

## **WELCOME TO THE MICRODERMABRASION TRAINING MANUAL AND GUIDE**

Microdermabrasion (MDA) is a mechanical exfoliation procedure for superficial skin resurfacing which utilizes a refined abrasive element, such as a diamond-tipped pad or aerosolized crystals, to gently remove the outermost skin layers. This controlled wounding process stimulates cell renewal with regeneration of a healthier epidermis and dermis.

MDA is used for treatment of photoaging, hyperpigmentation, and acne, as well as fine lines and superficial scars. It is one of the most commonly performed aesthetic procedures!

This manual offers you tailored lessons to develop by increasing your knowledge on skin care & microdermabrasion, whilst also expanding your skill sets with knowledge and techniques to provide the best result for your clients. We focus on treatment of photodamaged skin and combining MDA with chemical peels and topical home care products to maximize results!

### **Within this training manual you will...**

- Understand the related Anatomy & Physiology
- Learn about skincare & facials consultations
- The benefits of microdermabrasion
- Step by step instructions
- Understand the training theory plus tips and advanced knowledge!

Microdermabrasion Training is provided as an addition to existing qualifications in Facials or equivalent. Our goal at the end of this training, is to provide you with the skill sets and training needed to provide the highest level of services for your clientele.

This course is broken up into 14 lessons.

We are so excited to teach you MDA and bring you into the world of PRO facials. These procedures have the ability to boost confidence. Your clients will love their results and you will love the extra income this treatment provides.

**PLEASE ENJOY!**

## WHAT YOU WILL LEARN

**LESSON 1 MICRODERMABRASION – WHAT IS IT?**

**LESSON 2 HEALTH & SAFETY GUIDELINES**

**LESSON 3 ANATOMY AND PHYSIOLOGY**

**LESSON 4 SKIN TYPES, DISORDERS & DISEASES**

**LESSON 5 CONTRAINDICATIONS TO MDA TREATMENT**

**LESSON 6 CLIENT CONSULTATIONS**

**LESSON 7 EQUIPMENT & SETUP**

**LESSON 8 PREPARE THE CLIENT**

**LESSON 9 PRE-PROCEDURE CHECKLIST**

**LESSON 10 THE MICRODERMABRASION PROCEDURE**

**LESSON 11 AFTERCARE**

**LESSON 12 MICRODERMABRASION CONTINUED**

**LESSON 13 COMPLICATIONS AND MANAGEMENT**

**LESSON 14 VITAL MACHINE MAINTENANCE**

## LESSON 1 MICRODERMABRASION – WHAT IS IT?

**Microdermabrasion is a safe, controlled system of intense exfoliation and resurfacing using ultra fine crystals that rejuvenate the skin. The crystals work as a gentle abrasive on the skin to remove dead skin cells layer by layer. The irregular shape of the crystals helps to work on hard-to-reach areas, without any damage to the skin. The treatment is progressive meaning clients will continue to see results over the course of treatment.**

The degree of epidermal abrasion can be varied by altering the crystal's speed when impacting on the skin. The removal of the stratum corneum results in skin that feels instantly smoother and fresher, whilst promoting new skin and collagen growth. over a course of treatment skin will be left 'glowing' and will feel rejuvenated.

The vacuum action draws away used crystals and dead skin cells and also works to stimulate the circulation and promotes increased blood flow to the area. The production of collagen and elastin is stimulated, which results in a firmer, more youthful looking skin.

Microdermabrasion can be used for all skin types on all areas of the body and face. We recommend a course of 8, usually performed every 7 to 10 days. People with acne or acne scarring might need more treatments and we recommend a monthly maintenance treatment after the course has finished to help maintain the results achieved. After the treatment, the skin may feel tight with mild redness. Therefore, it is important that clients use a good moisturiser. These effects normally subside within 24 hours of treatment.

## **WHAT ARE THE BENEFITS OF USING MICRODERMABRASION OVER OTHER METHODS OF TREATMENT?**

There is minimal discomfort experienced during a microdermabrasion treatment and the Client is able to carry on with their normal day afterwards. Crystal microdermabrasion uses a completely inert and sterile compound with zero risk of allergic reaction.

- Eliminates possible adverse reactions often associated with chemical solutions
- Client can return to their normal lifestyle immediately after treatment i.e., no extreme reddening of the skin
- Can safely treat all skin colours and skin types
- Immediate visible results even after the first treatment, helps keep client motivated
- Helps treat early signs of ageing and offers an overall rejuvenation for aged skin
- Vacuum action offers improved elasticity and muscle tone of the skin and also stimulates fibroblasts for collagen production
- Enhances penetration of approved products after treatment
- Perfect for congested skin with open pores and comedones and acne prone skin
- Variable control allowing for deeper exfoliation of thickened blemished skin and acne scarring
- Successfully helps remove unwanted pigmentation marks
- Perfect for sun-damaged skin
- Total body exfoliation offers a cellulite treatment as the vacuum action helps with lymphatic drainage

## **ARE THERE ANY RISKS ASSOCIATED WITH MICRODERMABRASION?**

Improper use or unhygienic conditions pose a risk when having microdermabrasion treatment, that is why we advocate the importance of good hygiene in the workplace. The machines use disposable nozzles; eliminating any risk of cross-contamination between clients as the nozzle is the only component that will come into contact with the skin during treatment.

## **THE CRYSTALS**

Crystals are made of Aluminium oxide; a naturally occurring mineral. Sterile and non-toxic with no adverse skin contact reactions, we would however recommend a skin allergy test prior to treatment as a precautionary measure.

Aluminium oxide is considered a low health risk by inhalation and industry standards treat any inhalation of this nature as a nuisance dust. The inhalation of any fine particle dust, for example artificial nail dust, may cause irritation and coughing if exposed to them over long periods. Aluminium oxide contains no free silica which means it poses no respiratory risk from inhalation.

### **CRYSTAL SENSITIVITY – PATCH TEST**

It is important to perform a skin patch test to check the client is not sensitive to the crystals employed. It is most unusual for a client to be sensitive to the crystals employed however a skin test should be performed prior to treatment on the back of the forearm. If the area becomes irritable or swollen do not proceed with treatment. If the client develops red marks on the skin after treatment it is normally due to the therapist applying too much pressure.

## **WHAT SKIN CONDITIONS CAN MICRODERMABRASION BE USED TO TREAT?**

Anyone can benefit from microdermabrasion treatment. It improves the overall appearance of the skin giving skin a healthy glow and youthful appearance.

Microdermabrasion is also extremely effective at treating a number of skin problems. It can be used on the face and body making it a good treatment for acne scarring on the back for example.

### **Acne & Acne Scarring:** Acne simplex / Acne vulgaris (not pustules)

Microdermabrasion works by removing the top layers of dead skin cells from the skin's surface making it particularly effective in treating acne. Getting rid of the dead skin cells from the surface of the skin unclogs the pores reducing the chance of new spots developing.

### **Fine Lines And Wrinkles / Ageing Skin**

The vacuum action of the microdermabrasion treatment works to stimulate the production of collagen in the skin. As we age elastin and collagen production starts to slow down. The combination of collagen stimulation and increased skin renewal will improve the condition of the skin's surface smoothing out fine lines and wrinkles.

### **Dry And Dehydrated Skin (xerosis) / Uneven Skin Tone**

Normally skin renews itself approximately every 28 days. Removing the dead cells from the top layers of skin, microdermabrasion speeds up the rate at which the skin would normally renew itself revealing new, fresh skin and giving a radiant glow.

### **Cellulite, 'Orange Peel' Effect**

Microdermabrasion can't cure cellulite however it will stimulate the circulation improving blood flow to the area. To improve the appearance of cellulite clients should drink plenty of water and exercise regularly.

### **Stretch Marks / Pigmentation And Blemishes**

Microdermabrasion can vastly improve the appearance of pigmentation and stretch marks. The microdermabrasion treatment stimulates the area being targeted to produce more collagen and speed up the skin renewal process, improving skin condition and diminishing the appearance of stretch marks and discolouration of the skin.

Microdermabrasion treatment will not remove the stretch mark. However, regular treatment will show an improvement to the treated area making the marks less obvious. Scar tissue should not be treated until all the inflammation has disappeared from the area (6 months post-surgery for example).

Regular treatment with microdermabrasion will help improve the appearance of stretch marks by creating a blending effect to the surrounding scar tissue, also reducing any pigmentation problems that often make the stretch mark more noticeable.

### **Hyper-Pigmentation And The Cause (Melasma)**

Most obvious causes are the oral use of birth control pills or hormone replacement therapy, pregnancy or interaction with certain medications. Repeated sun exposure or over exposure also plays a part as does inflammation or trauma caused to the skin. Certain chemicals found in perfumes etc., can also result in pigmentation marks occurring. Regular microdermabrasion treatment will show significant benefits to sun-damaged skin and help remove unwanted pigmentation marks.

A course of microdermabrasion treatments can achieve beneficial results in the treatment of pigmentation marks. Clients should be advised that a course of between 10-15 treatments might be needed. It is also imperative that the client is advised to wear a sun block cream at all times.

*Please note microdermabrasion treatment cannot help clients with the vitiligo skin disorder.*

Melasma and chloasma (darkening of the skin due to hormone changes) can be helped by microdermabrasion treatment. It will help the trapped pigment move up through the epidermal layers to be shed in its normal organised way. However, many treatments may be needed to improve the affected area.

### **OTHER INDICATIONS**

- Photodamage
- Rough texture
- Air and skin debris aspirated
- Hyperpigmentation
- Dull, sallow skin color
- Enlarged pores
- Keratosis pilaris
- Thickened scaling skin (e.g., ichthyosis)
- Seborrheic keratosis scaling
- Enhanced penetration of topical products and chemical peels

## CLIENT SELECTION & TREATMENT COURSE

While almost any Client will receive benefits from microdermabrasion, Clients with mild to moderate photoaging changes such as solar lentigines, dullness, and rough skin texture, as well as acneic conditions, typically derive the most noticeable benefits

Microdermabrasion is a progressive rather than aggressive treatment. The epidermal layers are removed gently and safely over a course of treatments. In a course, the treatment is performed every 7 to 10 days. This means that the stratum corneum layer that was removed in the previous treatment has not had the chance to rebuild and also the client's tolerance to the treatment increases. Therefore, with each subsequent treatment, the intensity of the treatment can be increased in order to reach deeper down the layers of the epidermis to successfully remove acne scarring, lift pigmentation and smooth fine lines.

Generally, a client will opt for a course of six treatments to be performed every 7-10 days to get maximum effect. After completing a course, the client can then go on to have a monthly maintenance treatment to help them maintain the results achieved.

Clients with more problematic skin may need a longer course of treatment, however 15-20 treatments are considered to be a maximum, after which they must go on to a monthly maintenance program of one treatment every 4-6 weeks.

Clients of all **Fitzpatrick skin types (I–VI)** may be treated with MDA. However, it is advisable to treat darker skin types (IV–VI) conservatively to minimize the risks of pigmentary changes such as **postinflammatory hyperpigmentation (PIH)**.

Treating Clients with conditions such as rosacea, telangiectasia, and Poikiloderma of Civatte with MDA is controversial. Clearly, overly aggressive treatments can accentuate erythema. However, Clients with erythema have impaired barrier function and mild MDA treatments strengthening the epidermal barrier may ultimately reduce skin sensitivity and erythema. Some providers, therefore, do perform MDA on Clients with erythematous conditions using conservative settings in areas of high vascularity such as the midface and chin, and higher settings around the periphery of the face. Mild treatments are also recommended when treating elderly Clients with thin skin to reduce the risk of abrasions.



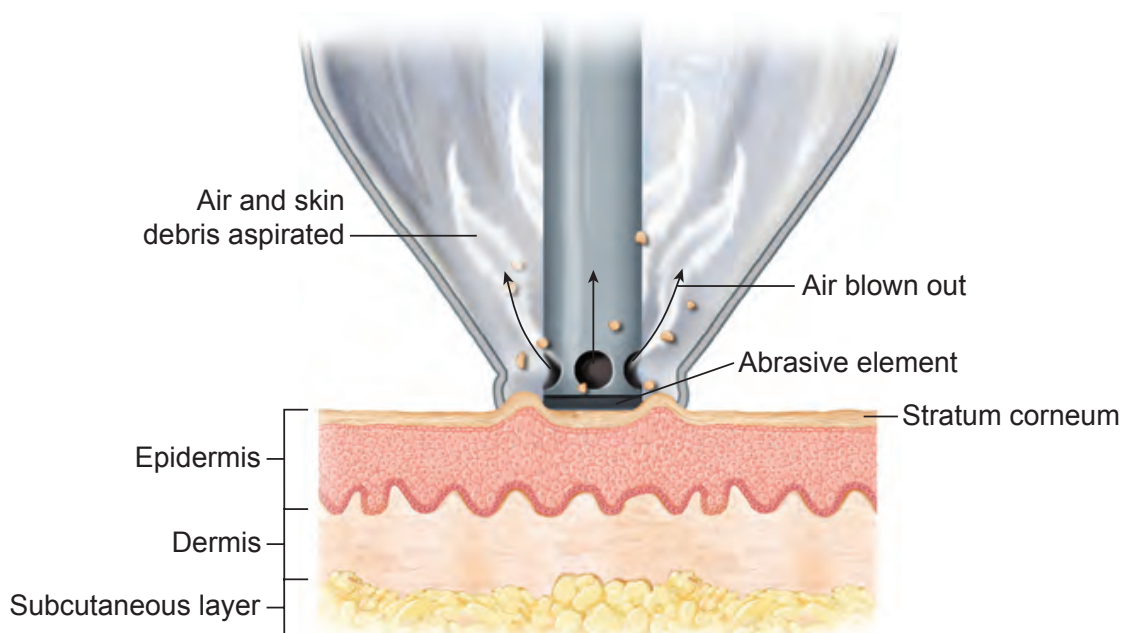
## DEPTH OF PENETRATION

Skin resurfacing with MDA ranges from removal of the stratum corneum (very superficial resurfacing) to removal of the entire epidermis (superficial resurfacing). Greater depth of penetration into the skin offers more significant improvements. While there are few risks with MDA, greater depth of penetration is associated with greater risks of complications.

Each pass of an MDA handpiece removes approximately 15  $\mu\text{m}$  of skin. Two passes typically exfoliate the stratum corneum, and four passes exfoliate the whole epidermis. For example, the SilkPeel MDA device, fully exfoliates the stratum corneum after two passes at a vacuum setting of 5 psi (260 mm Hg) using a 60-grit treatment head.

Several factors increase the depth of penetration with MDA devices including:

- Higher vacuum pressures
- Greater number of passes, where a pass is defined as contiguous coverage of treatment area
- Treatment head abrasiveness
- Greater downward pressure on the skin (for devices with non-recessed tips)



## MICRODERMABRASION DEVICES

The first MDA devices used aerosolized crystal particles (e.g., aluminum oxide) as the abrasive element which were blown across the skin and aspirated. While these devices are still in use, particle-free MDA devices have become widely adopted as they pose no risks of dust inhalation or corneal abrasion, which are associated with aerosolized crystal particles.

Particle-free MDA devices utilize diamond- or crystal-covered pads, or bristles in their treatment heads. Figure 2 shows an MDA handpiece (SilkPeel) and treatment heads with diamond-covered pads that range in coarseness from smooth (no diamond chips), fine (120 grit), to coarse (30 grit). Treatment heads for most devices are reusable and can be sterilized after the procedure.



***Microdermabrasion handpiece and diamond-tipped treatment heads.***

Some MDA devices simultaneously exfoliate and apply topical products to the skin (specifically referred to as “Dermalinfusion” by Envy Medical). These systems take advantage of the disruption to the epidermal barrier that occurs with removal of the stratum corneum to enhance delivery of topical products to the skin. If using an MDA device that does not dispense solutions, topical corrective products may be applied after completion of the MDA treatment. Products are selected based on the presenting signs and may enhance results for conditions such as dehydration, hyperpigmentation, and acne.

## **ALTERNATIVE TREATMENTS**

Superficial chemical peels provide a similar depth of skin resurfacing as microdermabrasion. Dermaplaning is another superficial resurfacing procedure with a similar depth of resurfacing, which uses a specialized scalpel blade that is gently scraped across the skin. It is useful for Clients with erythematous conditions such as rosacea.

More aggressive skin resurfacing procedures such as medium-depth chemical peels, dermabrasion, and laser resurfacing offer significantly greater reduction of wrinkles and improvements in photodamaged skin, but require longer recovery times and have increased risks of complications.

### **ADVANTAGES OF MICRODERMABRASION**

- Controlled depth of exfoliation
- Safe for all Fitzpatrick skin types (I–VI)
- Minimal to no discomfort during the procedure
- No anesthesia required
- Minimal risk of complications
- No recovery time post procedure (e.g., for skin flaking and peeling as with chemical peels)
- May be combined with other aesthetic treatments, particularly topical products and chemical peels, for enhanced results
- Procedural proficiency rapidly acquired

### **DISADVANTAGES OF MICRODERMABRASION**

- MDA devices are relatively costly (compared to chemical peels)
- Additional costs for disposable supplies such as topical solutions
- Results are subtle and cumulative, requiring a series of treatments for noticeable improvements

## LESSON 2 HEALTH & SAFETY GUIDELINES

### COVID-19 UPDATED PROTOCOLS

In light of the current global COVID-19 pandemic, the CDC or Center for Disease Control and Prevention have passed guidelines to assist estheticians in their daily sanitizing protocols. Below are the basic tips to keep in mind. Then we will dive into safety methods to practice before, during, and after your client's appointment.

#### Basic Tips to Follow

Because you are working so closely with your client and they will not have anything over their mouth, the best way to keep yourself safe is to wear an N95 mask. However, whether you can acquire one may depend on your state or region. If N95 is not obtainable, it is recommended that you wear a 3-ply face mask at all times.

If your clients are not having any work done on or around their mouths, or they are only having a consultation, have them wear a face mask. This will reduce the chance of contamination.

If you or your clients show any symptoms, stay home to reduce the chance of passing it on.

Be sure to sanitize everything from handles to chairs, to pens and anything in between. Share your disinfection protocol with clients and if you have one, your cancellation or rescheduling rules.

Maintain multiple sets of your tools (plasma pens, needles) and supplies to allow for a quicker and more sanitary treatment turnaround time.

Maintain 6 feet distance when possible and do not touch your face even with gloves on. Always wash your hands with a germicide-based soap, and keep everything sanitized. If you can purchase an autoclave it is a wise investment. This machine disinfects metal implements and tools. If you are unable to acquire one, be sure to have a disinfecting solution to clean or wipe your tools and implements with.

Provide yourself additional time to clean between procedures to ensure your treatment space is disinfected. A support staff to help clean and keep the areas sanitized would prove to be beneficial. Another great way to keep your environment sterile and infection-free is to use a germicidal lamp.

Some states do not allow for a waiting room, so if you are in one of these states be sure to schedule your clients accordingly to reduce their wait time. Also, you can suggest that clients wait in their car, and then you can call them when you are ready for them. If you are in a state that allows for a waiting room area, be sure the clients are six feet apart and wearing face masks. Have hand sanitizer available for them.

Read up on your state's rules and regulations regarding COVID-19 to make sure you are in compliance.

### **Prior to Procedure:**

Before your client comes, make sure the room and all your tools are sanitized and clean. Have your hands washed using an alcohol-based soap, a nail brush, and have your mask on ready to greet them. Make sure your working station is sanitized and ready for them. It is recommended that you have multiple tools on hand. Do not touch your client, but greet them the best you can. Have them wear a mask or provide them with one if possible. For your tools and products, be sure to have a sterilized tray to hold them and keep your items organized.

### **After Procedure:**

After your work is complete, be sure to throw any linen or towels used in the appropriate bins. Disinfect every tool, device, item, chair, and handle you or your client came in contact with. Place your tools or machinery in the proper sanitizing solution or in the autoclave to be rid of any possible contamination.

Be sure you wash your hands after the procedure once you have disposed of your gloves. Another level of protection is to use contact-less payment methods. The less surfaces touched, the better. If this is not possible, wipe down your payment processing devices after each use.

# INFECTION CONTROL

Now more than ever, we need to educate ourselves on how pathogens spread, and what we can do to protect ourselves. In this module we will cover best practices for preventing the spread of infection, but we encourage you to take an infection control course to be fully aware of how best to protect yourself and your clients.

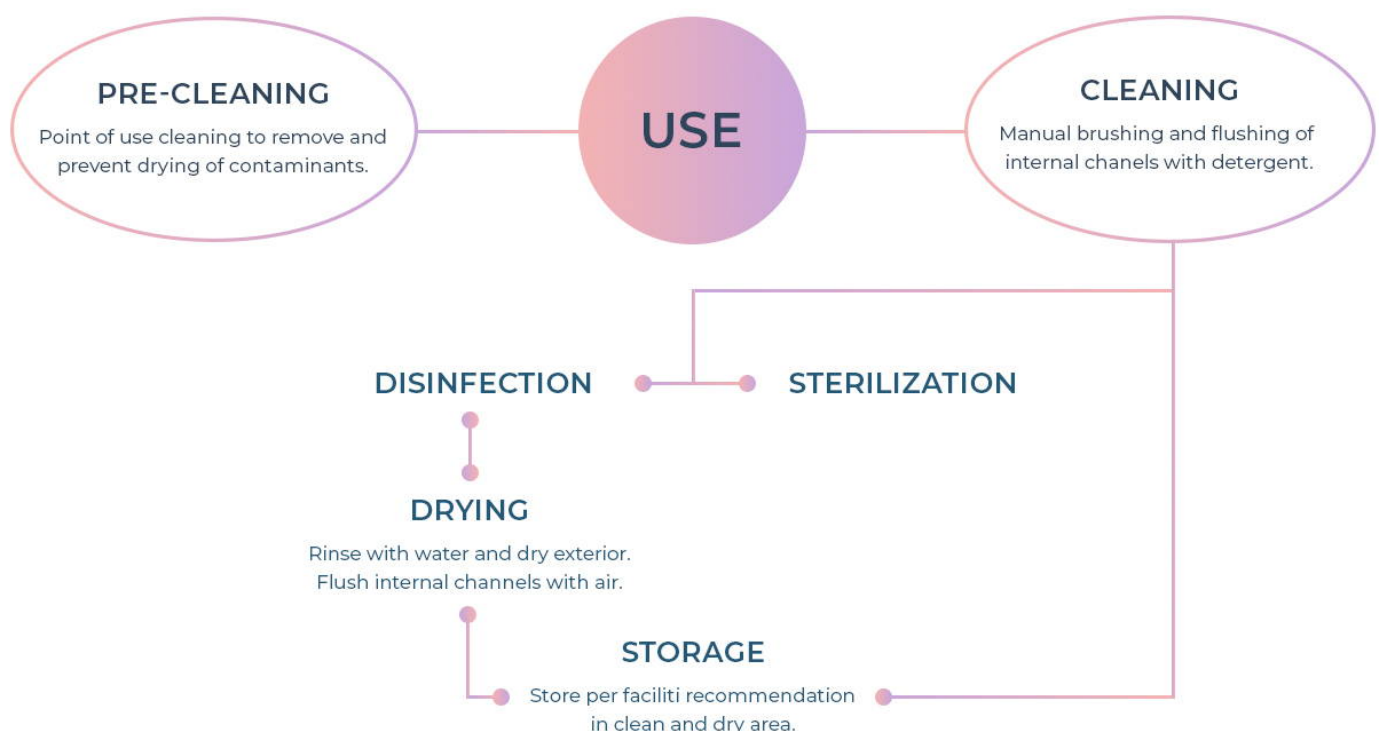
## How Infection Spreads

**Direct and Indirect Contact:** We can come in contact with germs by touching a surface that has been contaminated by someone coughing or sneezing on it, or by infectious particles being transferred to the object in another manner. This is transmission via indirect contact. Direct contact involves directly touching another person.

**Droplet Transmission:** Droplets from sneezing, coughing or talking can briefly travel in the air and infect another person through the mouth, nose or eyes. Wearing a face mask greatly helps reduce the chance of droplet-borne transmission,

**Airborne Transmission:** When infectious particles are small enough to float in the air for an extended period of time they can cause airborne transmission of disease.

**Reduce the Spread of Infection :** It's helpful to know the chain of infection so that we can learn ways to disrupt this chain and reduce the chance of spreading sickness. The chain of infection is a sequence of events that must occur in order to cause a sickness.



## **THE CHAIN OF INFECTION**

- **Infectious Agent:** This is the microscopic pathogen that can cause an infection.
- **Reservoir:** Reservoirs are places in the environment where the infectious agent lives such as on or within an animal or human host.
- **Portal of Exit:** This is the specific way the infectious agent leaves the reservoir. For example, many viruses exit a host by the respiratory tract. Bloodborne pathogens exist in the blood, so their portal of exit could be a cut or scratch.
- **Mode of Transmission:** There are many ways infections can be spread. The three most common ways an infectious agent can be transmitted to another host are by droplets (coughing, sneezing, talking), direct and indirect contact and airborne particles.
- **Portal of Entry:** A portal of entry is the way the infectious agent enters its new host. This could be through the nose, mouth, or other tissues.
- **Susceptible Host:** The susceptible host is the person the pathogen enters and infects.

### **Breaking the Chain Of Infection**

- **Eliminating or Inactivating the Infectious Agent**
- Example- pest control, antibiotics, antiviral medication, sterilizing surfaces, washing hands
- **Preventing Contact**
- Example- isolating or quarantining infected individual
- **Preventing Infectious Agent Escape**
- Example- covering the mouth when coughing or sneezing, wearing a face mask
- **Blocking the Ports of Entry**
- Example- wearing gloves, using a mosquito net while sleeping, wearing a face mask, wearing a face shield
- **Offering Resistance to the Host**
- Example- natural immune response, vaccines

## **PRECAUTIONS TO PREVENT THE SPREAD OF INFECTION**

The best way to stop infections from spreading is by interrupting the chain of infection. The two main categories for breaking the chain of infection are standard precautions and transmission-based precautions.

### **Hand Washing**

Hand washing is a simple yet effective way to reduce infections. Many pathogens, including coronaviruses have a fatty outer cell membrane. Soap can breakdown and dissolve fat. When you wash your hands, the soap is disrupting the molecular bond of these infectious substances. If you lather up long enough, you can completely kill many types of bacteria, viruses and other infectious agents. Wash your hands for 20 seconds to help prevent spreading infection to yourself or someone else.

### **Sanitation**

One of the most efficient ways to prevent the transmission of infections is to keep your work environment clean and sanitized.

The CDC recommends the following guidelines:

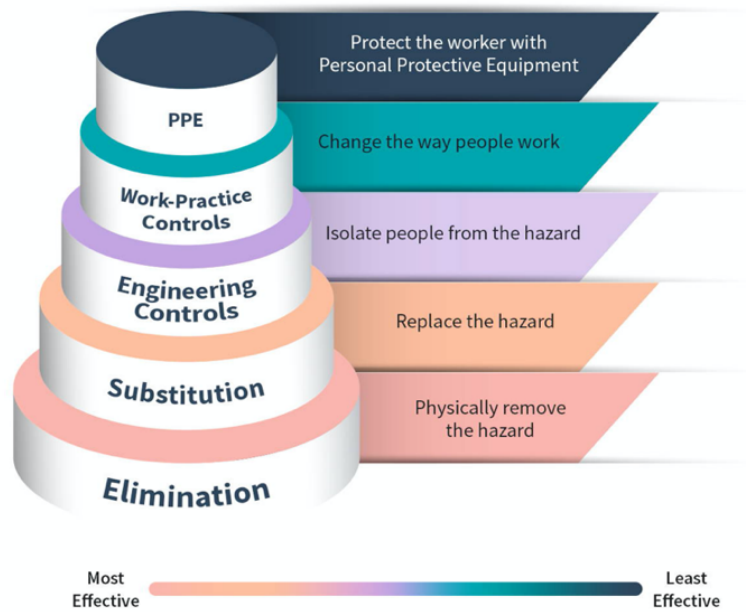
Procedures and policies should be in place for routine care, cleaning, and disinfection of environmental surfaces, especially frequently touched surfaces in (procedure equipment, door knobs, etc.)

All waste, such as used disposable syringes and needles, scalpel blades, microblades, ampoules, gloves, etc., should be considered potentially infectious, and they should be classified, handled, and disposed of properly.



# PERSONAL PROTECTIVE EQUIPMENT

Another way in which you can control the spread of infection is to use personal protective equipment or PPE. Personal protective equipment is an inexpensive yet effective way to impact two different sequences within the chain of infection. They can prevent transmission through a portal of exit or infection by blocking portals of entry.



## PPE Options

- **Masks, Goggles, Face Shields:** used during procedures that are likely to generate splashes or sprays of blood, body fluids, and secretions
- **Gloves:** used whenever there is a potential for contact with blood, body fluids, mucous membranes, broken skin, or contaminated equipment

## Re-Gloving

With procedures you may find yourself constantly needing to re-glove. Sometimes you will find yourself needing to grab something from a drawer, but you are already wearing your gloves. If you do pick up something the gloves are no longer sterile. Before you touch anything you will need to take your gloves off so that you are not contaminating the handle and anything else you touch in the process. You need to be stay conscious of what you're about to touch when doing procedures. The only items you should be touching while wearing your gloves are what you have set up on your tray before the procedure.

In order to avoid having to put on a new pair of gloves because you forgot an item, have your work area properly set up. Below are the items you will need to equip your treatment space at your own facility.

## Safety for Needles, Blades and Sharp Items

Sharp items such as needles, microblade, and ampoules that have been used should be considered contaminated. Place the used probe or needle in a designated waste receptacle for contaminated items. This waste receptacle should have a lid. The location of your waste bin for contaminated materials should not be near a general client waiting room or other type of common area, but in a secure location with limited chance for accidental contact. Seal the bag and dispose of properly at the end of the day.

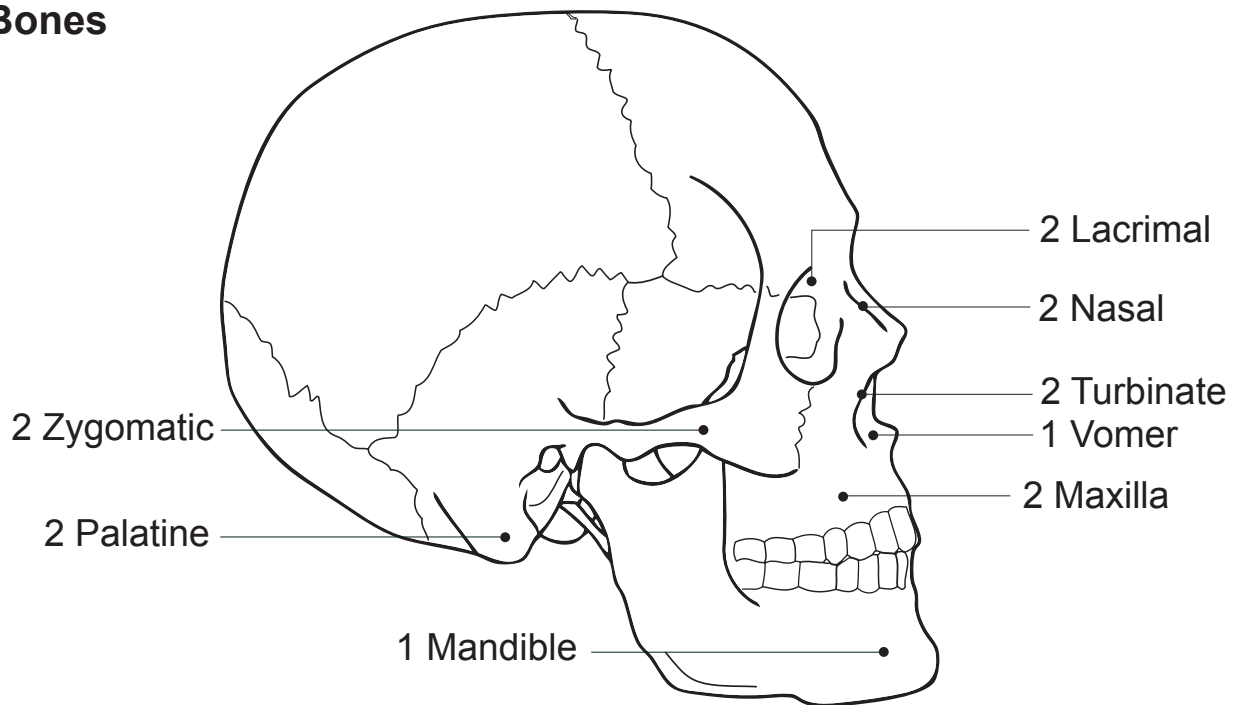
## LESSON 3 ANATOMY AND PHYSIOLOGY

It is important to have some basic understanding of anatomy and physiology as a therapist carrying out treatment.

### BONES OF THE HEAD & NECK

The face is made up of 14 facial bones, these are indicated in the diagram below.

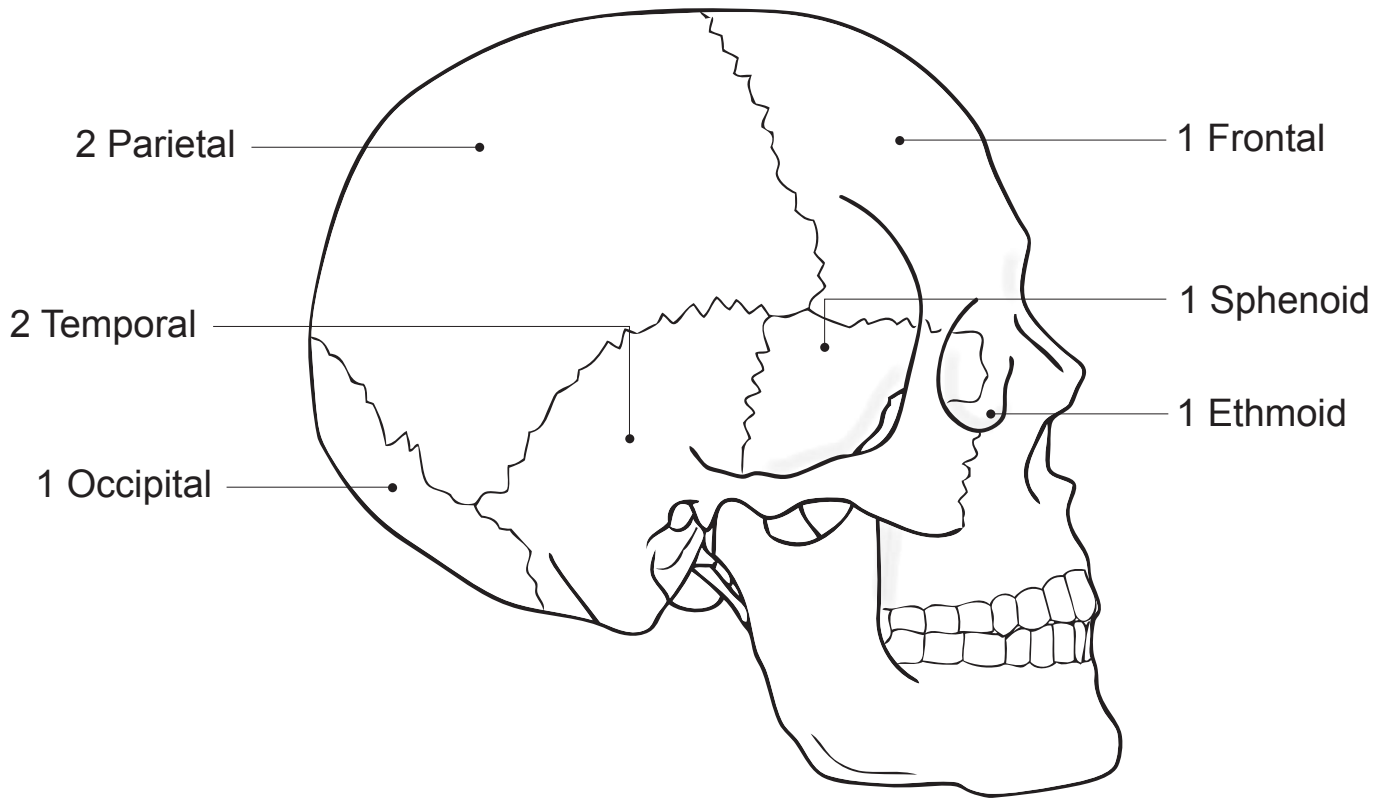
#### Facial Bones



The rest of the skull is made up of the cranial bones there are eight in total shown in the diagram below.

Bone	Description
Palatine	x 2 Forms the floor and wall of the nose and the mouth roof
Nasal	x 2 Form the bridge of the nose
Turbinate	x 2 These two bones form the outer walls of the nose
Vomer	This is the dividing wall of the nose
Lacrimal	x 2 The inner walls of the eye sockets
Maxilla	x 2 Fused to form the upper jaw
Mandible	The lower jaw
Zygomatic	x 2 Cheekbones

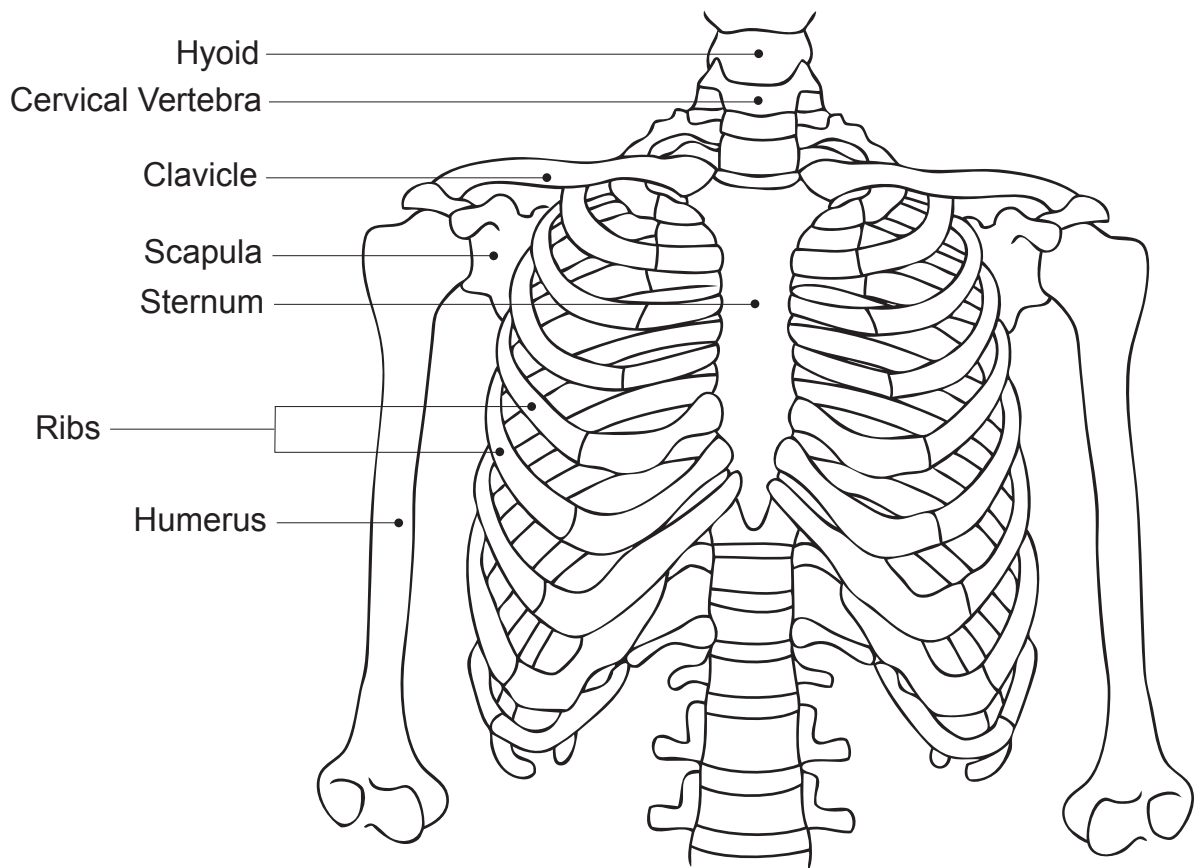
## Cranial Bones



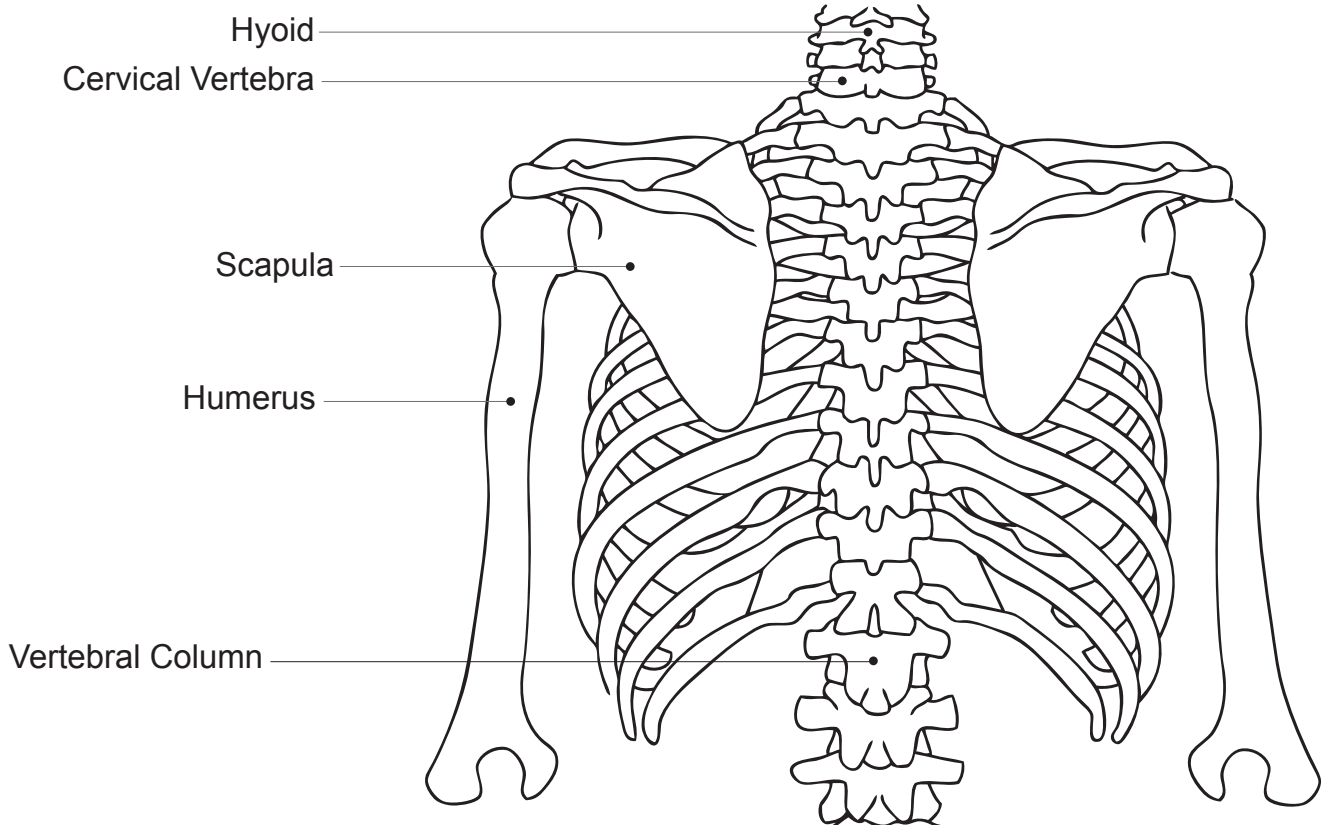
Bone	Description
Occipital	Located at the back of the skull, contains the hole for the spinal chord, nerves and blood vessels to pass through
Parietal	x 2 fused together to form the crown
Frontal	Forehead and upper eye sockets
Temporal	x 2 The sides of the head
Ethmoid	Forms part of the nasal cavities
Sphenoid	Bat-shaped bone joining all the cranial bones together

## Neck, Chest and Shoulder Bones

Front



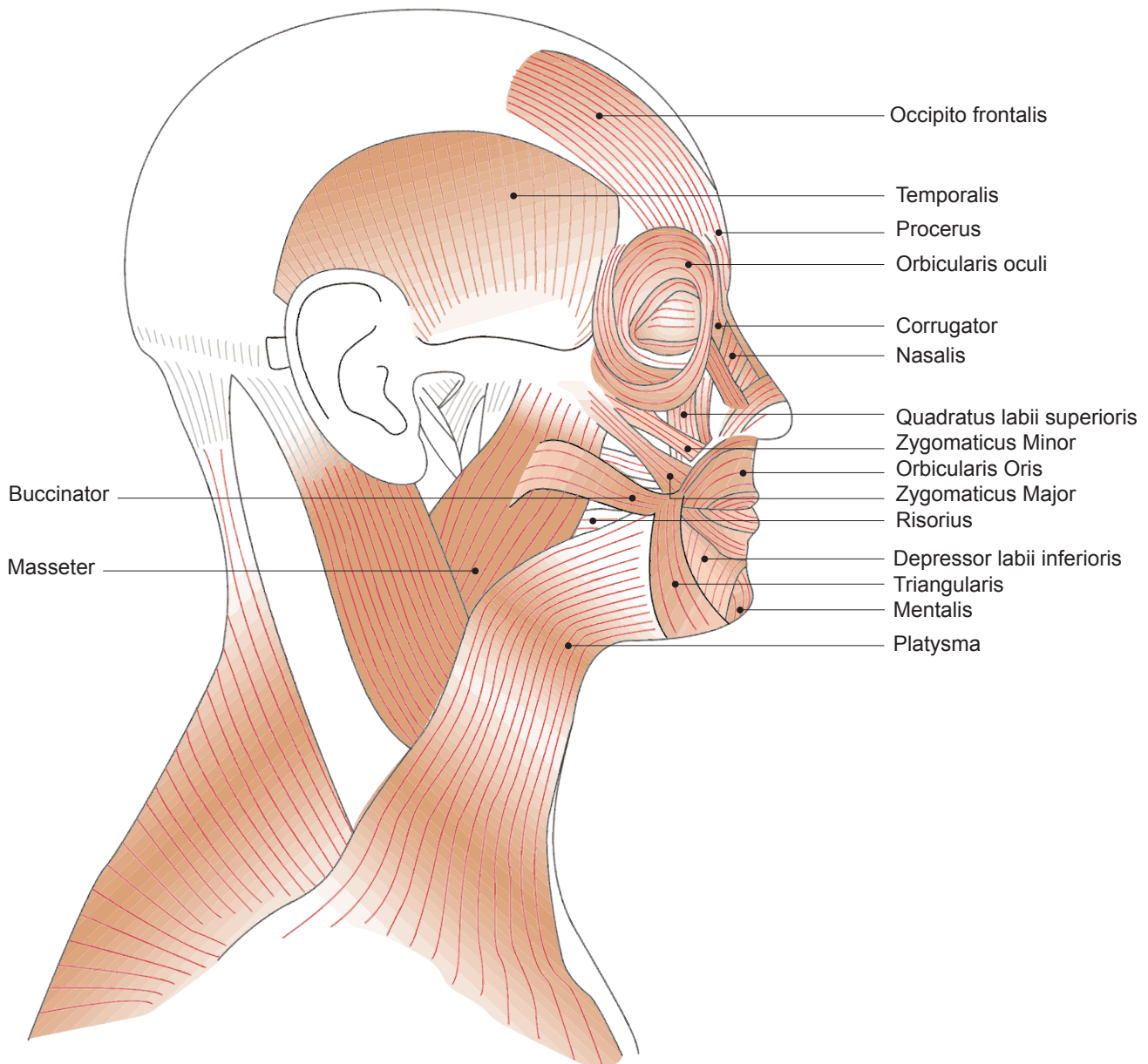
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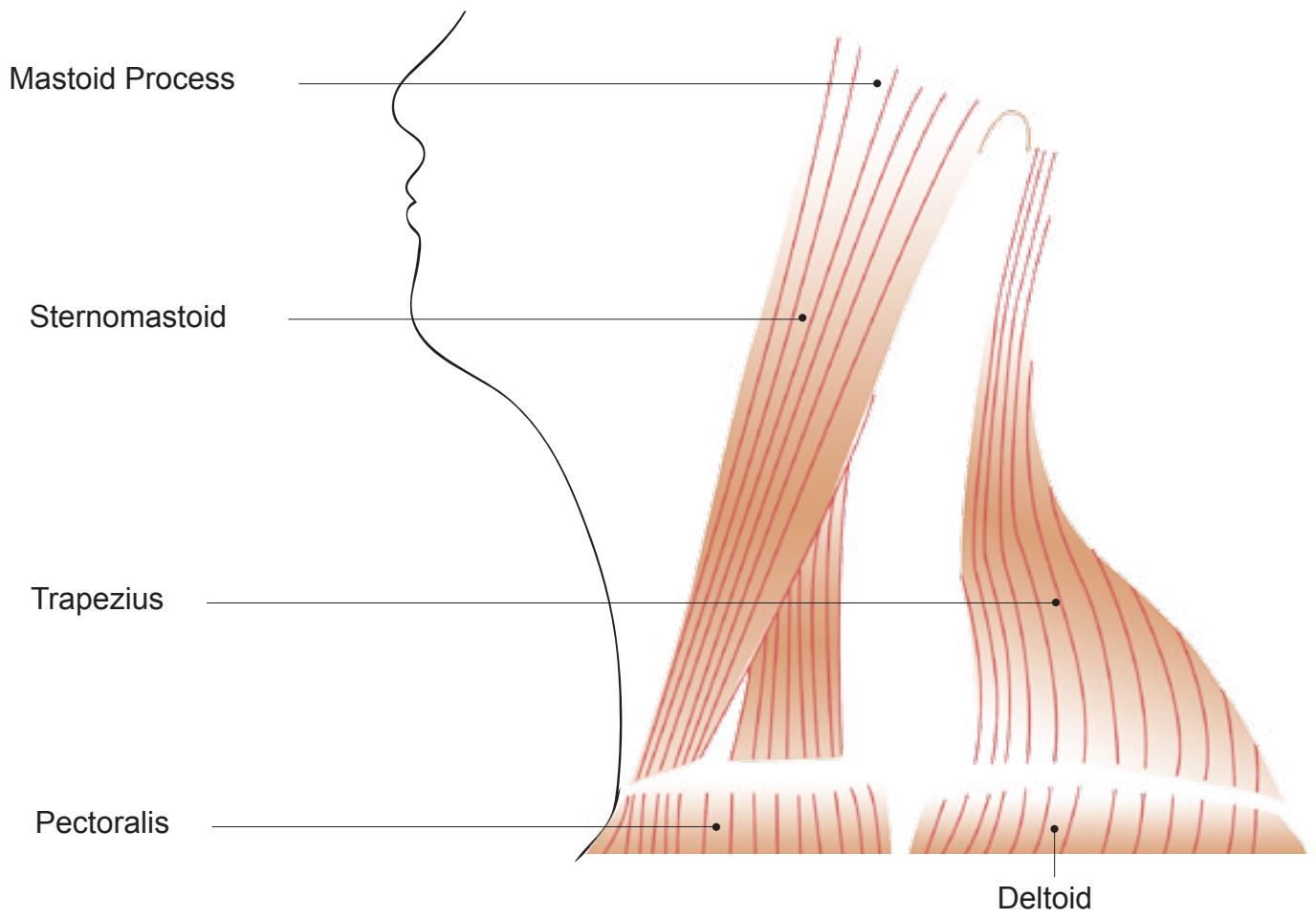
## MUSCLES OF THE FACE AND NECK

The muscles in the face and neck are responsible for our facial expressions. As we age the expressions that we use on a daily basis produce lines on the skin and we begin to show the outward signs of ageing. Microdermabrasion removes the dead skin cells from the epidermis improving the appearance of these fine lines and wrinkles.

### Facial muscles

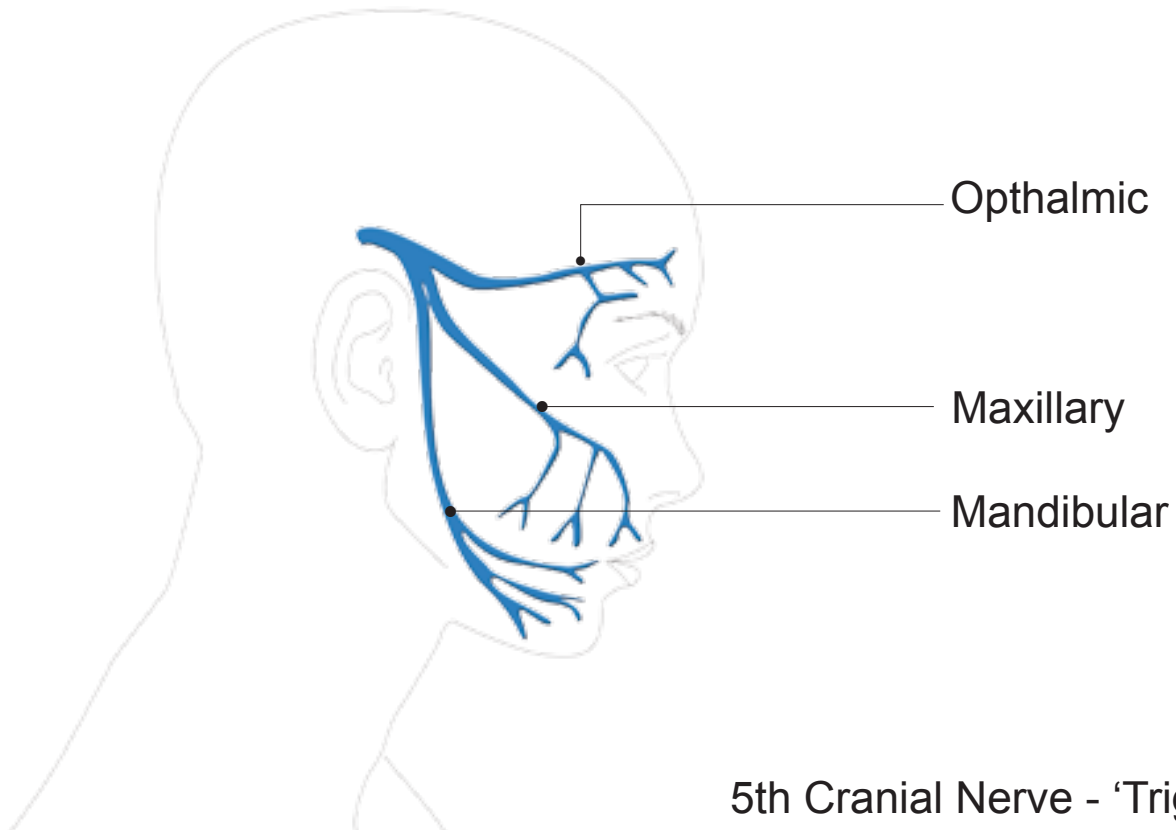


# Muscles Of The Neck

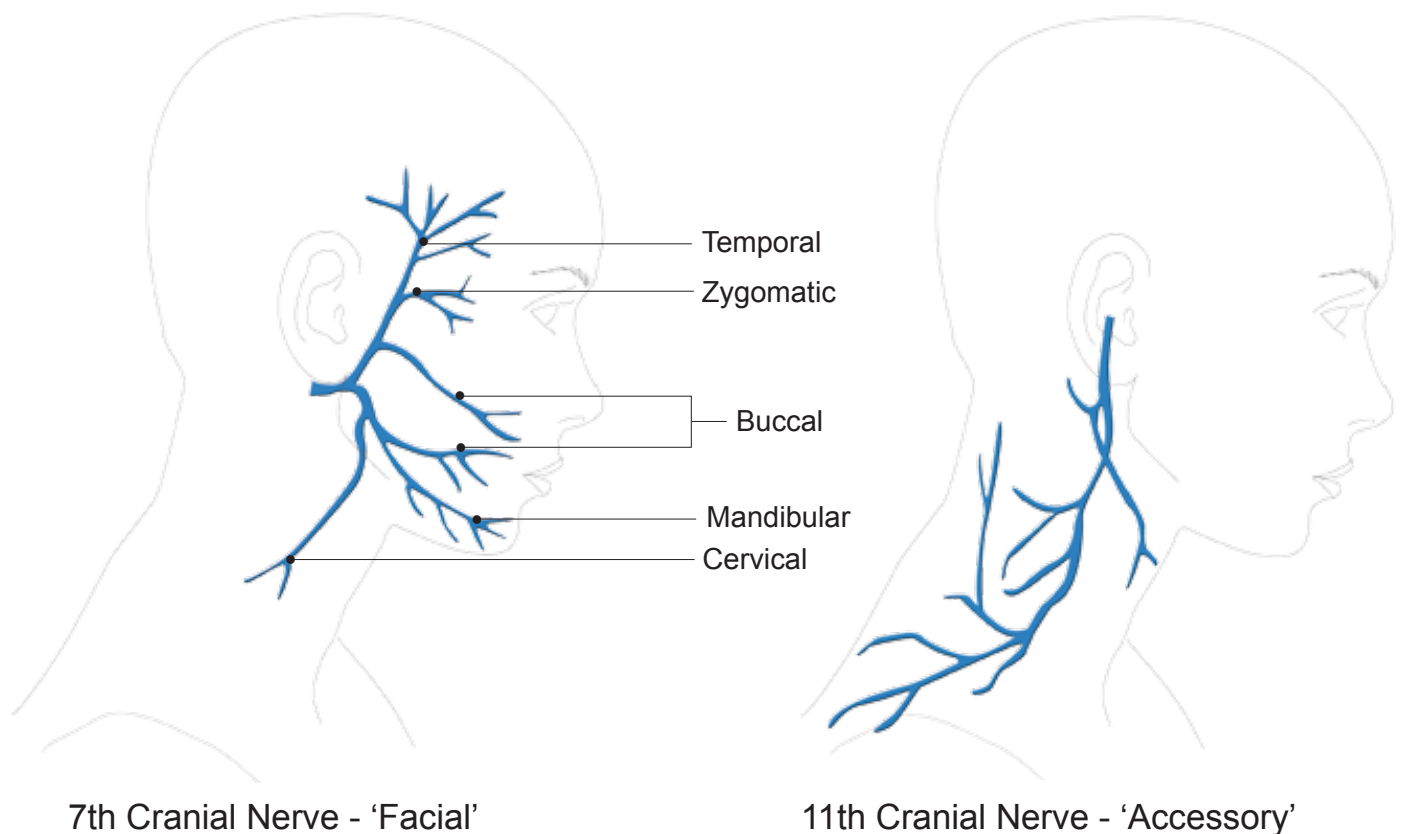


## CRANIAL NERVES

The nervous system is the body's method of sending 'information' messages from the brain to other parts of the body.



The nerves of the face and neck or 'cranial' nerves control the muscles in the head and neck or carry nerve impulses (sensory information) from sense organs to the brain. The 5th, 7th and 11th cranial nerves are those that we are concerned with as therapists when performing facial treatments.



Nerve	Function	Nerve Branches	Sends Messages to:
5th 'Trigeminal'	Controls muscles for chewing  Passes on sensory info from the face	Ophthalmic	Tear glands Skin of forehead Upper cheeks
		Maxillary	Upper jaw muscle Mouth
		Mandibular	Lower jaw muscle Teeth Muscles for chewing
7th 'Facial'	Controls muscles used for facial expressions	Temporal	Muscle surrounding the eye Muscles on the forehead
		Zygomatic	Eye muscles
		Buccal	Upper lip Sides of the nose
		Mandibular	Lower lip Chin
		Cervical	Sides of neck and chin
11th 'Accessory'	Moves the neck and shoulders		



## **THE SKIN**

The skin is the largest organ of the body. The skin functions in a number of ways to protect us from external elements.

- Prevents the absorption of harmful substances
- Helps regulate body temperature
- Acts as a barrier to keep out infection
- Melanin in the skin protects us from the harmful effects of UV light
- Provides a waterproof coating that prevents us from becoming dehydrated
- Provides an energy reserve in the form of stored fat

### **THE STRUCTURE OF THE SKIN**

The skin is made up of two distinct layers, the epidermis and the dermis. Between them is the basement membrane which keeps the two layers together. Beneath these layers is the subcutaneous layer, a layer of fat that protects, cushions, insulates and stores extra energy for the body.

### **THE EPIDERMIS**

The epidermis is the outermost layer of the skin. It is composed of five layers. Each layer of the epidermis can be recognised by its shape and by the function of its cells. The main type of cell found in the epidermis is the keratinocyte, which produces the protein keratin.

Cell renewal happens over a period of approximately four weeks. Cells move from the bottom layer of the epidermis (basal layer) to the top layer (horny layer) changing in shape and structure as they progress. The top layer of the epidermis is the layer that dies, and which is shed from the skin 'desquamation'. This is the layer that is removed in microdermabrasion treatment and also the layer that helps to reflect UV light away from the skin, which is why it is important that clients use sun protection after microdermabrasion treatment.

# THE FIVE LAYERS OF THE EPIDERMIS

## 1. Stratum corneum or 'horny Layer'

This is the outermost layer of the epidermis, made up of several layers of flattened, mostly dead, overlapping cells. These cells help to reflect UV light.

Black skin, which evolved to withstand strong UV light, has a thicker stratum corneum than Caucasian skin. It takes about three weeks for the epidermal cells to reach the stratum corneum from the stratum germinativum. The cells are then shed; a process called desquamation.

## 2. Stratum Lucidum or 'Lucid Layer'

This layer is only found in thicker areas of the skin such as the palms of the hands or soles of the feet.

## 3. Stratum granulosum or 'granular Layer'

In this layer cells begin to die. These cells have what look like granules within them caused by the nuclei breaking up. These granules are known as keratohyaline granules and later form keratin.

## 4. Stratum Spinosum or 'prickle cell Layer'

The stratum spinosum is made up of cells which have a spikey surface (hence the name) to connect with surrounding cells. This is the layer that begins to synthesise keratin.

## 5. Stratum germinativum or 'Basal Layer'

Column shaped cells responsible for producing new epidermal cells. Cells divide and move up to higher layers. The remaining cells divide to fill the gaps. This process of cell division is known as Mitosis.

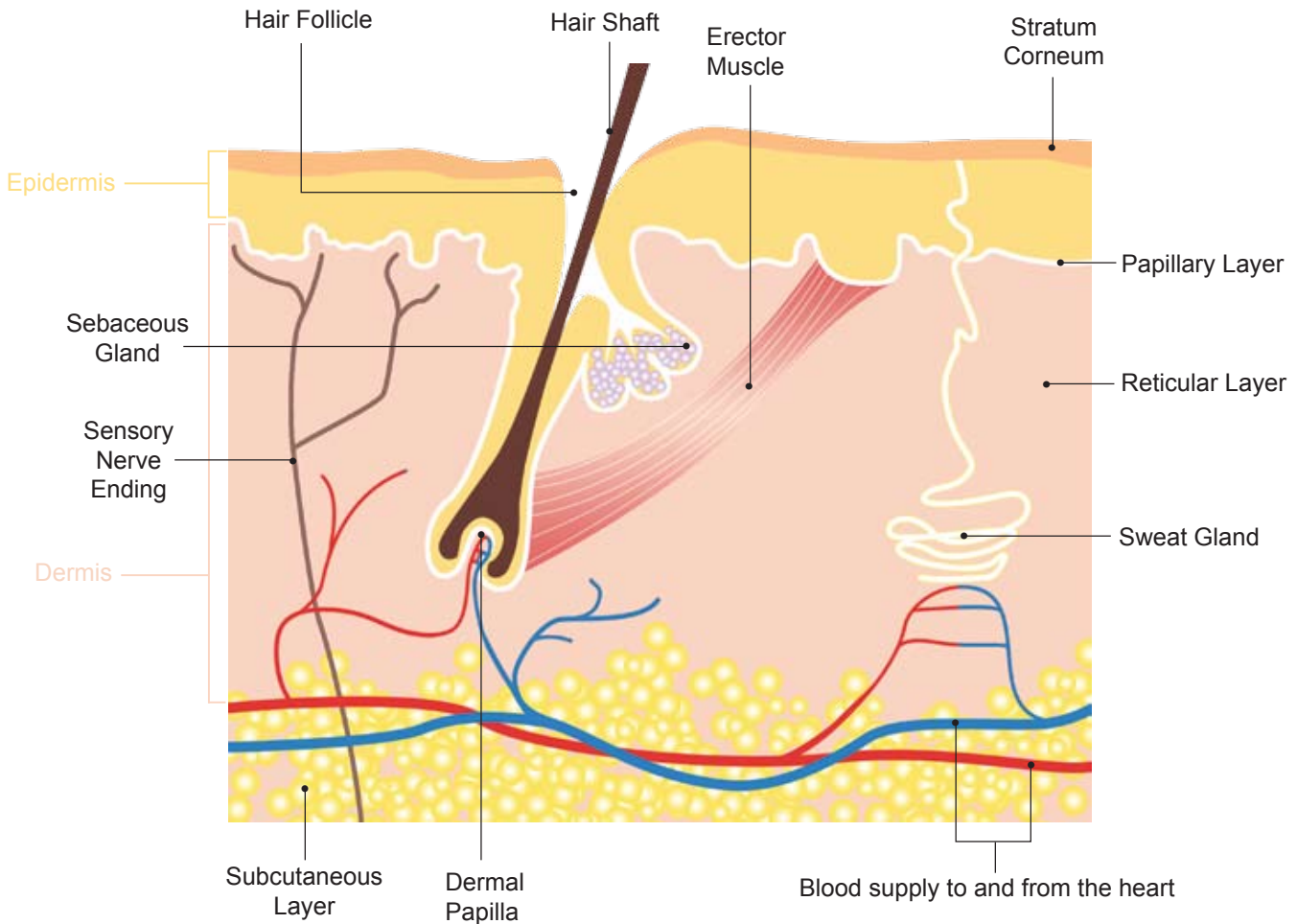
The germinative zone of the epidermis also contains two other important cells, Langerhan and Melanocyte cells.

Langerhan cells - absorb & remove foreign bodies that enter the skin. They move out of the epidermis and into the dermis below then finally enter the lymph system; the body's 'waste disposal system'.

Melanocyte cells - Responsible for the production of melanin in the skin. These protect the other epidermal cells from the harmful effects of UV. Melanin helps determine our skin colour; the more melanin present the darker our skin tone.

## THE DERMIS

The dermis is the layer found beneath the epidermis and is responsible for the strength and elasticity of the skin. It also contains lots of specialised cells and structures including nerves, blood vessels, glands & hair follicles. The dermis consists of two layers, the papillary and reticular layers. The upper, papillary layer contains a thin arrangement of collagen fibres. The reticular layer beneath is made of dense collagen fibres arranged parallel with the skin's surface.



### The Reticular Layer

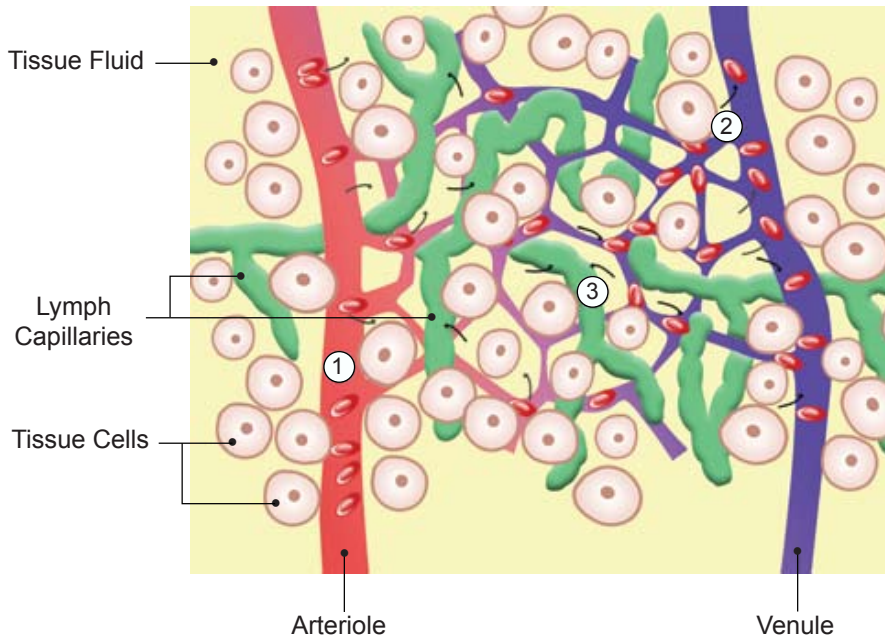
The reticular layer consists of two sorts of protein: elastin fibres which give the skin its elasticity and collagen fibres which give the skin its strength. These fibres are held in a gel-like substance called 'ground substance'. The elastin and collagen fibres form a strong network which gives us our youthful appearance.

As we age these fibres in the skin begin to harden and fragment; the network starts to break down and our skin starts to lose its elasticity and show visible signs of ageing. Blood circulation to the skin declines; nutrients do not reach the surface, resulting in sallow skin. The fatty layer beneath the skin grows thinner so we look more drawn as our bone structure is more prominent. The reticular layer is vital to our skin's health and appearance and so it is essential that it is looked after in order to prevent the signs of ageing.

## BLOOD FLOW

The blood circulates through the body to all the cells, carrying vital nutrients and energy such as oxygen, glucose and other raw materials essential for the body's health, maintenance and growth.

The vacuum action of microdermabrasion treatment assists in the stimulation of the micro-circulation near the skin's surface. This promotes increased blood flow to the area which promotes collagen and elastin production in the skin as well as cell renewal (skin regeneration), aiding tissue repair and revealing smoother and fresher skin.



*This diagram shows how the blood flows through the cells; first delivering nutrients and energy and then removing waste products such as carbon dioxide.*

1 Blood is under high pressure as it flows through the capillary network forcing fluid out into the tissue and becoming tissue fluid. This fluid contains useful substances like oxygen and nutrients essential for the cells. Blood cells and large proteins remain in the capillary.

2 As the blood becomes deoxygenated pressure is reversed and some of the fluid containing waste products will re-enter the capillaries and be carried away.

3 Excess fluids, waste products and large molecules like proteins that were unable to re-enter the blood are taken up by lymph capillaries and carried to lymph nodes where the fluid is processed and enters back into the blood nearer to the heart.

## BLOOD FLOW THROUGH THE SKIN

Normal body temperature is 37°C. The body will work to maintain this temperature. If body temperature starts to rise, blood will pass close to the skin to release some of its heat. When body temperature falls, capillaries are constricted and blood will pass through 'shunt vessels' deeper in the dermis instead, reducing the amount of heat

Vaso-dilation happens when you are:  
Hot – blood passes close to the surface – heat is released

lost through the skin.

Vaso-constriction happens when you are:  
Cold – blood flows through shunt vessels away from the surface – heat is retained

## LESSON 4 SKIN TYPES, DISORDERS & DISEASES

There are six basic skin types. However, a person's facial skin can vary at different times during their life due to illness or hormonal imbalance.

### **Dry Skin Types**

Dry skin is caused by under or inactive oil glands that do not produce enough sebum to keep the skin naturally hydrated. It usually has a dull appearance, feels dry and itchy and is sometimes sensitive. Dry skin must be hydrated regularly from the inside (drinking water) and outside with rich hydrating creams or lotions.

### **Oily Skin Types**

oily skin is caused by glands that produce too much sebum, resulting in skin that appears shiny and has large open pores. oily skin types are prone to develop comedones (blackheads) and acne. Despite these drawbacks oily skin generally remains younger looking and remains suppler over time than other skin types. oily skin benefits hugely from microdermabrasion with the application of light moisturisers.

### **Sensitive Skin Types**

Sensitive skins can be dry, normal or oily and are characterised by their delicacy. Sensitive skin frequently reacts adversely to environmental conditions and often requires special treatment in order to remain in good condition. Sensitive skin benefits greatly from natural skin care products and treatments.

### **Normal Skin Types**

Normal skin produces sebum at a moderate rate, resulting in a balanced state. Normal skin looks consistently plump, moist and vibrant. A great blessing but still requires no less attention. It benefits from regular cleansing, toning and moisturising.

### **Combination Skin Types**

Combination skin is the most common skin type. Combination skin is frequently characterised by an oily T zone area that covers the forehead, nose and chin. While the skin around the cheeks, eyes and mouth is normal to dry. People with combination skin should assess their skin regularly and use different products on different areas of the face.

### **Mature Skin Types**

Mature skin has the following characteristics: skin becomes dry as sebaceous glands become less active. Skin loses elasticity; fine lines and wrinkles appear. Skin

appears thinner with broken capillaries, especially on the cheek area and around the nose. Facial contours become slack as muscle tone is reduced. Underlying bone structure becomes more obvious, as the fatty layer beneath the skin grows thinner. Blood circulation becomes poor, which interferes with skin nutrition making skin appear sallow. Due to the decrease in metabolic rate, waste products are not removed as quickly leading to puffiness of the skin. Mature skin must be hydrated well by drinking water regularly and using nourishing moisturisers.

### **Skin is also affected by:**

- Hormones
- Weather
- Central heating
- Wrong products used
- Prolonged illness
- Medication or drugs
- Poor nutrition
- Smoking and alcohol intake
- Allergies
- Stress
- Genetic inheritance
- Ethnicity

## **SKIN COLOUR TYPES**

The tone of human skin can vary from dark brown to nearly a colourless pigmentation, which may appear reddish due to blood in the skin. Europeans generally have lighter skin, hair and eyes than any other group, although this is not always the case. For practical purposes, six types are distinguished following the Fitzpatrick scale (1975).

### **Black**

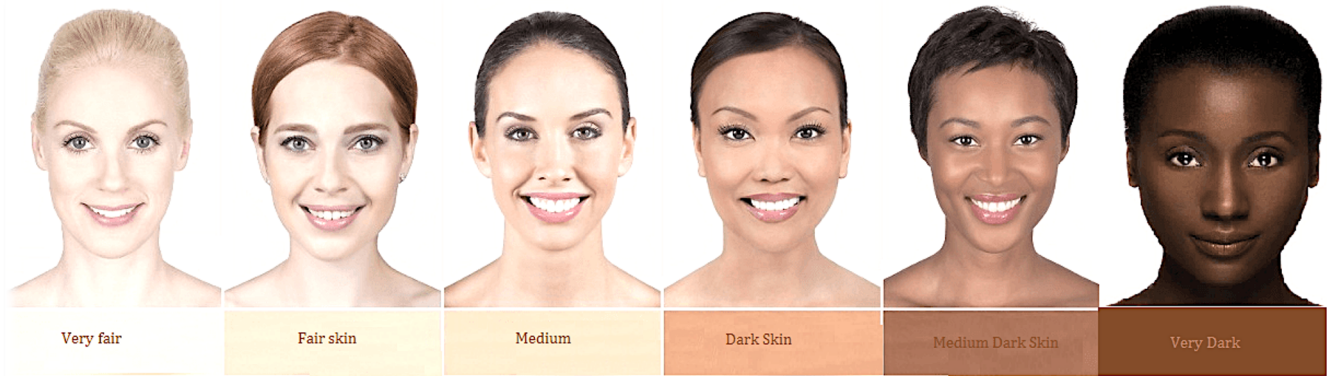
Black skin (people from Africa, Native Australians, African- Americans, Caribbean's, and Other Islands) is darker than northern European skin because of the increased amount of melanin in the skin. Melanin is the pigment in the skin and protects the skin from sunlight. This keeps black people looking younger than white skinned people. The melanin pigment in the skin protects the skin from sunlight and slows down the aging process. As black people age, their skin often becomes irregularly pigmented. This shows up as dark patches on the skin. Irregular pigmentation can also be caused by inflammation. If an area of the skin becomes inflamed or red from an insect bite or from an acne pimple, a brown area can be left behind as the redness or inflammation subsides.

### **White**

Thin epidermis  
Prone to early signs of ageing  
Delicate skin tone  
Skin tones are linked to colour of hair  
Bruises quite easily

### **Chinese**

Light yellow skin tones  
Oily skin  
Shiny appearance  
Open pores  
Prone to blackheads  
Prone to scarring if extraction is too heavy handed



**Asian**

Asian skin tends to be smooth and pore less with yellow undertones. Asian skin is more prone to irritation. Commonly used preservatives, fragrances and alcohol suitable for Caucasian skin can actually cause irritation when used on Asian skin. Asian skin has larger pores than Caucasian skin. Asian skin has a greater need for daily exfoliation to minimize the appearance of pores and even out skin tone and texture. Asian skin is more prone to acne.

**Mixed**

A very thorough analysis is needed to determine the correct skin type as people with this skin type don't fall into any particular category and normally have a combination of skin colouring.

**THE FITZPATRICK SCALE**

TYPE	ALSO CALLED	TANNING BEHAVIOUR	HAIR AND EYE COLOUR
I	Very light, also 'Nordic'	Often burns, rarely tans	Tend to have freckles, red or blonde hair, blue or green eyes
II	Light or light skinned	Usually burns	Tend to have light hair, blue or green eyes
III	Light intermediate, or dark skinned European or 'average caucasian'	Sometimes burns Usually tans	Tends to have brown hair Dark eyes
IV	Dark intermediate, also 'Mediterranean' or 'Olive'	Sometimes burns Often tans	Tends to have dark brown hair and eyes
V	Dark or 'Brown' Type	Naturally black-brown skin	Often has dark brown hair and eyes
VI	Very dark or 'Black' Type	Naturally black-brown skin	Usually has black-brown hair and eyes

## SKIN DISORDERS & DISEASES

Infectious diseases that are contagious contra-indicate beauty treatment. People with certain skin disorders, even though these are not contagious, should likewise not be treated by the therapist as treatment might lead to secondary infection. The therapist must be able to distinguish a healthy skin from one suffering from any skin disease or disorder

### **Important:**

**If You Are Uncertain Or Unable To Identify A Skin Condition You Should Not Treat The Client And Advise Them To Consult Their Doctor.**

**Certain skin disorders and diseases contra-indicate a beauty treatment: the treatment would expose the therapist and other clients to the risk of cross-infection it is therefore vital that you are familiar with the skin diseases & disorders with which you may come into contact.**

### **Bacterial infections**

Bacteria can be present in large numbers on the skin without causing us any ill harm. However, certain types of bacteria are harmful to us and these are known as 'pathogenic'. Pathogenic bacteria can cause skin diseases which are infectious and therefore a client should not be treated if found to be suffering from the following bacterial infections:

- **Impetigo** Extremely infectious and is easily spread through contact. Impetigo usually appears on the face first around the nose, mouth & ears, and can spread to other areas. Initially red and itchy, blisters appear, and these become crusty and weep.
- **Conjunctivitis:** Conjunctivitis is not always infectious as it can be caused by an allergic reaction or as a result of an irritant. However, it would be impossible for you to determine this so it should always be treated as infectious. The eye will appear red and inflamed; eyes might also be watery or have pus coming from the eye area.
- **Styes:** Styes are an infection of the sebaceous gland at the root of an eyelash. This causes a swelling which can leave the adjacent area red and the affected follicle will have a small lump filled with pus.
- **Boil/Furuncle** A boil or furuncle is caused by the inflammation of hair follicles, resulting in an accumulation of pus and dead tissues. Boils are red, pus-filled lumps that are tender, warm, and/or painful. A yellow or white point at the centre of the lump can be seen when the boil is ready to drain.

**Viral Infections** The particles of a virus are so small they cannot grow and reproduce on their own, so they require a 'host' cell. Viruses invade healthy living cells in the body so they can reproduce. They enter the body any way they can, by inhalation, through saliva, sexual contact. our immune system is designed to deal



with most viruses, and we will naturally fight off most infections. Clients suffering from the following viral infections should not receive microdermabrasion treatment.

- **Herpes Simplex (Cold Sores)** Cold sores are caught by close contact with someone who already has cold sores. They are characterised by a tingling feeling in the skin followed by sores which scab. Commonly found on the mucous membranes of the nose or lips they can also occur on other areas of the skin.
- **Herpes Zoster (Shingles)** Shingles is an infection of the nerve and the area supplied by the nerve. The virus usually affects one nerve, commonly the chest, abdomen or the upper face. Symptoms occur in the area of skin supplied by the nerve, causing redness, blisters and scabs.

**Fungal infections** Fungi are parasitic, microscopic plants feeding off the waste products of the skin. Some fungal infections are found on the skin's surface others are deeper within the skin tissue. Clients with fungal infections should not be treated as these diseases are infectious and can be spread.

- **Tinea Corporis/Ring Worm** Ringworm is a fungal infection of the skin found on the trunk of the body, the limbs & face. They appear as scaly red patches on the skin which spread outwards. The patches heal from the centre leaving a ring.
- Other skin disorders are not infectious however they should be treated with some caution and in some cases avoided altogether.

**Sebaceous Gland Disorders** The sebaceous glands are small glands which secrete an oily substance called sebum in the hair follicle to lubricate the skin, they are found in greatest abundance on the face and scalp. Sebaceous gland disorders include acne, rosacea and milia. Sebaceous gland disorders are generally caused by an over production of sebum.

- **Milia** Also known as 'milk spots' or 'oil seeds' they are benign, keratin filled cysts usually found around the nose and eyes. They are small, hard, white or pale yellow in appearance. They are not infectious and can be removed using a sterile needle to pierce the overlying skin and release the keratin.
- **Comedones/Blackheads** Caused by excess sebum and keratinised cells blocking the hair follicle. They are found on the face, the upper back and chest and are not infectious.
- **Seborrhoea** Caused by excessive secretion of sebum, usually occurs during puberty because of hormonal changes. Sufferers will have enlarged follicles and excessive sebum. It is not infectious and usually found on the face and scalp. It can also affect the back and chest.
- **Sebaceous Cysts** These form in the hair follicle when sebum becomes blocked and a lump forms. They are not infectious.
- **Acne Vulgaris** Hormonal imbalance during puberty causes an increase in the production of sebum. This in turn causes congestion in the sebaceous ducts resulting in inflammation of the skin, comedones, pustules and papules. It is not infectious, commonly found on the face, nose, chin and forehead. It may also

occur on the chest and back. Active acne should be avoided during microdermabrasion treatment.

- **Rosacea** Caused by a combination of excessive sebum secretion and chronic inflammatory condition, skin becomes coarse, pores enlarge, cheeks and nose become red and inflamed. The skin can look purplish in appearance because of slow blood circulation. Rosacea cannot be treated with Microdermabrasion.

## **Pigmentation**

### • **Hyperpigmentation - Increased Pigmentation**

Chloasmata 'liver spots' - increased pigment production can be caused by UV light, often occurs during pregnancy, oestrogen is believed to stimulate the production of melanin and so may also occur as a result of taking the contraceptive pill. They occur on the hands, forearms, upper chest, temples and forehead.

Ephelides 'freckles' - caused by exposure to UV light which stimulates the production of melanin. Found on the nose and cheeks of fair skinned people, also can occur on the hands, arms, shoulders and back.

Lentigo - patches of hyperpigmentation larger than freckles, occurring either in childhood or middle age due to sun exposure. Found on the face, hands and shoulders.

### • **Hypopigmentation - Loss Of Pigment**

Vitiligo - patches of skin which have no pigment in them so appear completely white

Albinism - skin with no pigment whatsoever and so the skin, hair and eyes lack colour. Skin is very pale pink; eyes are also pink, and hair is white.

**Erythema:** Erythema is the reddening of the skin caused by dilation of the blood vessels controlling capillary networks in areas of the skin affected by injury or infection.

**Vascular Naevi** These are areas of pigmentation caused by permanent dilation of blood capillaries

- Dilated Capillaries –small red capillaries visible in areas that are neglected or dry like the cheeks.
- Spider Naevi – dilated blood vessels with dilated capillaries spreading out around them.
- Naevi Vasculosis 'strawberry marks' – red or purplish raised marks that appear on the skin at birth
- Capillary Naevi 'Port-wine stain' – large areas of dilated capillaries

**Telangiectasia (Broken Capillaries)** Any form of broken capillary can be made worse by the vacuum action of microdermabrasion. These “thread veins” are quite common around the nose and cheek area. The area would have to be avoided completely or the treatment would have to be performed at a very low level.

**Keloids:** Keloids are scar tissue with excess deposits of collagen. Skin is raised in appearance, red with ridges. This type of scar tissue cannot be treated with microdermabrasion. Stretch marks and post-operative scars can be treated, however scar tissue should not be treated until all the inflammation has disappeared (6 months post-surgery for example).

**Dermatitis** An inflammation of the skin caused by an irritant or allergen. There are several types of dermatitis, symptoms can include skin which is red, itchy, flaking, scaling, weeping, swollen and possibly blistered depending on the severity.

Irritant contact dermatitis occurs quickly after contact with a strong irritant or over a longer period after prolonged and repeated exposure to a weak irritant. Common causes of this type of dermatitis are soaps, shampoos and detergents, dust, oil and grease, repeated and prolonged contact with water.

Allergic contact dermatitis is caused when the sufferer develops an allergy to a substance. Common causes are hair dyes, adhesives and food such as shellfish.

- **Eczema** There are two main types of eczema, *atopic* and *contact*. Atopic eczema tends to develop in childhood and many children grow out of it.

Contact eczema usually affects adults and is caused by contact with an allergen such as nickel, detergents, soaps and perfumes.

When suffering from eczema the skin becomes itchy, dry and flaky, and is often red and painful. Sometimes it weeps or bleeds. Areas commonly affected are the face, neck and skin particularly in the inner creases of the elbows and behind the knees.

- **Psoriasis:** Psoriasis is a chronic, autoimmune disease affecting the skin and joints. Psoriasis causes scaly patches of skin called psoriatic plaques which are areas of inflammation and excessive skin production which rapidly becomes silvery white in appearance due to the build-up of skin.

## LESSON 5 CONTRAINDICATIONS TO MDA TREATMENT

### MAJOR CONTRAINDICATIONS - DO NOT PROCEED

**PREGNANCY:** An increase in hormones can affect the skin during pregnancy, this can cause pigmentation. For this reason, we advise against microdermabrasion as the skin could react in an unexpected manner making the condition worse. Advise clients to use a good sunscreen when outside to help prevent the pigmentation occurring.

**CANCER:** We advise that you do not treat a client with Cancer, they should be in remission for at least 6 months prior to commencing a course of treatment. Microdermabrasion stimulates the blood flow and lymphatic drainage.

**GRADE 4 ACNE:** Clients with this level of acne should not be treated with microdermabrasion. If the skin is very congested with pustules and papules treatment would irritate the skin and spread bacteria.

**ROACCUTANE:** Roaccutane causes thinning of the skin, if your client is receiving Roaccutane treatment for acne, you must wait 6 months after discontinuing Roaccutane before performing microdermabrasion treatment.

**AUTO-IMMUNE DISEASE:** Used to describe a number of disorders where the body attacks its own cells and tissues, you should avoid treating a client suffering from an auto-immune disease.

**DIABETES:** Diabetes affects the nerves and circulation, and the skin can take much longer to heal than normal. Clients must provide written permission from their GP before treatment can be carried out.

**IMPETIGO:** A contagious bacterial skin infection, do not perform microdermabrasion.

**ROSACEA:** Rosacea cannot be treated with microdermabrasion.

### MINOR CONTRAINDICATIONS - PROCEED WITH CAUTION AND AVOID AFFECTED AREAS

- Eye Infections e.g., Conjunctivitis, Styes/Hordeola, Cysts
- Skin Disorders e.g., Active Acne, Seborrheic Dermatitis, Herpes Simplex (cold sores), Eczema, Psoriasis
- Keloid Scars
- Telangiectasia (broken capillaries)
- Raised Moles, Warts, Skin Tags
- Cuts, Bruises, Abrasions

**If You Are Uncertain Or Unable To Identify A Skin Condition You Should Not Treat The Client And Advise Them To Consult Their GP.**

## LESSON 6 CLIENT CONSULTATIONS

Your consultations can take many forms such as over the phone, in person, or over the computer. There is one key component to remember which is visually seeing the area you will be working on either in person or with an up-to-date photographs.

It is your job as the trained professional to provide them with a proper estimation and quote. The more realistic the quoting, the higher the client satisfaction, and the higher the chance you will have continued clientele.

As you have your consultation with your client, you will need to have a client intake form to go over with them. This intake form is to go over their history, any reasons why they cannot have the procedures (also known as contraindications), the minimal risks involved, and to understand what procedure they want done.

### THE CONSULTATION

1. Check client's suitability for treatment using the list of contraindications.
2. Carry out a skin analysis pinpointing any areas to avoid during treatment i.e., minor contraindications such as Telangiectasia (broken capillaries).
3. Pinpoint areas that require special attention such as acne scarring or pigmentation, open pores or uneven skin tone.
4. Suggest a treatment plan making sure you explain the cost, duration and frequency required for the course.
5. Explain to the client what the treatment will do and how it will feel.
6. Explain to the client how the skin might react. Although reactions if any are very minor, make sure clients are aware there may be some sensitivity.
7. Talk the client through the aftercare advice so they are aware of what they should be doing post-procedure to look after their skin.
8. It is vital the client understands the importance of using the correct home regime in between treatments and is committed to achieving results i.e., using the correct sun protection factors are crucial to avoid further pigmentation problems.
9. **Always Complete A Client Record Card:**  
This will ensure special attention is drawn to their specific needs. Explain contraindications of treatment and ask the client to sign the record card.
10. **Parents/Guardians (Over 18) Must Sign The Consultation Card For Children Under 16 Years Of Age**

## LESSON 7 EQUIPMENT & SETUP

### EQUIPMENT

- MDA device with abrasive element
- Headband
- Facial wash and astringent toner to cleanse and degrease the treatment area
- Towel to drape the Client
- Non-sterile gloves
- Eye protection for the Client (adhesive eye pads, goggles, or moist gauze)
- 4 x 4 gauze
- Saline eye wash
- Broad-spectrum sunscreen of SPF 30 or greater containing zinc oxide or titanium dioxide and a nonocclusive soothing moisturizer for post procedure application

### SETTING UP THE SYSTEM

1. Always check that your filter jar is empty of any used crystals before starting a treatment.
2. Make sure the handset is connected to the disposal jar with the silver tube and firmly connected at both ends.
3. Attach a clean nozzle and a new bottle of crystal to the handset and screw in firmly.
4. Connect the electrical lead, switch on at the power point and the starting switch on the panel.

### Adjusting Treatment Level

Make sure a bottle of crystal is connected to the handset and with your fore-finger over the hole in the nozzle, turn the regulator valve until you have your desired pressure for the facial.

**Please Make Sure You Understand Correct Pressure Levels Before Commencing Any Microdermabrasion Treatment**

**PLEASE NOTE: UNDER NO CIRCUMSTANCES SHOULD THE METAL CASING BE UNSCREWED AND LIFTED WITHOUT FULLY DISCONNECTING FROM THE MAINS SUPPLY.**

## TREATMENT LEVELS

**ALWAYS FOLLOW THE INSTRUCTIONS THAT COME WITH YOUR OWN PROFESSIONAL DEVICE**

The following descriptions provide a guideline to selecting an appropriate treatment level for your client.



### **LEVEL ONE** **-0.3bar**

- Newly trained therapists
- First treatment
- Eye area

**LEVEL ONE - 0.3 BAR** This level should be used by newly trained therapists until they are confident about how light their strokes should be. Level one allows gentle all-over exfoliation and should always be selected for the client's first treatment. Always use level one when performing microdermabrasion around the eye (feathering action).



### **LEVEL TWO** **-0.4bar**

- Targeting
- No higher than level 2 for Black/Asian skin

### **LEVEL TWO - 0.4 BAR**

This level should be gradually selected when working on acne scars or more thickened skin. No higher than this level for black and Asian skin types see *Fitzpatrick Scale*



### **LEVEL THREE** **-0.5bar**

- End of a treatment course when skin is more tolerant
- Body exfoliation
- Problematic skin
- Targeting only
- Never for Black/Asian skin

### **LEVEL THREE - 0.5 BAR**

This level is only to be used on clients toward the end of their treatment course when the skin is more tolerant. Used for working on acne scars, pigmentation, fine lines and wrinkles. Also, for body exfoliation, stretch marks and cellulite.

### **LEVEL FOUR - 0.6 BAR**

Use for body treatments only. **never to be used on the face**

## LESSON 8 PREPARE THE CLIENT

***Always give clear instruction to your client.***

Ask the client to remove any jewellery from the neck, face and ears

Ask the client to remove their shoes

Settle the client on the couch. The couch should be raised very slightly at the head or their head should be placed on a small pillow. There should be nothing obstructing the back of the neck, you should be able to comfortably put your hands behind the client's neck without them having to move.

Check the client is comfortable – you want them to be as relaxed as possible before you start.

Put on a headband if necessary, excuse yourself and wash your hands.

Explain what you are doing as your work so that the client is reassured. Warn the client if you are going to place anything cold or warm on the skin so that they do not jump.

### **Carrying Out A Skin Analysis**

You must always analyse the skin for the following reasons:

- To check for contra indications
- To ensure the client is treated with suitable products
- To identify specific areas for treatment
- To check the progress of regular clients
- To build a rapport and gain the clients confidence

Look at the skin both before and after cleansing, once you are happy that there are no contra indications, continue by cleansing the skin. The cleanser should be water-soluble so that the product does not form a barrier to any oils you may use.

Look at the skin in a good light and preferably under a magnifying lamp. Look at the skin on both the face and neck and consider each of the following points to help you decide the skin type and treatment plan.

### **Colour**

- Evenness of overall colour, pale, dark, olive
- All skin has varying tones of skin tone, so it is ruddy, sallow or clear
- Pigmentation – is there a tan, or just in patches i.e., freckles, lentigines etc

**pH balance** - pH refers to the balance of acid and alkali in your skin. That is, how acidic the skin is.



Naturally, the skin is slightly acidic: at around pH 5.5. Unfortunately, many foods and skin treatments have the effect of changing our skin pH slightly and putting it out of balance. Soaps in particular are alkaline, and therefore this can increase skin pH above its natural levels. The best foods to eat to keep skin pH at the right level are those that contain so called alpha-hydroxy acids. Foods in this category include foods like apples, blackberries, any citrus food at all, and also tomatoes are a good source.

- Are there sufficient natural oils?
- What is the moisture content?
- Is there excessive perspiration?
- Without looking, how does the skin texture feel ?
- How warm is the skin, does it feel cool or clammy?
- Does the skin have good elasticity, muscle tone?
- Is there excess adipose tissue?
- Look at the bone structure.
- Are there any skin imperfections?
- Are there any skin abnormalities?

*Other factors to include are:*

- The client's occupation- will that have an effect on the skin?
- Does their lifestyle affect their skin?
- History of the skin-origin
- Home care or lack of it! Is the client using the correct products for their skin type?
- Medication, some medication such as steroids can have an effect on the skin.

## **Procedure for Professional Facial Cleansing**

Cleansing routine

Cleanse each eye separately with small circular movements and remove make-up with damp cotton wool

Cleanse lip area with a figure of eight movement supporting the corner of the mouth, remove with damp cotton wool

Apply cleanser to the neck and face area

Starting at the neck, use upward strokes on the neck-

6 to the right 6 to the left

Alternate stroking along the jaw line x 6

Alternate stroking over the chin using the thumbs x 6

Stroking under the nose and over the upper lip x 6

Circular movements from the corner of the mouth over the entire cheek area x 3

Circular movements at the crease of the nose

Stroking up and down the length of the nose

Eye circles x 6

Stroking of the forehead

Cross friction over the forehead

Large circular movements over the entire cheek area x 3

Finish with pressure at the temples

Remove cleanser with damp cotton wool and repeat the routine.

## **Procedure for Toning**

Place some toner onto damp 4x4 Gauze and follow the same sequence as for cleansing. Not all cleansers require the use of toner; however, it does give the skin a fresh feeling after cleansing.

Blot the skin dry using a tissue.

## LESSON 9 PRE-PROCEDURE CHECKLIST

Review the Client's medical and cosmetic history

Perform an aesthetic consultation

Determine the Client's Fitzpatrick skin type and Glogau score

Examine the treatment areas and assess for the presence of wrinkles, acne, scars, benign vascular or pigmented lesions, oiliness/dryness, and other skin conditions.

Obtain informed consent

Pre-treatment photographs are recommended

A broad-spectrum sunscreen of SPF 30 or greater containing zinc oxide or titanium dioxide is used daily prior to and for the duration of treatments.

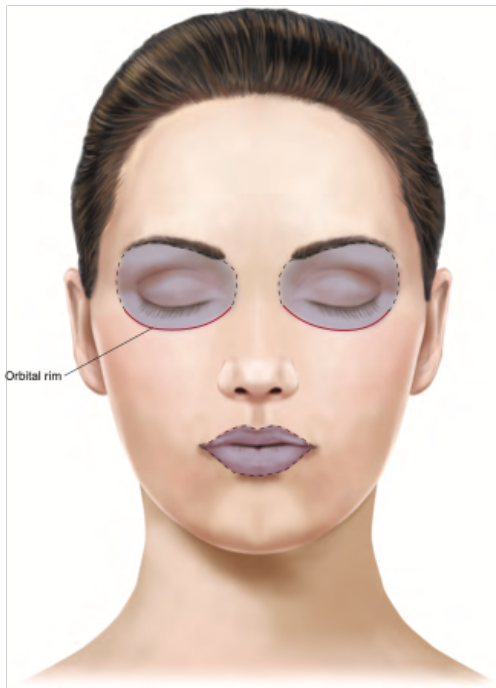
Two weeks prior to the procedure, Clients are advised to discontinue tanning and direct sun exposure, and avoid for the duration of treatments.

One to two weeks prior to treatment, Clients are advised to discontinue products containing high strength alpha hydroxy acids (such as glycolic and lactic acids) and prescription retinoids (such as Retin-A, Renova, and Differin).

Two days prior to the procedure, a prophylactic antiviral medication (e.g., acyclovir 400 mg or valacyclovir 500 mg, 1 tablet 2 times per day) is begun for Clients with a history of herpes simplex or varicella in or around the treatment area, and continued for 3 days post procedure.

On the day of the procedure, Clients are advised to wash the treatment area, and remove facial jewellery and contact lenses.

## LESSON 10 THE MICRODERMABRASION PROCEDURE



The area within which MDA treatments can be safely performed on the face is referred to as the microdermabrasion Safety Zone (Fig. 3). All regions of the face may be treated apart from the area within the bony orbital rim and, for most devices, the lips. MDA devices that have non-abrasive smooth treatment heads may be used on the lips (Fig. 2). MDA may be performed on the face, neck, chest, hands, back, and almost any area of the body requiring exfoliation.

Treatment intensity ranges from mild to aggressive and is selected based on the presenting skin condition and treatment area, as outlined below:

Figure 3 Microdermabrasion Safety Zone.

Treatment Intensity	MDA Settings	Skin Conditions Treated
Mild	2 passes, mild abrasive element, low vacuum	Papular acne, erythema, darker Fitzpatrick skin types (IV–VI), thin skin
Moderate	2–4 passes, moderate abrasive element, moderate vacuum	Hyperpigmentation, rough skin, fine lines, coarse pores, comedonal acne, keratosis pilaris, combination treatments when MDA is followed by a chemical peel or for photodynamic therapy
Aggressive	4 or more passes, coarse abrasive element, high vacuum	Superficial acne scars (face) and non-facial hyperkeratotic areas such as elbows, knees, and pedal calluses

## PERFORMING THE MICRODERMABRASION PROCEDURE

The following recommendations are guidelines for MDA treatments on the face using a particle-free, diamond-tipped device, which simultaneously applies topical solutions. Recommended treatment parameters vary according to the device used, and manufacturer guidelines for any device used should be followed at the time of treatment.



1. Position client semi-reclining
2. Use a headband to pull hair away from the client's face.
3. Cover the Client's eyes with protective eyewear such as adhesive eye pads or moist gauze.
4. CLEANSE client's skin thoroughly – must use a gel/foaming cleanser. Wait for the skin to dry completely before starting the procedure.
5. Select the treatment head size based on the treatment area.
  - Usually, the 6 mm head is typically used for face, neck, chest, and hands, and the larger 9 mm head is used for other body areas.

6. Select the treatment head coarseness based on the desired treatment intensity. Suggestions for treatment parameters using MDA are shown below.

Treatment Intensity	Treatment Head Coarseness	Vacuum Pressure (psi)
Mild	140 grit	3.0–3.5
Moderate	120 grit	3.5–4.0
Aggressive	60–100 grit	4.0–5.0

7. Set the vacuum pressure by inverting the hand piece and occluding the tip with a gloved finger. The strength of the vacuum affects the depth of resurfacing, and small adjustments in this parameter can fine-tune the intensity of a treatment.

Conservative vacuum settings are recommended for initial treatments. Consider decreasing vacuum settings when treating thin-skinned areas such as the periorbital area.

8. Select a topical product appropriate for the presenting condition and then select a flow rate of infusion per the manufacturer's guidelines.

- **Hyperpigmentation** may be treated with lightening agents such as hydroquinone, kojic acid, arbutin, or brightening peptides (e.g., decapeptide-12).
- **Dehydration and fine lines** may be treated with hyaluronic acid, allantoin, and glycerin.
- **Photodamage** may be treated with vitamin C.
- **Acne** may be treated with erythromycin and salicylic acid.



9. Cover the entire face with contiguous sweeps of the hand piece as shown in Figure 4. Begin at the forehead, then proceed down the nose, cheeks, and lastly around the mouth and chin.

10. Move the handpiece across the skin as follows: stretch the skin between two fingers, and holding the handpiece perpendicular to the skin (as if it were a pen), bring the tip gently in contact with the skin. Slowly and smoothly move the handpiece across the face using even pressure, parallel to the tension lines between the fingers (Fig. 6). The tip must move across the skin for exfoliation to occur with devices that utilize abrasive pads.

11. Communicate with the client regarding any discomfort they may be feeling using a pain scale of 1 to 10. Clients typically report minimal to no discomfort. Discomfort up to 4 out of 10 is acceptable.

12. Observe the skin throughout treatment for desirable and undesirable clinical endpoints.

**Desirable** clinical endpoints for microdermabrasion include

- Mild erythema

**Undesirable** clinical endpoints for microdermabrasion include:

- **Petechiae or purpura** (visible as small red dots or bruising, respectively)
- **Excessive Client discomfort** with pain greater than 5 out of 10, or overly irritating sensations

13. Undesired endpoints indicate overly aggressive treatment. If undesired endpoints occur, reduce treatment intensity by decreasing vacuum pressure and/or grit coarseness and avoid the affected area for the remainder of treatment.

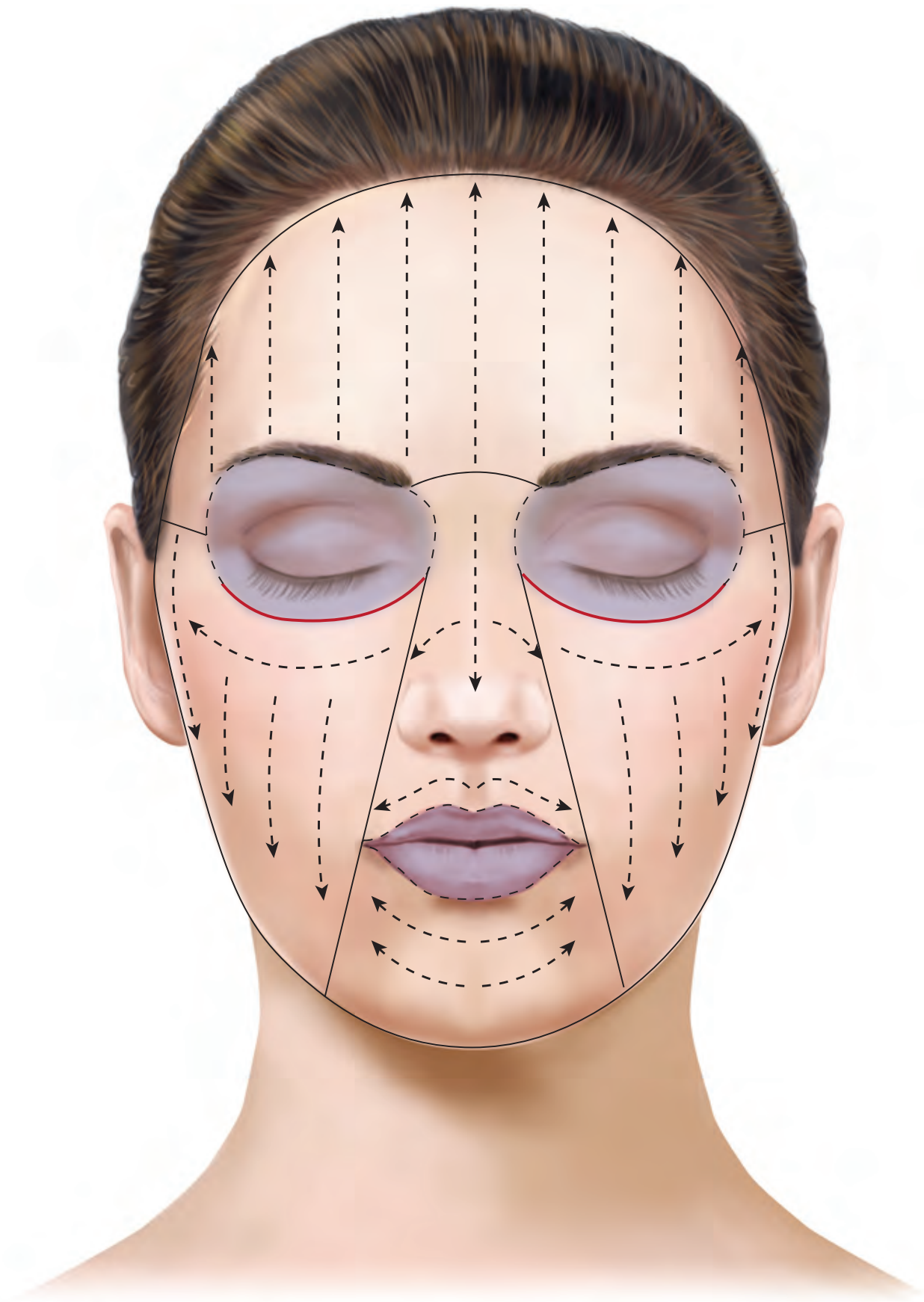
14. After completing treatment of the entire area, perform a second pass to the same treatment area (if undesired endpoints have not occurred) by moving the handpiece perpendicular to the previous handpiece direction (Fig. 7).



15. On completion of treatment, wipe away any residue of crystals that remain on the skin using damp cotton pads (cold water)

15. After the treatment, apply a soothing non occlusive moisturizer followed by a broad-spectrum sunscreen with SPF 30 or higher containing zinc oxide or titanium dioxide (**Optional:** Tone using gentle toner / Mask)

16. Sanitize (e.g., using a quaternary ammonium solution, commonly referred to as quats) or sterilize (e.g., by autoclave) reusable equipment parts between treatments per the manufacturer guidelines.

# DIRECTIONAL GUIDE FOR MICRODERMABRASION.



 = Non-treatment areas     = Microdermabrasion handpiece direction



## TIPS FOR TREATMENT

The diagram demonstrates the directions you should work in when treating the face.

The dashed lines around the delicate eye area are to suggest quick, light strokes. Each arrow (stroke) is approximately 4cms in length

### Eye Area

- **use a feathering action**
- **always use Level 1 around the eyes**

1. you should try to understand the client's skin and how it reacts before becoming too adventurous. Quite often therapists want to impress the client so much on their first treatment that they apply too much pressure and work too aggressively. This results in the client's skin actually becoming sensitive and if the skin has been dragged with too much pressure applied red stripes can be evident. This is due to the therapist being too ambitious and not understanding the client's skin. It is vital that therapists master the gliding movement of the nozzle across the skin in a gentle and controlled manner.

2. Always keep the pressure light during the first treatment then slowly progress to higher levels and a more aggressive treatment as the course progresses.

This ensures the client's skin becomes used to the treatment and the client will understand what is happening. A client that goes home with red stripes or red, sensitive skin will be a very unhappy client and will probably cancel the course of treatments because the therapist has failed to explain or perform the treatment properly.

*N.B. Always use a light vacuum on Black and Asian skin, no higher than level 2 on skin types V and VI of the Fitzpatrick scale*

3. The secret of a treatment's success lies in the pressure of the strokes used. Light quick strokes should be used for a gentle exfoliation (feathering around the eyes), slower strokes to concentrate on problem areas.

Areas exhibiting minor telangiectasias (broken capillaries) should be treated very gently by performing light quick strokes over the area. Strokes should never be longer than 4cms.

## LESSON 11 AFTERCARE

It is very important to give your client clear instructions about what to expect and what to do at home in order to get the best from their treatments. This will help prolong the effects of the treatment.

It is essential to emphasise the importance of aftercare; clients must be provided with clear written aftercare instructions to prevent adverse reactions and know how to deal with them.

They must also have an appreciation of the importance of regular services and be given the opportunity to purchase skin care products.

It is always good practice to give your clients a leaflet explaining the advice, this way you make sure they know and understand what to expect.

Explain to the client the following points:

- Use the correct products for their skin type
- Cleanse, tone and moisturise very day
- Exfoliate regularly
- Avoid using harsh soaps and products on the skin
- Always use a good sun protector
- Eat a healthy and stable diet to help the nails grow to their best
- If a reaction occurs and does not clear up in 24 hours then please consult your GP
- If their skin is prone to spots and blemishes, a few additional spots may be noticed
- Advise the client about further treatments that may benefit them
- Advise the client to have regular facials to maximize benefits, taking into consideration financial constraints and time

And finally ask the clients for feedback on the treatment; fill in their record card on your findings and ask when they would like to rebook.

## CLIENT AFTERCARE ADVICE

We recommend that clients adhere to the following advice after treatment

**For 12 Hours After Treatment:** No Heavy Make-Up

**For 24 Hours After Treatment:** No Swimming No Facial Waxing

**For 48 Hours After Treatment:**

No Sauna, Sun Beds Or Sun Exposure

No 'Botox', Collagen Injections Or Dermal Fillers

**For 72 Hours After Treatment:**

Do Not Use Anti-Ageing Creams

Do Not Use AHA's, Glycolic Or Retinol.

Do Not Use Exfoliating Products, The Newly Abraded Skin Is Receptive To Any Products Applied, So The Use Of Any Exfoliants After Treatment Can Irritate The Skin.

**At All Times During A Course Of Treatment:** SPF 15 minimum must be applied and exposure to U.V should be avoided. Regular moisturiser applications are vital to replenish moisture and prevent the skin from becoming dry and peeling

**Products Must Be Between Ph 4.5 And 7** Skin care products that contain a high percentage of botanicals and essential oils are UNSUITABLE for use after microdermabrasion treatment as some of the ingredients contained may cause an allergic reaction. Should this occur, there is a real danger of both the therapist and client thinking that it is the treatment they are allergic to, where it is actually the ingredients within the skin care preparations. It is important that products are used that replace or add moisture back to the skin to stop the skin becoming dry or peeling.

### **Botox/dermal fillers**

Allow 14 days before performing microdermabrasion, including any touch up injections, to allow Botox/fillers to settle.

**Men** should close shave the night before a treatment if the treatment is in the morning, or in the morning if the treatment is in the afternoon.

**Laser treatments** A course of laser treatments cannot run concurrently with a course of microdermabrasion treatments. Please allow at least 2 weeks before commencing microdermabrasion after completing a course of Laser.

## LESSON 12 MICRODERMABRASION CONTINUED

### RESULTS

Microdermabrasion results are progressive. While improvement in skin texture and skin brightness may be observed after a single treatment, more marked improvements including reduction of hyperpigmentation, acne, and fine lines typically require a series of six treatments.

### INCREASING INTENSITY OF SUBSEQUENT TREATMENTS

At subsequent visits, treatments may be intensified by increasing the number of passes or the treatment head grit coarseness. It is advisable to change only one of these variables at any one time to safely escalate treatment intensity. The skin is reassessed at each visit prior to treatment, as the condition of skin is dynamic and may vary between treatments, and it may not be possible to increase intensity at each subsequent treatment.

### TREATMENT INTERVALS

Microdermabrasion treatments may be performed every 2–4 weeks during a treatment series. To maintain results after the initial series treatments may be performed every 4–6 weeks.

### LEARNING THE TECHNIQUES

Providers are encouraged to practice on the dorsum of the hand to get a feel for moving the tip across the skin with different vacuum pressures. Treating staff and friends initially can aid providers in developing a systematic approach for treating the face and acquiring proficiency with microdermabrasion.

### NON-FACIAL TREATMENT AREAS

MDA may be performed on the neck, anterior chest (also called décolletage), hands, back, and almost any area of the body requiring exfoliation. The skin on the body is different from that of the face as it has fewer pilosebaceous units, which are the sites of re-epithelialization and sebum production. Non-facial skin has delayed healing relative to the face, shows less dramatic improvements after treatment, and is more prone to complications such as scarring with overly aggressive treatments. Therefore, it is advisable to treat non-facial areas conservatively.

**Neck:** position the Client with the chin lifted and extended. Perform 1–2 passes using handpiece sweeps from the chin toward the clavicle.

**Chest:** perform the first pass with handpiece sweeps from the midline of the chest to the periphery. The second pass sweeps are vertical from the chest to the clavicle.

**Hands:** position the hand into a fist. Perform 1–2 passes with handpiece sweeps parallel to the forearm.

## **COMBINING AESTHETIC TREATMENTS**

Enhanced results, whether treating sun-damaged skin or other skin conditions, can be achieved when MDA is combined with other skin care treatments discussed in this practical guide, including chemical peels and daily skin care products. MDA can also be safely combined with other minimally invasive aesthetic procedures such as lasers and intense pulsed light devices, or with injectable procedures

## **ADVANCED MICRODERMABRASION**

As skill and experience are gained with microdermabrasion, providers may choose to combine MDA with other procedures. For example, MDA may be used prior to the application of chemical peels to allow for more even peel application and to enhance the depth of penetration into the skin. It is advisable to use established manufacturer protocols when combining these two exfoliation procedures, as removal of the stratum corneum barrier by MDA can significantly alter the characteristics of a peel.

MDA may also be used as part of photodynamic therapy (PDT). This is an FDA-approved treatment for non-hyperkeratotic actinic keratoses on the face, and PDT is used off-label to enhance light-based photo rejuvenation treatments. PDT utilizes application of topical photosensitizing medications such as 5-aminolevulanic acid (Levulan) followed by activation with an appropriate light source such as an intense-pulsed light (IPL), light-emitting diode (LED) or laser.

MDA can be performed prior to application of the photosensitizer to enhance product penetration and increase PDT treatment intensity.

## LESSON 13 COMPLICATIONS AND MANAGEMENT

- Pain
- Prolonged erythema
- Postinflammatory hyperpigmentation
- Severe dryness and/or pruritis
- Superficial abrasion
- Infections (e.g., activation of herpes simplex, impetigo, and candidiasis)
- Contact dermatitis
- Urticaria
- Petechiae or purpura
- Remote possibility of scarring or hypopigmentation

Microdermabrasion is a very safe, well-tolerated procedure that has minimal risks of complications. One study of more than 100 Clients receiving MDA over a 2-year period reported no instances of infection, long-term hyperpigmentation, or scarring. However, complications are possible with any procedure, and knowledge of these is important to minimize risks and helps ensure the best possible results.

**Erythema** is anticipated immediately after treatment. The duration of erythema depends on the aggressiveness of the procedure and the reactivity of Clients' skin. Most erythema resolves spontaneously within a day, but occasionally may last up to 5 days. If erythema is significant immediately after treatment, ice may be applied to the skin for 15 minutes every hour followed by a topical steroid cream. In the office, a high-potency topical steroid cream may be used (e.g., triamcinolone 0.5%), and the Client may be sent home with a low-potency steroid (e.g., hydrocortisone 2.5% or 1%) to be used twice daily for 3–5 days or until erythema resolves. Prolonged erythema, particularly in Clients with darker Fitzpatrick skin types (IV–VI), can lead to PIH. Sun avoidance and use of sunscreen is very important to reduce the risk of PIH when erythema is present.

**Hyperpigmentation** can be treated with lightening agents such as hydroquinone or cosmeceutical agents such as kojic acid, arbutin, and liquorice (see Topical Skin Care Products section for additional information on treatment of hyperpigmentation). Resolution of hyperpigmentation is slower in darker Fitzpatrick skin types (IV–VI) and can take up to several months. In rare instances, hyperpigmentation may be permanent.

**Severe dryness and pruritis** can be managed with application of moisturizers. Use of occlusive moisturizers, such as Aquaphor, will reduce dryness, but can be associated with acne and milia. Therefore, thinner less occlusive moisturizer formulations with frequent application are preferable for managing dryness and pruritis.

**Superficial abrasions** can occur with aggressive MDA treatments, particularly in older Clients and in thin-skinned areas. Abrasions typically appear as erythematous, slightly raised fine lines, which are commonly referred to as “striping”. They may also be circular if the tip dwelled too long or excessive downward pressure was applied in one spot (with MDA devices that do not have recessed tips). Abrasions are not usually evident during treatment, but become visible immediately after treatment. After a few days, they may crust slightly and may hyperpigment.

- Abrasions and crusts are managed with moist wound care using a topical antibiotic ointment (e.g., bacitracin) daily and an adhesive dressing as needed until healed.
- Hyperpigmentation can be managed as outlined above.

**Infections** are extremely rare with MDA and require treatment specific to the pathogen. Activation of herpes simplex may occur despite adequate prophylactic antiviral medication use prior to treatment. Herpes simplex can be treated using a higher dose antiviral that is different from the prophylactic medication (e.g., valacyclovir 1 g twice per day for 7 days). Bacterial and fungal infections are extremely rare, but are possible any time the skin barrier is breached.

**Contact dermatitis** may occur after MDA due to the products applied during or after treatment. This typically presents as prolonged erythema with small erythematous papules and can be treated with a low-potency steroid (e.g., hydrocortisone 2.5% or 1%) applied twice daily for 3–5 days.

**Urticaria** is a rare complication, and may be due to application of a vacuum to the skin, referred to as dermatographic or pressure-induced urticaria. Ice may be applied, an oral antihistamine (e.g., cetirizine 10 mg) given to the client, and a referral to their doctor for a topical steroid (e.g., triamcinolone 0.5%) and the Client sent home with a low-potency steroid

**Petechiae** and **purpura** can occur with overly aggressive vacuum settings, particularly in older Clients, thin-skinned areas, and with anticoagulant use. Petechiae, visible as pin-point red dots, typically resolve in 3–5 days and purpura, typically visible as a circular red bruise, can take up to 2 weeks to clear.

**Scarring** is remotely possible and might be seen with the use of aggressive treatment parameters, particularly if infection occurs or crusts are excoriated.

**Hypopigmentation** is also a possibility, and is usually temporary but may be permanent.

## NOTES ON SPECIFIC LESIONS AND CONDITIONS

**Seborrheic keratoses (SKs).** MDA can reduce the hyperkeratosis of SKs but does not usually improve the associated hyperpigmentation.

**Actinic keratoses (AKs).** MDA (without PDT) is not a treatment for AKs as the rough texture of these lesions may be their only presenting sign. AKs have a small potential for conversion to squamous cell carcinoma, therefore, and treatment of AKs with appropriate therapies is recommended.

**Nevi.** Moles cannot be removed with MDA due to the depth of the melanocytes. Attempted removal may depigment moles and possibly result in scarring.

**Erythematous conditions such as rosacea, telangiectasia, and Poikiloderma of Civatte.** Treatment of erythematous conditions with MDA is controversial. Clearly, excessive vacuum pressures can accentuate erythema. However, Clients with rosacea, for example, have impaired barrier function and mild MDA treatments performed with low vacuum settings may strengthen the epidermal barrier, ultimately reducing skin sensitivity and erythema. Some providers, therefore, do perform MDA on Clients with erythematous conditions using reduced vacuum settings in areas of high vascularity such as the midface and chin, and higher settings around the periphery of the face.

**Acne.** MDA may be used for comedonal acne and mild-to-moderate papulopustular acne. However, it is advisable to avoid pustules. Alternative treatments for severe papulopustular acne such as oral medications and/or chemical peels are preferred treatment options.



## LESSON 14 VITAL MACHINE MAINTENANCE

After every treatment – turn off the system and unplug the power cable from the mains supply and the casing

Remove the crystal cartridge and tap the handset onto the palm of your hand to remove any residue crystals in the handset chamber. Each time you change the crystal bottle, shake out any excess crystals that may be in the inner canal of the handset. This ensures the inner chamber of the handset is kept clear at all times

Remove and dispose of the nozzle

Empty disposal jar after **every** treatment, unscrew the disposal jar from the lid and empty the used crystals carefully and dispose of responsibly.

Make sure the disposal jar is replaced securely and firmly and is not cross threaded (if it is not secure the vacuum power will be decreased)

Tidily wrap up all tubing and attachments into the case and make sure everything is clean ready for the next use

### IMPORTANT

The plastic disposable filter jar **MUST** be changed at least every 80 treatments. Failure to connect a new jar will cause the vacuum power to drop and can cause crystals to be sucked from the paper filter in the jar directly into the pump inside the unit, which may seriously damage your machine and invalidate any warranty.



*Congratulations!*