

TRAINING MANUAL

EMS / FARADIC FACE AND BODY



Faradic Facial Treatment

The faradic treatment or electrical muscle stimulation (EMS) uses the application of electrical pulses, which are applied to the face to stimulate the muscles to contract, resulting in a tightening and toning effect.

During the treatment the client does not have to participate, they simply relax; therefore, the treatment is classified as passive exercise. For most people this is a dream come true, however you must reinforce to the client that they will need to attend for treatments on a regular basis (usually 2-3 times per week for 4-6 weeks, a maintenance treatment will then be required once a month). In addition, the client should be advised about an appropriate skin care routine and facial exercise programme to complete at home.

How does the treatment work?

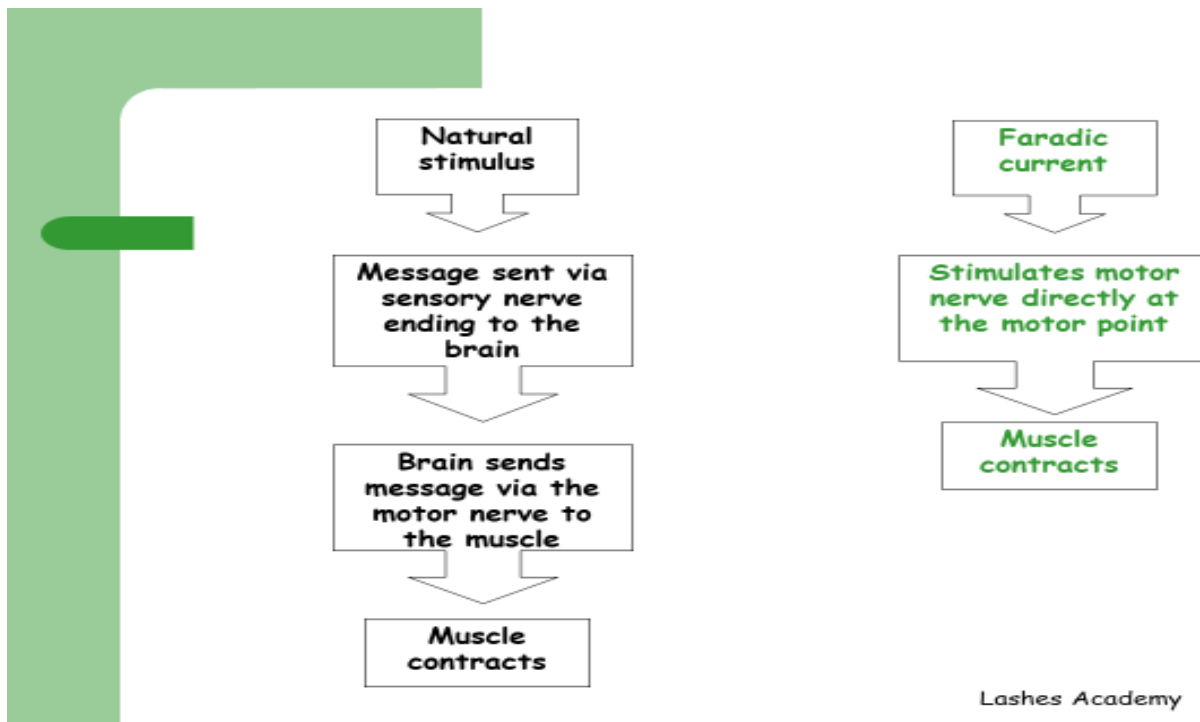
Muscles comprise of bundles of muscle fibres and there are many nerves that supply each muscle fibre.

These nerves create the movement in the muscle.

When the nerves are stimulated they cause the muscle fibres to shorten, therefore the muscle contracts and causes movement to occur. The nerves that create this movement are called motor nerves.

Normally a muscle would contract in response to an impulse from the brain received via a sensory nerve, a message would then be sent to the motor nerve, which would cause the muscle to contract.

Stimulation by a faradic current activates the motor nerve directly to produce a contraction; basically, it takes a short cut.



Lashes Academy

Sensations experienced

When the current is initially applied, the client will firstly feel a tingling sensation as the sensory nerves are stimulated. As the current intensity is increased the motor nerves will be stimulated, the client will now feel the muscles contracting.

The faradic machine

A faradic unit produces an interrupted direct current, which is used to stimulate muscle contraction. The unit produces a low frequency, direct current of between 10 and 120 Hz. The facial machine is much less complicated than a body machine and has only a few controls.

It will have an:

On/Off switch, which controls the current flow, usually a light will indicate if the current is flowing.

Intensity control, which allows you to treat each client and muscle to the required level.

Outlet for the facial electrode wire to be connected.

Some machines may also have a surge control.

Facial electrodes

The treatment is applied via facial electrodes that are made from electrically conductive carbon impregnated plastic. The treatment can be applied via three different types of electrodes:

A hand-held facial electrode, which is contained within a plastic holder and houses both the active and inactive electrode. This is individually placed over a group of muscles or over a specific nerve. The therapist will apply to stimulate the muscles 6-8 times working around the face 2-3 times.

A facial mask may be used to stimulate all the facial muscles simultaneously. This does have an advantage of being speedier; however, some clients may find with this method that they feel claustrophobic.

Disc electrodes may be adhered to the skin to stimulate the motor points of the muscles simultaneously. This is a more up to date, speedier method.

The uses of the faradic treatment

To firm the muscles by increasing muscle tone, this will re-educate sagging contours. A preventative measure, to reduce the onset of dropped facial contours. To prevent the skin wrinkling through loss of contour. Improved skin colour through improved circulation.

Indications for Treatment

Mature skin, Drooping contours, Poor muscle tone, Sluggish circulation, Effects of ageing: muscles, lose tone unless regular facial exercise is taken

Restrictions to a faradic treatment

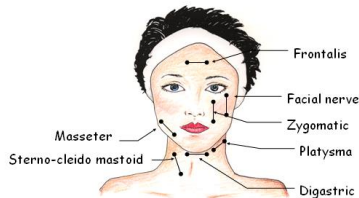
In addition to the general contra-indications, the following will restrict treatment in the area: Migraine, Excessive dental fillings or bridgework, Hypersensitive skin, A very nervous client

Application techniques

You must always refer to manufacturer's instructions before application, as there are different ways of applying a facial faradic treatment. When applying using the hand-held electrode it is preferable to treat the same muscle groups on the opposite side of the face, one after each other. This will ensure that you apply a similar current intensity to similar muscle groups, which

should result in a more precise treatment. Once you have treated all areas, you should then return to the first area and repeat the procedure again, a further two times. When applying the treatment, it is difficult to isolate individual muscles as many of the muscles insert into each other. Therefore, appropriate facial nerves are stimulated to produce a contraction.

Motor point stimulation



Applying and adjusting to suit individual clients needs

The current intensity will need to be varied depending on the:

Client's needs

Client's tolerance

Muscle tone

Area being stimulated

Remember that as you move to a new area you will have to re-evaluate the intensity required. The intensity used will depend on the manufacturer's guidelines; however, you should use the minimum intensity to produce a smooth and comfortable contraction.

Can you think of reasons for a poor muscle contraction?

If there is a grease or make-up film on the client's skin

The selected intensity is too low

Insufficient saline solution on the electrodes

Electrode pads are dirty

Incorrect positioning of the electrodes i.e. not over the motor points

Loose leads in the terminals

Poor contact between the electrode pads and the skin

Effects of the faradic treatment

Increased circulation brings fresh oxygen and nutrients to the muscles and removes waste products, thus improving the appearance and functioning of the muscles.

Muscular contraction improves the tone of the muscle.

Sensory nerve endings are initially stimulated producing a tingling sensation at the beginning of the treatment.



Motor nerves are stimulated resulting in muscle contraction.

Blood supply increases therefore bringing fresh oxygen and nutrients to the area.

Waste products are more efficiently removed from the area.

Vasodilation of the blood vessels improves the colour of the skin under the pads.

Muscle contractions improve the lymphatic circulation in the area, which assists with the removal of waste products.

Precautions

Always perform skin sensitivity tests.

Remember that not all muscles are of equal strength, you cannot expect a smaller muscle group to be able to receive the same current intensity as a larger group of muscles.

Always ensure that all intensity dials are at zero before applying.

Test the machine on yourself prior to application.

Only turn up the intensity during the surge period

Do not move the electrode when the current is surging.

Do not over treat the muscles.

Always check the condition of the wires and electrode pads before commencing.

Ensure the electrode pads are moistened with sufficient saline solution or water.

Therapist must ensure that they have a clear view of the treatment.

Muscle fatigue

Muscle fatigue can be recognised as a muscle that fails to relax completely, causing the muscle to go into spasm, which generally results in some discomfort in the area. This is due to over exercising of the muscles using a faradic type unit. The blood flow is restricted to the muscle fibres as the blood can only flow through the capillaries when the muscle is relaxing.

The causes of muscle fatigue are lack of oxygen and nutrients to the muscle and the accumulation of waste products, mainly lactic acid. If you continued to treat the client with a faradic unit it would cause severe muscle fatigue and the muscle may fail to work as it would become exhausted. It would also be very uncomfortable for the client. Stop treatment immediately and massage the muscle to remove the waste products and lactic acid.

Use & Limitations of Products

Two options:

Saline solution/gel

Tap water (not distilled as impurities conduct current)

The purpose:

Allows current to pass from pad to skin

Limitation:

Water may dry out in a warm room

EMS Body

1 x machine

10 x coloured wires

20 x carbon pads

1 x mains wire



Body Faradic

The tissues of the body are made up of a large percentage of water, which contains salt (sodium chloride), which enables the body to conduct an electrical current. When salt is dissolved in water, the molecules split into ions, these are known as electrically charged. Tissues and the fluid in the tissues become an ionised solution. A solution which can conduct electricity, is termed as an electrolyte.

The amount of tissue fluid in a specific part of the body will determine how well the body conducts electricity. As the epidermis is very low in tissue moisture content, it will form an initial resistance to an electrical current – to overcome this a saline solution (salt and water) or other special products are applied to the skin.

The faradic treatment or electrical muscle stimulation (EMS) uses the application of electrical pulses, which are applied to stimulate the muscles to contract. This results in a tightening and toning effect. The result of the treatment will be that the client will lose inches rather than weight.

The treatment is usually applied for 30-40 minutes, however always refer to specific manufacturer's instructions. The client will usually attend 2-3 times per week for 4-6 weeks. Suggest that a maintenance treatment will then be required once every 2 weeks.

Firmer muscles without exercise?

During the treatment the client does not have to participate, they simply relax; therefore, the treatment is classified as passive exercise. This treatment is a form of isometric exercise as there is no movement produced at the joints. For most people this is a dream come true, however you must reinforce to the client that they will need to attend the salon for treatments on a regular



basis. In addition, the client should be advised to follow an appropriate body care routine, healthy eating plan and exercise programme

SAFETY

Place machine on a stable base/No water near machine

Remove jewellery from client and yourself

Check plugs and leads are not frayed, dirty or knotted

Check body pads are not damaged or dirty

Check connections are not loose

Check all dials are at zero to start

Do skin sensitivity tests before

Always turn up during contraction / down during rest (off in between)

Pads should be damp

Pads should be flat to the skin

Pads should be clean / not worn out

Silicon side should be in contact with skin

Pads should not be touching other pads

Do not put your fingers under the pads whilst in use

Pads should not be placed over clothing

Warning!!!

All faradic machines vary; some may not have all these controls & others have extra

Read the instructions carefully before use

Do not be surprised if the instructions tell you to use the machine in a different way

The machine will have been tested to find the best way of using it effectively

Follow the instructions even if they differ from the way you have been taught

You could injure a client if you don't

How does the treatment work?

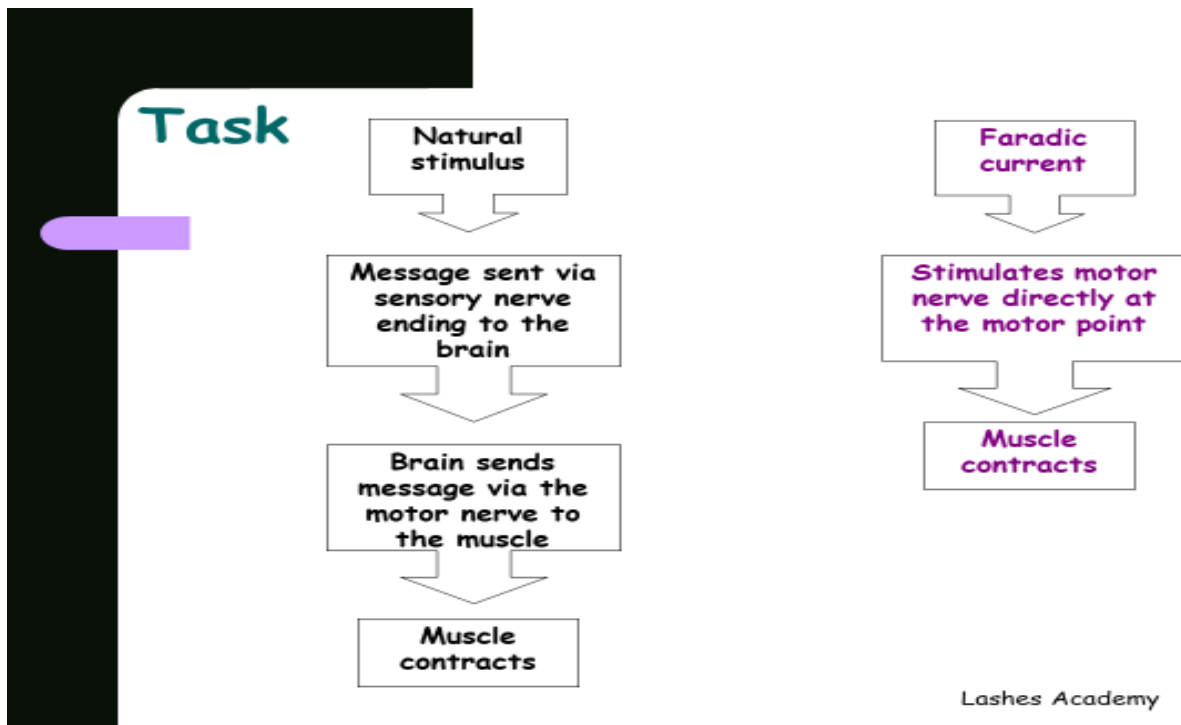
Muscles comprise of bundles of muscle fibres and there are many nerves that supply each muscle fibre.

These nerves create the movement in the muscle.

When the nerves are stimulated they cause the muscle fibres to shorten, therefore the muscle contracts and causes movement to occur. The nerves that create this movement are called motor nerves.

Normally a muscle would contract in response to an impulse from the brain received via a sensory nerve, a message would then be sent to the motor nerve, which would cause the muscle to contract.

Stimulation by a faradic current activates the motor nerve directly to produce a contraction; basically, it takes a short cut.



The faradic machine

The faradic unit uses an interrupted direct current to stimulate muscles to contract. These units produce a low frequency, direct current of between 10 and 120 Hz. The machine has many different controls and functions which will be discussed further over the next slides.

On/off switch

Controls the current flow, usually a light will indicate if the current is flowing.

Frequency control

This controls the number of pulses per second. Frequency determines the strength of contraction at the motor point, and to produce a smooth contraction it should be set between 40-60 Hz. If the muscle is showing a tremor then you should increase the frequency, although there is nothing to be gained by working with a frequency over 80 Hz as the muscle would already be working at maximum force.

Surge control



Controls the length of time that the current is flowing i.e. the length of time the muscle contracts. When the current flows the muscle contracts, once the current stops flowing the muscle relaxes. The length of the current surge should be long enough to produce a good muscle contraction. This is normally set between ½ to 2 ½ seconds.

Relaxation control

Controls the rest time in-between the contractions. The rest period should be equal to, or longer than the stimulation period. This allows the muscles to relax fully and prevents muscle fatigue from occurring. However, the rest period should not be too long as this would waste time.

Phase control

Mode control - **Mono or Bi**

Mono – the current flows in one direction between negative and positive.

Bi – the current flows in one direction and then the other (**recommended for facial faradic**) A pull sensation is experienced after each contraction.

Mode control

This controls the rhythms of the contractions:

Constant - the rhythm remains even, with the surge and interval remaining the same throughout the treatment.

Variable - the rhythm of the surge and interval is varied throughout the treatment. This is advantageous as it prevents the client anticipating the contraction and resisting it.

Pulse width

This alters the width of each pulse, by increasing the pulse width a similar effect is produced as if you were to increase the intensity control. Select 150-200 at the start of the treatment, and if the client cannot tolerate an increase in intensity, increase the pulse width to between 200-300 to produce a better contraction.

Intensity controls

Adjust the amount of current flowing through each pair of electrodes. As the intensity control is turned up the amount of current flowing to each pad will be increased. The aim is to achieve a visibly smooth contraction that the client is comfortable with. Each set of pads has an intensity control dial.

Master output

This control increases the amount of current to all the outlets being used, it's an easier way to increase the intensity once the client has become used to the treatment.

Electrodes

The current is conducted from the machine to the muscle via the leads and electrodes. The electrodes used on the body are made of rubber impregnated with graphite or carbon, which are good conductors. The rubber is on the upper side and the conducting metal on the lower side, which comes into contact with the body. The electrodes are manufactured in pairs of various sizes and are usually round or square.



The uses of a faradic treatment

To re-educate muscles with poor tone due to disuse over a long period of time.

To firm body contours and maintain an attractive figure.

To restore abdominal muscle tone after pregnancy.

To firm the pectoral muscles, assisting with the correction of sagging breasts.

To assist with inch loss in a specific area.

For figure reshaping, in-conjunction with exercise.

Body Treatment

An initial treatment assesses the client's tolerance to the treatment and should be given for 15-20 minutes. Future treatment time increases to 30-40 minutes. The client should attend the salon 2-3 times per week for a course of 10 treatments. After the course a maintenance treatment can be given once every 1-2 weeks.

Restrictions to a faradic treatment

In addition to the general contra-indications, the following will restrict:

Pregnancy – do not treat

Immediately post pregnancy - doctors note

Muscular injury or spasm

Migraine

IUD in the uterus – avoid the abdomen

Over bony areas

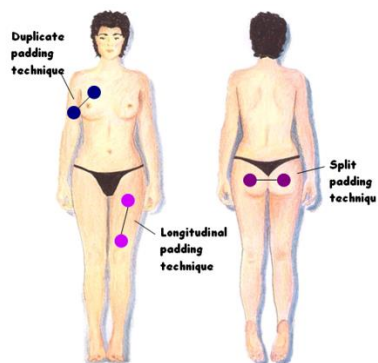
Heart area

Phlebitis

Obese client - too much adipose tissue acts as an insulator and makes the treatment ineffective

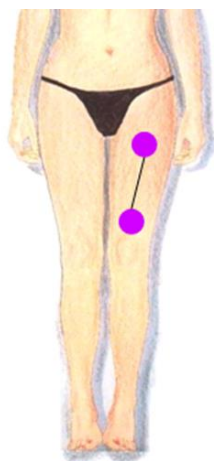
Metal plates/pins

Padding techniques



Longitudinal padding

This technique involves placing one pad near the origin and one pad near the insertion of the muscle whereby the current flows past the motor point to cause a contraction of the muscle. This padding technique is beneficial as it shortens the muscle, however is less economical as more pads are used per muscle. Longitudinal padding is most often used on the: rectus abdominus, rectus femoris, hamstrings, adductors and abductors



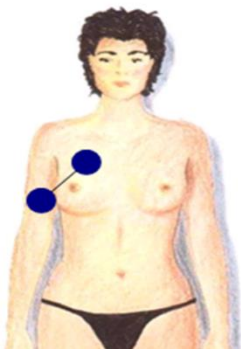
Split padding

In this padding technique the pair of pads are split and placed onto the motor point of the same muscle group, but on the opposite side of the body. This technique is beneficial for treating smaller muscles, where the motor points are difficult to locate. Split padding is often used on the: pectorals, triceps, gluteus medius, gastrocnemius and trapezius.



Duplicate or dual padding

An electrode is placed on the motor point of two different muscles that are adjacent. This allows for differing muscles strengths on either side.



Considerations for padding techniques

The main considerations you need to consider when deciding on the padding technique are:

The areas of the body being treated and the number of pads available, the shape or size of the muscle, Size of the body, Manufacturer's instructions, Weaker muscles, the phase control being used

What are the reasons for poor muscle contraction?

If there is a grease on the client's skin, the selected intensity is too low, Insufficient saline solution on the electrodes, Electrode pads are dirty, Incorrect positioning of the electrodes i.e. not over the motor points, Loose leads in the terminals, Poor contact between the electrode pads and the skin, Too much adipose tissue in the area

Effects of a faradic treatment

- Muscular contraction improves the tone of the muscle.
- Blood supply to the muscles increases therefore improving the functioning of the muscle fibres.
- Speeds up the body's metabolism, improving the muscle condition.
- Sensory nerve endings are initially stimulated producing a tingling sensation at the beginning of the treatment.

- Motor nerves are stimulated resulting in a muscular contraction.
- Increased circulation brings fresh oxygen and nutrients to the muscles and removes waste products.
- Waste products are more efficiently removed from the area.
- Vasodilation of the blood vessels improves the colour of the skin under the pads.
- Muscle contractions improve the lymphatic circulation in the area, which assists with the removal of waste products.

Precautions

In order to perform a safe and effective treatment the therapist must check that the client has normal skin sensation. This is ascertained by performing a sensitivity test on the client's skin in the area being treated. Examples of sensitivity tests are:

- Hot and cold - test tubes filled with hot and cold water
- Hard and soft - orange stick and cotton wool

Can you think of other precautions that you would need to take?

- Remember that not all muscles are of equal strength, you cannot expect a smaller muscle group to be able to take the same intensity as a larger group of muscles.
- Always check that all dials are at zero before applying the current.
- Test the machine on yourself prior to application.
- Turn the intensity up during the surge period only.
- Avoid stimulating opposite muscle groups at the same time i.e. biceps and triceps.
- Remember that not all muscles are of equal strength, you cannot expect a smaller muscle group to be able to take the same intensity as a larger group of muscles.
- Always check that all dials are at zero before applying the current.
- Test the machine on yourself prior to application.
- Turn the intensity up during the surge period only.
- Avoid stimulating opposite muscle groups at the same time i.e. biceps and triceps.

Muscle fatigue

- Recognised as a muscle that fails to relax completely, causing the muscle to go into spasm, which generally results in some discomfort in the area.
- This is due to over exercising of the muscles using a faradic type unit.
- The blood flow is restricted to the muscle fibres as the blood can only flow through the capillaries when the muscle is relaxing.

- The causes of muscle fatigue are lack of oxygen and nutrients to the muscle and the accumulation of waste products, mainly lactic acid.
- If you continued to treat the client with a faradic unit it would cause severe muscle fatigue and the muscle may fail to work as it would become exhausted. It would also be very uncomfortable for the client.
- Stop treatment immediately and massage the muscle to remove the waste products and lactic acid.

Aftercare advice

- The client should avoid exercise for the rest of the day.
- Advise the client when to return for their next treatment – usually 2-3 times per week for 6 weeks.
- Discuss dietary advice.
- Reinforce the importance of regular exercise.
- Contra-action advice.