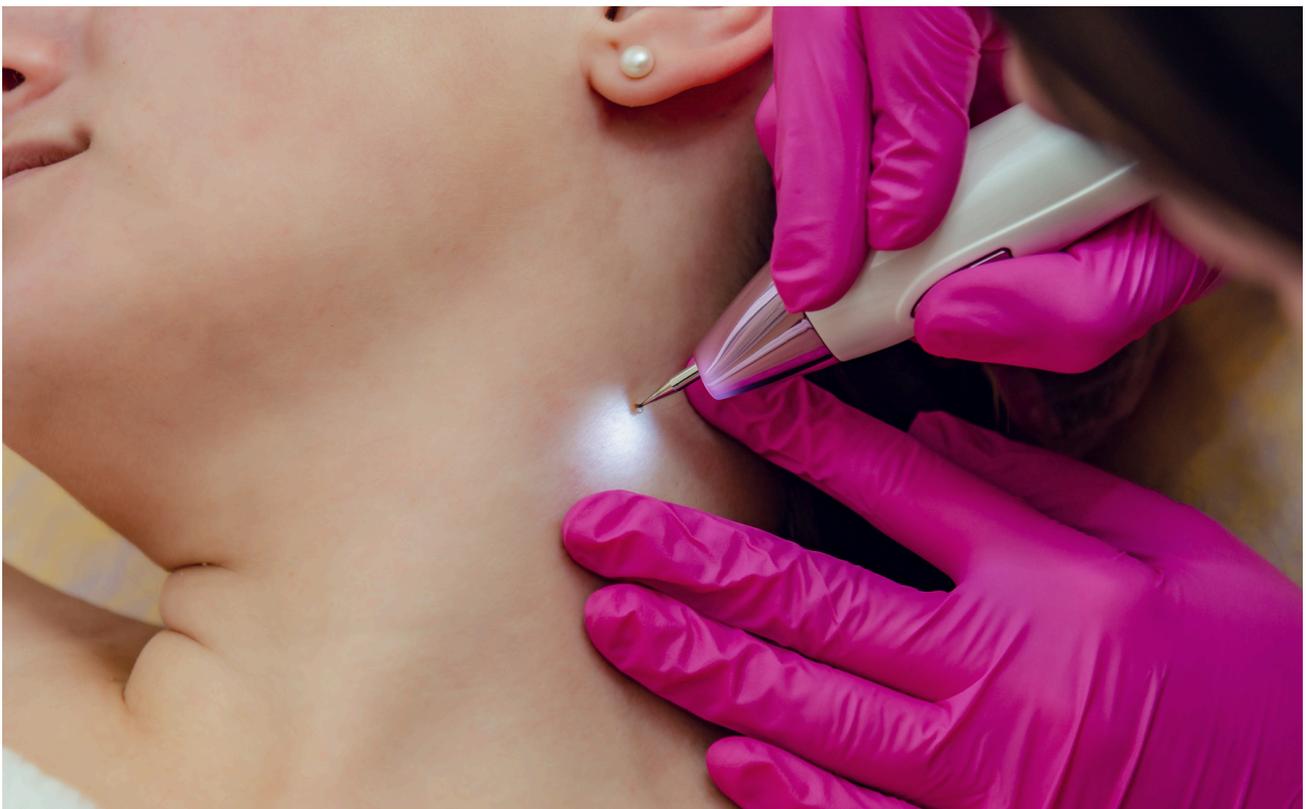
7. Aftercare Advice

- Avoid sun exposure; use SPF 50.
- Do not scratch or pick the treated area.
- Clean with gentle soap and water; avoid perfumed products for 48 hours.

If blistering occurs, do not burst; allow to heal naturally.

8. Review & Follow-Up

Schedule a follow-up at 2–4 weeks to assess the healing and determine if additional treatment is needed.



Cryotherapy - Skin Lesion Removal Treatment Consultation

Client Name	Contact Details:
Doctor Name and contact:	

Please answer all questions to the best of your knowledge:

Are you pregnant or breastfeeding?

Are you taking any immuno-suppressant drugs?

Have you recently had any dermal fillers?

Do you suffer from eczema or dermatitis?

Do you suffer with haemophilia or any blood clotting disorders?

Do you take any blood thinning medication?

Do you suffer with Rosacea or Scleroderma?

Have you recently been exposed to the sun or sunbeds in the last 24hours?

Have you been on any Accutane medication in the last 12 months?

Have you had skin cancer or taking medication for cancer?

Have you had or taking medication for kidney disease?

Have you recently had COVID? If YES how long ago? _____

Are you currently on any medication? Yes / No If yes please state what it is below:

Your practitioner will now go through the consultation with you, please answer questions honestly and to the best of your knowledge:

Treatment Planning

Treatment planning for cryotherapy skin lesion removal involves assessing the type, size, and location of the lesion to determine the appropriate freeze time and technique. Typically, the affected area is exposed to extreme cold using liquid nitrogen, which freezes and destroys abnormal tissue.

The number of treatments needed can vary depending on the lesion's characteristics; small, superficial lesions may require just one session, while larger or thicker lesions might need multiple treatments spaced several weeks apart to ensure complete removal. Follow-up appointments are essential to monitor healing and to decide if additional sessions are necessary for optimal results.



Treatment options with cryotherapy:

Cryotherapy for skin lesion removal can also be complemented by nice treatments like facials to support overall skin health and improve appearance after the procedure. Gentle facials, especially those designed for sensitive or healing skin, can help soothe irritation, reduce redness, and promote hydration. Treatments like calming or antioxidant-rich facials may boost skin recovery and enhance the complexion once the lesion area has healed. However, it's important to wait until the skin is fully healed from cryotherapy before starting any facial treatments to avoid irritation or infection. Light exfoliation or more aggressive facial procedures should generally be avoided during the healing phase.



Treatment Pricing

Pricing for cryotherapy skin lesion removal typically depends on several factors, including the size, number, and location of the lesions being treated. Clinics may charge per lesion or offer a flat rate for multiple lesions, with prices varying accordingly. Additional costs can arise if follow-up treatments are needed or if lesions are in sensitive or hard-to-treat areas and require a more precise application. It's also common for prices to reflect the experience of the practitioner and the geographic location of the clinic. Many providers offer an initial consultation fee, which may be waived if treatment proceeds. Overall, cryotherapy is generally considered a cost-effective option compared to more invasive procedures.

Use the following as a guide to help you price your treatments - costs stated are examples only, you will need to do your research and find out what suppliers charge and what other practitioners are charging for their treatments, and price yourself competitively.

Typically N20 canisters are available in two sizes, 16g and 25g.

16g = 200 seconds / £30 + VAT

25g = 280 seconds / £40 + VAT

1 Treatment uses 25 seconds of gas = £3.25 to the salon / £50 - £60 to the client

Skin Tags:

1mm skin tag = 5 seconds of treatment / £10 - £15 to client / £0.65 to salon

2mm skin tag = 10 seconds of treatment / £20 - £25 to client / £1.30 to salon

Warts:

1mm above the epidermis + 1mm below the epidermis = 2mm total

10 second freeze / thaw / freeze method. Total freeze time = 20 seconds

Cost to client £40 - £50

Cost to salon £2.60 - £3

Please Note: Prices mentioned are as a guide only and may vary according to choice of supplier.



Ideas for Retail

Retail products play a vital role in the overall success of the treatment. By recommending appropriate skincare products for use between salon visits, clients can enhance and maintain their results more effectively. Achieving the desired outcome requires time and commitment, so clients who are serious about their skin should be prepared to invest in a course of treatments and complementary homecare products. This combined approach helps to support and extend the benefits achieved during their salon sessions.



Ideas can include offering:

- Healing and soothing products to promote healing
- Sun protection
- Products for skin repair and barrier support
- Skin Health supplements

Offering these retail products not only supports your clients' recovery but also enhances their overall skin health and satisfaction with treatment.



Promotional Ideas:



There are many ways in which you can promote your new treatment. You'll need to practice to feel confident so you could run a special promotion for a month or offer your regular clients a special price for the treatment. Social media is a great way to get attention and put out offers. Referrals are another way to promote treatments and gain customers.

Getting clients can be challenging; start with family and friends and get them to do the work for you. In other words if you are giving them a treatment at a discount then expect something from them in return, for example ask them to refer 2 people to you or promote you on their social media platforms. Perhaps have an introductory offer for your regular clients to introduce them to the treatment.

Social media is also a great way to promote yourself. FaceBook, Reels and Instagram work really well and you can ask someone to film you whilst you carry out a treatment or take pictures. Asking your clients for before and after pictures is also great as people can see the effects of the treatment – of course ask their permission first.



Assessment Information

To ensure that you are safe and competent to carry out the treatment you will be required to practice on models and on each other.

To ensure that you have understood the information you will be required to complete a knowledge test



Assessment Criteria:

In order to gain your certificate, you will be required to complete the review questions. You will also be required to demonstrate the skills that you have learnt from watching and participating in the practical sessions. Once the tutor is satisfied with your test results and you have competently demonstrated the practical element of the training, your tutor will then issue you with your certificate. You will then need to contact your insurance provider to update your policy.

You have now reached the end of your course. You should now be able to:

- Understand the relevant Health and Safety and Legislation regarding a Cryotherapy Skin Lesion Removal treatment
- Be able to understand the history of treatment.
- Understand the relevant skin anatomy, physiology and skin types/conditions that benefit from this treatment.
- Understand how cryotherapy treatments can be used to treat different types of lesions.
- You should be able to carry out a client consultation, identify relevant contra indications, and possible reactions and risks.
- You should be able to understand the treatment preparation, and safely follow a treatment procedure.



Knowledge Review Questions for Cryotherapy for Skin Lesion Removal

Please answer the following questions. Some answers can be found in the training manual and may require you to re-read certain sections. Your educator will then mark your answers before assessing your practical skills.

1. Which of these lesions would you NOT treat?

- a) Milia
- b) Skin Tag
- c) Warts
- d) Melanoma

2. What are the stages of wound healing?

- a) Inflammation / Remodelling / Proliferation
- b) Proliferation / Inflammation / Remodelling
- c) Inflammation / Proliferation / Remodelling
- d) Remodelling / Inflammation / Proliferation

3. Answer YES or NO to the following statement:

Primary lesions develop as a direct result of a disease or condition

4. True or False (write T or F next to the statement)

- a) You are only trained to remove Primary lesions
- b) You are not trained to remove moles
- c) You must not treat Xanthlasma
- d) Blistering may occur post treatment
- e) Pitting may occur if you treat over an area where there is dermal filler
- f) Secondary lesions occur as a result of an infection

5. Find out the following - use this manual to help you find the information:

a) What is the freeze time for a 1mm raised cherry angioma?

b) What is the freeze time for treating milia?

c) What is the freeze time for a verrucae?

6. List 3 precautions to take when treating darker skin types:

7. What is the maximum freeze time?

- a) 3 seconds
- b) 5 seconds
- c) 20 seconds
- d) 30 seconds

8. List three drugs that will affect treatment:

8. Why do antihistamines affect treatment?

9. What is N2O?

- a) Liquid Nitrogen
- c) Liquid oxygen
- C) Liquid carbon

10. Complete the contraindications chart:

Contraindication	Risk(s)
Skin Cancers	
	Cold triggers abnormal protein precipitation in blood, leading to vascular blockages
Recent sunburn	
Near the eyelash line	
	Can cause pigment fading or colour change.

11. What is a wart?

- a) An infection
- b) A bacterial infection
- c) An infection of the feet
- d) A contagious infection caused by the HPV virus

12. What is the best method for treating warts?

- a) 30 seconds
- b) Freeze - thaw - freeze
- c) 15 seconds
- d) 30 seconds with a follow up treatment 2 weeks later.

13. How does moisture in the air affect the treatment?

14. What factors will influence the treatment outcome?

**WELL DONE! You have now
completed the Knowledge Review
Questions - your educator will now
review these.**

TOTAL MARKS

Cryotherapy

PRACTICAL TRAINING

INFORMATION

Practical

- Although I do my best to find models for you to work on, there may be occasions when this is not possible and therefore you may have to work on each other.
- To ensure minimal skin trauma, I ask that you avoid blood thinning agents as listed below, avoid sun exposure, and do not peel the treatment area for 7 days prior to the treatment.
- Please ensure that you all refrain from taking the following for 7 days prior to treatment. Aspirin, Ibuprofen, St Johns Wort, Dong Quai, Ginseng, Gingko Biloba, Feverfew.
- In order for you to have the treatment as part of the training, you will be required to fill in a consultation form.

Treatments- Time lapse required:

- Microdermabrasion (3-4wks)
- Botox and Fillers (2wks)
- Electrolysis, Waxing (2-3wks)
- IPL, Laser (1 mth post)

Blood thinning agents

- Aspirin
- Ginger
- Vitamin E
- Blood thinning medication

Please check the contraindications list. Should you have any contraindications you will need to make your assessor aware before treatment commences.



Verbal Questioning

During your practical assessment, the assessor will be asking you some verbal questions. Here are ten example questions that you will most likely be asked during your assessment:

1. Which area will you be treating?
2. What type of skin lesion are you treating?
3. How will you work out how many seconds of freezing the lesion will need?
4. What are the desired treatment outcomes for your client?
5. How many treatments will your client need?
6. What other areas can be treated?
7. What factors would influence the treatment outcome of your client?
8. What common reactions can occur?
9. What aftercare can you recommend for your client?
10. How are you going to ensure that the client follows the aftercare advice you give them?



Practical Assessment

To ensure that you are safe and competent to practice you will need to demonstrate your treatment for the tutor/trainer.

You will be assessed on the following criteria:

Date of Assessment:	Tutor/Assessor:	
Treatment:		
Criteria	Assessor Comments	Criteria passed Y / N
Health & Safety: <ul style="list-style-type: none">• Sterilisation & Sanitation• Correct PPE• Correct Sharps disposal• Personal appearance		
Client Consultation <ul style="list-style-type: none">• Treatment and possible risks explained to client• Consultation forms filled in and signed• Aftercare advice given		
Treatment: <ul style="list-style-type: none">• Correct client position for treatment• Correct products selected• Correct treatment procedure followed• Rebooking / treatment follow up advised		

Congratulations

You have now completed your Cryotherapy for Skin Lesion Removal Treatment Training

Completing training in cryotherapy for skin lesion removal equips practitioners with the essential knowledge and skills to safely and effectively treat a variety of skin lesions. This expertise not only enhances the practitioner's confidence and professional credibility but also ensures better patient outcomes through precise, tailored treatment plans. For clients, the benefit lies in receiving a minimally invasive, cost-effective solution with minimal downtime and improved skin health.

From a business perspective, offering cryotherapy treatments can expand service offerings, attract a wider clientele, and increase revenue through both treatments and recommended retail products. Overall, this training empowers practitioners to deliver high-quality care while driving business growth and client satisfaction. For more professional development opportunities, I also offer a range of other training courses be sure to visit my social media channels to stay updated and learn more.

**I wish you all the best and hope to see you on one of my other courses
in the future**



This page has been left for your notes

To see what other trainings I offer,
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