

Body Electrical Treatments

NVQ Level 3
Beauty Therapy
Lecturer Copy



Body Electrical Treatments

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Why have an electro-therapy body treatment?



A beauty therapist needs to have a thorough knowledge of electro-therapy body treatments, body care products, recommended healthy eating plans and lifestyle advice in order for the client to feel confident in the therapist's skills.

A therapist therefore needs to understand the uses and benefits of each electro-therapy body treatment. In addition, each company will design their treatment to have additional benefits, and these are called unique selling features. For this reason, you will often find that the procedures used during electro-therapy body treatments vary greatly.

Each electro-therapy body treatment is carried out for different benefits however, the general reasons for a client wanting an electro-therapy body treatment are outlined below:

- To improve the appearance of conditions such as cellulite or stretch marks.
- To help improve muscle tone.
- To aid with achiness to the contours.
- To assist with any sluggish lymphatic or circulatory problems.
- To keep the skin soft, by removing dead skin cells.
- For relaxation and pampering.
- To encourage the client to follow a suitable body care, diet and lifestyle programme at home.

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Electro Muscle Stimulation Treatment

Introduction to the treatment

The electrical muscle stimulation (EMS) treatment uses the application of electrical pulses, which are applied to stimulate the muscles to contract, resulting 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.



Treatment intervals

The client will usually attend 2-3 times per week for 4-6 weeks. Suggest that in a tightening and maintenance treatment will then be required once every 2 weeks.

Items required:

- Record card
- Handic machine
- Body electrode pads
- Leads
- Elasticated straps
- Skin sanitiser
- Aftersun lotion
- Talc
- Cotton wool
- Skin sensitivity testing kit
- Linen bin
- Towels

Firmer muscles without exercise?

During application of 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 treat-

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

59 Micro-current

70 Vacuum suction

Vacuum Suction

This relaxing mechanical treatment uses external suction to lift the body tissues via moving or static cups. The treatment is similar to a massage; however, suction is applied instead of pressure.

The main use of this treatment is to stimulate the lymphatic and circulatory systems, thus aiding the flow of waste products and tissue fluids from the area to the nearest lymph nodes. The treatment can be applied to any part of the body where there is sufficient adipose tissue. It is often used in conjunction with other treatments and is most beneficial if used as a course of treatments. A full body application takes 45-60 minutes, application to a partial area of the body takes 15 minutes.

The vacuum suction machine



The vacuum suction unit consists of a vacuum suction pump that is powered by an electric motor, a selection of plastic tubing that is used to connect the cups to the machine.

The regulating switch controls the amount of pressure exerted on the tissues and the vacuum suction gauge displays this information. The suction effect occurs due to a reduced atmospheric pressure inside the cups. As the air is sucked out, the skin and subcutaneous tissue is sucked upwards. In addition, the machine will also have an on/off switch.

Uses of the vacuum suction treatment

- To improve and reduce areas of cellulite.
- To improve poor blood circulation.
- To improve poor lymphatic circulation and drain away waste products.
- To reduce areas of fluid retention on oedema (non-systemic).
- To assist with the removal of fatty deposits on the thighs, abdomen, tops of arms, buttocks or dowagers hump - alongside diet & exercise.
- Improvement in the appearance and condition of the skin.

80 Micro-dermabrasion

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Micro-dermabrasion

Micro-dermabrasion Machine

This mechanical treatment uses a compressor device that draws air into the applicator when its not in contact with the skin. When the applicator comes into contact with the skin a vacuum is created resulting in the micro-crystals being sucked through at high speed and propelled out onto the skin. The amount of force that is used when the micro-crystals hit the skin can be altered on the machine by adjusting the compressor suction setting.



Some image of skin care micro-dermabrasion unit

Micro-dermabrasion is a mechanical skin peeling treatment that uses an applicator probe to break down the skin cells of the stratum corneum and any other debris sitting on the skin's surface.



Some image of application of micro-dermabrasion

The first type of micro-dermabrasion systems use aluminium oxide micro-crystals which are applied to the skin at a controlled pressure through an applicator probe. The micro-crystals along with the dead skin cells are then sucked back up via a vacuum effect.

A different type of machine has recently been introduced onto the market which uses a diamond tipped applicator head. The diamond tip removes the stratum corneum, the top layer of skin. The dead skin and debris are vacuumed and filtered into the system and

recycled. The advantage of this system is that there is no crystal application of scars. More even skin color and reduction of freckles and sun spots. Gradual recovery of aging signs and improved texture. Improved appearance of fine lines and wrinkles. Reduction in the appearance of scars.

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How Age Limits The Effectiveness Of The Treatment



The age of a person may limit the effectiveness of the treatment to a certain degree. As a person ages their bodily functions and metabolism start to slow down and this means that the following will start to occur.

- A slowdown in sebaceous and sweat gland activity causes the skin to become drier.
- As cell replacement slows down the epidermis grows slower and appears thinner. As the skin is more transparent, broken capillaries are more prone and appear more visible.
- The circulatory system is not as efficient in removing waste products and bringing fresh oxygen and nutrients.
- The lymphatic system is not as efficient in draining away waste products and fluid from the tissues.
- The muscle tone starts to slacken.
- Adipose tissue may become irregularly distributed.
- Elasticity decreases in the skin.
- Metabolism slows down so that a person will (normally) gain weight.
- As the metabolism slows down a person will have less energy and will not be as motivated to take part in activities, which would normally provide exercise.
- Joints become less manoeuvrable and therefore limit what a person can do.

For all these reasons, you may find that the same treatment is not quite as effective on a mature client as it is on a younger client, however this is only a general rule. Remember that all conditions can be improved but never reversed, by an body electrical treatment. Always reinforce the prevention is better than cure!

103 Evaluating the effectiveness of the treatment

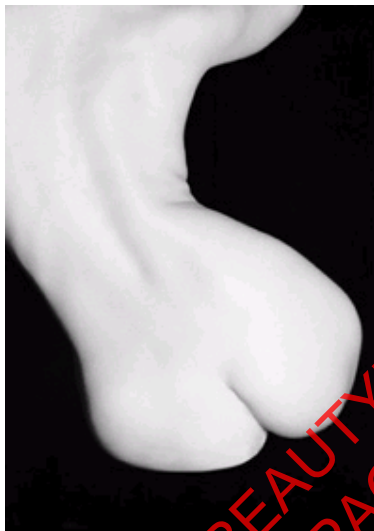
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Why have a body electrical treatment?



A beauty therapist needs to have a thorough knowledge of body electrical treatments, body care products, recommended healthy eating plans and lifestyle advice in order for the client to feel confident in the therapist's skills.

A therapist therefore needs to understand the uses and benefits of each body electrical treatment. In addition, each company will design their treatment to have additional benefits, and these are called unique selling features. For this reason, you will often find that the procedures used vary greatly.

Each body electrical treatment is carried out for different benefits however the general reasons for a client wanting a body electrical treatment are outlined below:

- To improve the appearance of conditions such as cellulite or stretch marks.
- To help improve muscle tone.
- To aid with inch loss to the contours.
- To assist with any sluggish lymphatic or circulatory problems.
- To improve uneven skin texture.
- To keep the skin soft, by removing dead skin cells.
- For relaxation and pampering.
- To encourage the client to follow a suitable body care, diet and lifestyle programme at home.

Electrical Science

Electrical equipment is either powered by the mains supply via a socket or from a battery. Mains electricity is an alternating current at 240 volts, whereas a battery produces electricity from chemical reactions and is a direct current.

Electrical terminology

Volts	• The measurement to explain a unit of electrical pressure - mains is 240 volts
Amps	• The unit of electrical strength
Watts	• The power or energy used by electrical equipment
Ohm	• A unit of electrical resistance
Circuit	• The movement of an electrical current from its source through the conductor and back to the original source
Conductor	• A substance that allows electricity to pass through it for example metals and electrolyte solutions
Insulator	• A substance that resists the flow of electricity for example rubber, plastic and wood

Fuses

A fuse is a safety device that is designed to blow if an excessive amount of current flows through a circuit, therefore protecting the electrical equipment. A fuse is fitted into the plug to protect the cable from overheating. A fuse may also be fitted inside the electrical equipment itself to provide extra protection. When attaching a plug to a piece of electrical equipment a calculation is made to decide on the correct size of fuse required:

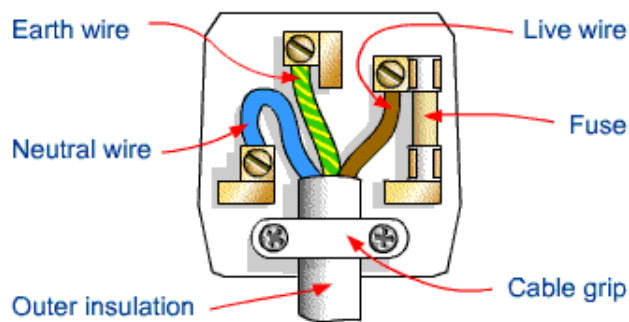
$$\text{watts} = \text{amps} \times \text{volts}$$

Fuses in plugs have different current ratings and should be selected accordingly:

1. 3 amp fuse for appliances up to 700 watts
2. 5 amp fuse for appliances between 700-1000 watts
3. 13 amp fuse for appliances between 1000-3000 watts

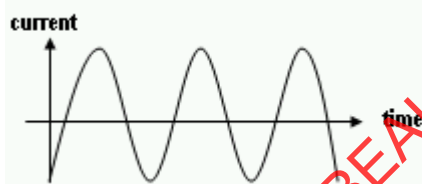
If the fuse blows, it should be replaced with another of the same value.

Wiring a plug



When wiring a plug it is important that you never use frayed wire, wires with split insulation or excessive lengths of wire. Always use wire strippers to cut insulation and remember to select the correct value fuse.

Alternating current



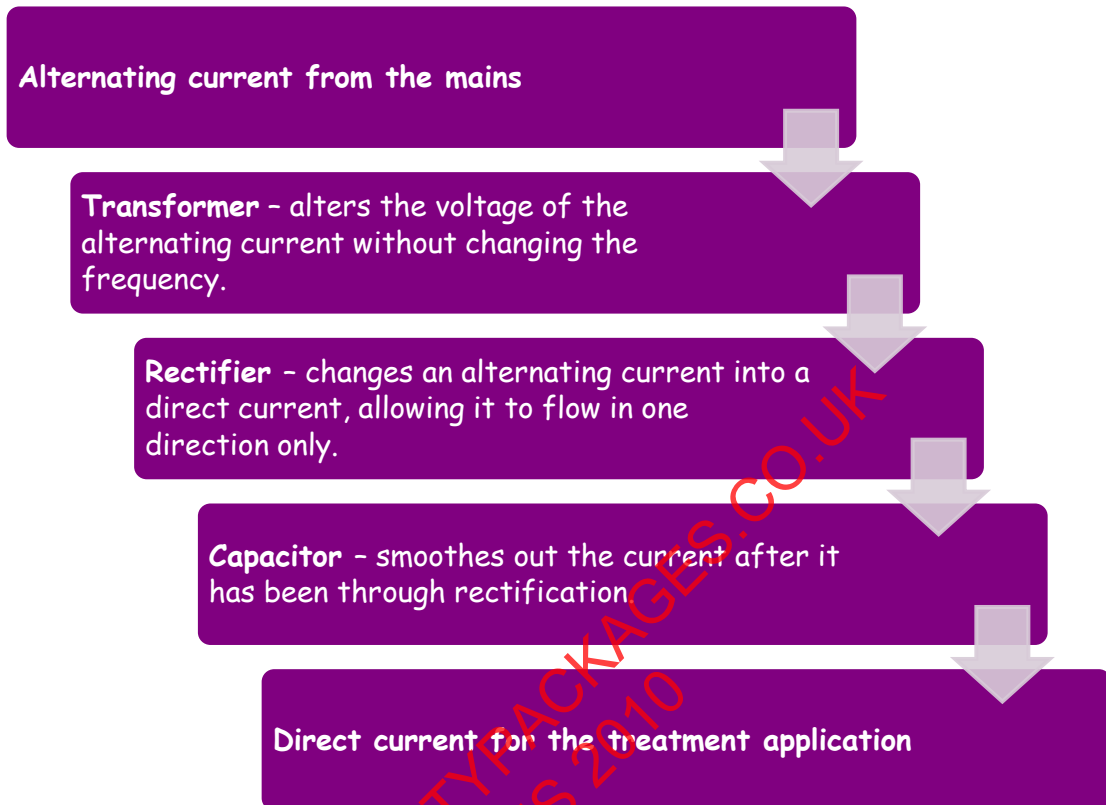
An alternating current has a flow that constantly changes direction - many times per second. This is the current that is produced by the mains electricity. The number of cycles this current completes each second is measured in hertz (Hz). The width, depth and frequency of the current can be varied to achieve different effects. If the current alternates a few times each second it is said to be low frequency, whereas if the current alternates more than 100,000 times it is said to be high frequency. The frequency of the UK mains is 50 Hz. A high frequency treatment uses an alternating current.

Direct current

A direct current flows in one direction only - from positive to negative, and is produced by a battery or by smoothing out the alternating current from the mains supply. Two electrodes are necessary - the anode (+) and the cathode (-), one electrode acts as the active electrode and will be placed on the skin with the other acting as the indifferent electrode and this completes the circuit - allowing the current to flow. Galvanic, EMS and micro-current treatments all use this current, although the latter treatments modify the current before use.

Changing the electrical current

There are certain devices contained within electrical equipment that change the electrical current:



Task

Answer the following questions to demonstrate your knowledge of electrical science.

1. How can electrical equipment be powered?

Electrical equipment is either powered by the mains supply via a socket or from a battery.

2. What safety device is designed to blow if an excessive amount of current flows through a circuit?

A fuse

3. Complete the missing words:

- a) **Volts** - the measurement used to explain a unit of electrical pressure
- b) **Amps** - the unit of electrical strength
- c) **Watts** - the power or energy used by electrical equipment
- d) **Ohm** - unit of electrical resistance
- e) **Circuit** - the movement of an electrical current from its source through the conductor and back to the original source
- f) **Conductor** - a substance that allows electricity to pass through it for example metals and electrolyte solutions
- g) **Insulator** - a substance that resists the flow of electricity for example rubber, plastic and wood

resists
strength

unit
energy

substance
power

conductor
resistance

4. What is an alternating current?

An alternating current has a flow that constantly changes direction many times per second. This is the current that is produced by the mains electricity.

5. What current does a high frequency treatment use?

A high frequency treatment uses an alternating current.

6. Explain a direct current.

A direct current flows in one direction only - from positive to negative, and is produced by a battery or by smoothing out the alternating current from the mains supply. Two electrodes are necessary - the anode (+) and the cathode (-), one electrode acts as the active electrode and will be placed on the skin with the other acting as the indifferent electrode and this completes the circuit - allowing the current to flow.

Sterilisation And Hygiene



A therapist must be aware that high standards of hygiene are essential to prevent cross infection and secondary infection occurring.

Cross infection occurs due to certain contagious micro-organisms (germs such as fungus, virus or bacteria) being transferred through direct or indirect contact.

Secondary infection occurs because germs enter a cut or broken skin. For example, if the client has a small graze and you use unhygienic practices, the graze could become infected.

Sterilisation	Sanitisation	Disinfect
<ul style="list-style-type: none"> • Sterilisation is the total destruction of all living micro-organisms and their spores. 	<ul style="list-style-type: none"> • Sanitisation is the destruction of some, but not all micro-organisms. It inhibits their growth. 	<ul style="list-style-type: none"> • Disinfect is to use a chemical that kills micro-organisms but not their spores. They keep the micro-organisms at an acceptable level.

The hygienic methods that we use in a body electrical treatment are:

- Always wash hands before and after each client.
- Place sponges and mask brushes in chemical disinfectant for 20-30 minutes before use.
- Cover any mask brushes with a tissue.
- All towels must be boil-washed after each client.
- All straps should be washed after each client.
- Use spatulas to remove products from any containers.
- If wooden spatulas are used for the removal of products, they should be disposed of after each client.
- Replace lids straight away on all products.
- Dispose of waste correctly. Any waste that has met body fluids should be placed into a yellow bin liner or a yellow 'sharps' container.
- Therapist's hair is secured away from the face if it is long. If hair is shorter it should be presented in a way that does not interfere with the treatment. If the hair is touched at any time during the treatment, the therapist must wash their hands.
- Nails are short, clean and free from enamel.
- Cuts on the therapist's hands are covered with a waterproof plaster.
- Clean and wipe over all surfaces with a detergent or surgical spirit.
- Micro-dermabrasion applicators are disposable.
- Any equipment being used must be clean and hygienic. To ensure this follow these procedures:
 - * Galvanic pads, EMS pads and high frequency electrodes should be cleaned in hot water and detergent and then wiped over with surgical spirit.
 - * Sanitise metal micro-current probes by wiping over with surgical spirit and if detachable, placing in chemical or autoclave sterilisation for 20 minutes.
 - * Clean vacuum suction cups with hot water and detergent and then wipe over with surgical spirit or appropriate disinfectant. Glass cups can be sterilised in the autoclave or chemical fluid.
 - * Gyrotory vibrator heads are cleaned in hot water and detergent. Plastic/rubber applicators are then wiped over with surgical spirit. Washable covers can also be purchased to apply over the sponge applicators.
- Once equipment is clean it should be placed into the UV cabinet for 20 minutes.

Task

Explain how you would clean the following pieces of equipment:

Galvanic/EMS pads and high frequency electrodes

Galvanic/EMS pads and high frequency electrodes should be cleaned in hot water and detergent and then wiped over with surgical spirit.

Micro-current probes

Sanitise metal micro-current probes by wiping over with surgical spirit and if detachable, placing in chemical or autoclave sterilisation for 20 minutes.

Vacuum suction cups

Clean vacuum suction ventouse/cup with hot water and detergent and then wipe over with surgical spirit or appropriate disinfectant. Glass ventouses/cups can be sterilised in the autoclave or chemical fluid.

Gyratory vibrator heads

Gyratory vibrator heads are cleaned in hot water and detergent. Plastic/rubber applicators are then wiped over with surgical spirit. Washable covers can also be purchased to apply over the sponge applicators.

Risk assessment for body electrical treatments

Identify the hazard	Risk
Vacuum Suction	
Electric shock	Low
Bruising the skin	High
Spreading infection	High
Excessive erythema	Moderate
Galvanic Treatment	
Electric shock	Low
Galvanic burn	High
Allergic reaction	High
Excessive erythema	Moderate
Electro Muscle Stimulation	
Electric shock	Low
Minor shock from pad	High
Muscle fatigue	Moderate
Skin irritation	Moderate
Micro-current	
Electric shock	Low
Allergic/sensitive reaction	Moderate
Bruising	Moderate
Micro-dermabrasion	
Electric shock	Low
Skin irritation	High
Bleeding	Moderate
Pigmentation disorders	Moderate
Excessive erythema	High

Working Cost Effectively

Minimise waste

Being effective with your time

Charging an appropriate price for a treatment

For a business to run cost effectively and make a profit, it is important that all wastage is minimal. To work cost effectively in a body electrical treatment:

- Use the minimal amount of product to produce the desired outcome.
- Split tissues, bedroll and cotton wool.
- Use minimal amount of towels.
- Place tops back on products to work hygienically and prevent spillages.
- Always turn off taps and don't run the water excessively.
- Store products in the correct environment - usually dark, cool, dry and upright.
- Turn out lights when not in use.
- Switch electrical equipment off when not in use.
- One of the most important things to be cost effective with is with your treatment time.

Timing and pricing of treatments

A calculation is made for how long each treatment should take to ensure that the price charged is correct and profitable. It is important that you complete the service within the agreed time because:

- It prevents time wastage within the salon.
- Clients can calculate the time required for the treatment.
- Clients are not left waiting or made late for other appointments.
- An effective appointment system is guaranteed.

Task

Research the prices for the different body electrical treatments offered within your salon.

Preparation Of The Work Area

You should **firstly sterilise all tools** and then prepare your work area with the required equipment.

You should prepare your work area by considering the following points:

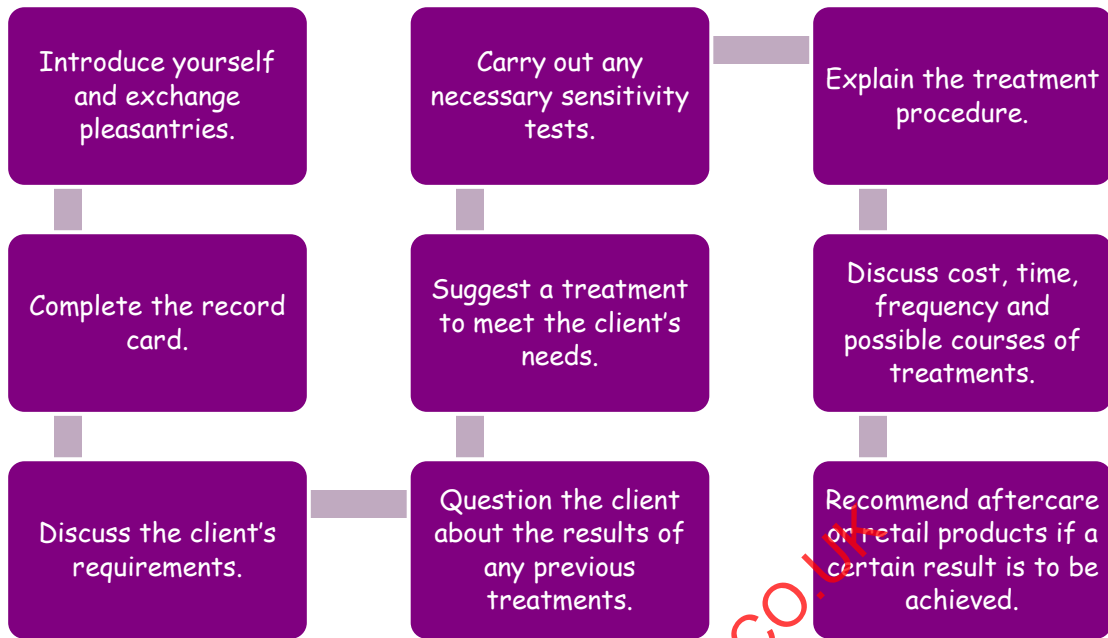
1. Appropriate **ventilation** or **heating** will be required as the client will be undressed throughout the treatment, the room temperature should be slightly warmer than normal. The room temperature should be able to be adjusted throughout the treatment as required. Adequate ventilation should also be provided to prevent cross infection of viruses and diseases, carbon dioxide saturated air, stale smells and odours.
2. Subtle **lighting** is recommended, the lighting should be dim so that it is not bright on the client's eyes; the client needs to be able to relax.
3. **Ambience**, the room should smell pleasant, you may need to use aromatherapy oils or air fresheners. You should also consider the use of appropriate relaxing background music during the treatment (the radio would be inappropriate for a body treatment).
4. **Two chairs** will be required.
5. An adequate supply of freshly laundered **towels** will be needed.
6. **Blankets and pillows/bolsters** may be needed to keep the client warm and comfortable during the treatment. Alternatively, some salons use a heated electrical blanket underneath the bed cover to keep the client warm.
7. A supply of **bedroll, cotton wool** and **tissues** should be available.
8. **Shower and toilet** facilities need to be clean and in working order.
9. An empty, lined **bin** should be available for your use.
10. **Treatment couch** should be protected with clean linen. It should also be in full working order and safe.
11. **Electrical equipment** should be checked to ensure that all plugs, wires and switches are safe, all dials are on zero and that the equipment is working correctly.
12. The **trolley** should be disinfected with appropriate product or surgical spirit.
13. All **products** should be available; containers are clean and contain an adequate quantity of product.
14. **Record card** and pen should be placed on the bottom shelf of the trolley. Check details of the client's previous treatments prior to their arrival.

Consultation And Record Cards

One of the most important parts of the treatment is the consultation. At this point, you will discuss the client's needs and decide what to do to meet those needs. Points that should be included for an effective consultation:

- **Good communication skills** - both verbal (talking) and non-verbal (body language). Good verbal communication would be speaking at the correct pace, varying your tone, not using confusing technical words and ensuring you project your voice clearly. Examples of good body language are good posture, eye contact, smiling and encouraging head nods.
- **Good questioning techniques** - this is vital to gain the information that you require to carry out the treatment. You will need to mainly use open questioning techniques.
- **Good observation skills** - you need to be able to read your client's body language as it will help you to understand how your client is feeling.
- **Allow time for the client to ask questions** - this will ensure the client is fully prepared and will enable them to relax during the treatment.
- **Visual and manual assessment** - you will need to visually assess the suitability of the client for the treatment and decide which electro-therapy treatment to recommend for the client's particular condition and requirements. You may also need to touch the client's skin to check muscle tone etc. prior to recommending a particular treatment.
- **Reference to other records** - you should obtain any previous record cards and check previous treatment and product details to provide a background about the client's treatment history. You may also need to check medical conditions and establish if any contra-indications have previously been given medical consent.
- **Adapting consultation** - when you carry out a consultation you must adapt your advice, treatment plan and manner to take into account the client's age, culture, religious background, gender and any disabilities they may have.

During the consultation, you would:



What may happen if a consultation is carried out ineffectively?

- You would be less likely to meet the client's requirements.
- The client would not relax during the treatment, as they do not feel confident in your service.
- You would not give a professional image to the client.
- You would feel less confident performing the treatment, as you do not have all the required information.
- The client may be dissatisfied with the result.
- If you did not obtain important information such as client signature or check for contra-indications then you could put the client at risk. This could result in the client taking legal action against the salon.
- You would not get repeat business from the client.
- They would not recommend the salon to friends etc.
- All the above would have a negative effect on the salons takings.

Record keeping

A record card should be completed for all treatments and contains confidential personal information about each client that is specific to each treatment. They should be stored in alphabetical order by surname in a locked metal filing cabinet or box. This should be easily accessible to the therapist, when ready to perform a treatment. This information could also be updated onto a computerised system. The record card should contain the following information:

- Personal details
- Doctors name and telephone number

- Any medical details
- List to check for contra-indications
- Treatment aims and outcomes
- Treatment plan on which to base future treatments
- Client's signature (parent or guardian signature if client is a minor)
- Current body products being used
- Current intensity and application time/techniques
- All products used on the client
- Other treatments tried for the condition
- Condition of clients skin/muscle tone
- Postural identifications or noted body language
- Details on lifestyle
- Clients physical appearance
- Retail sales

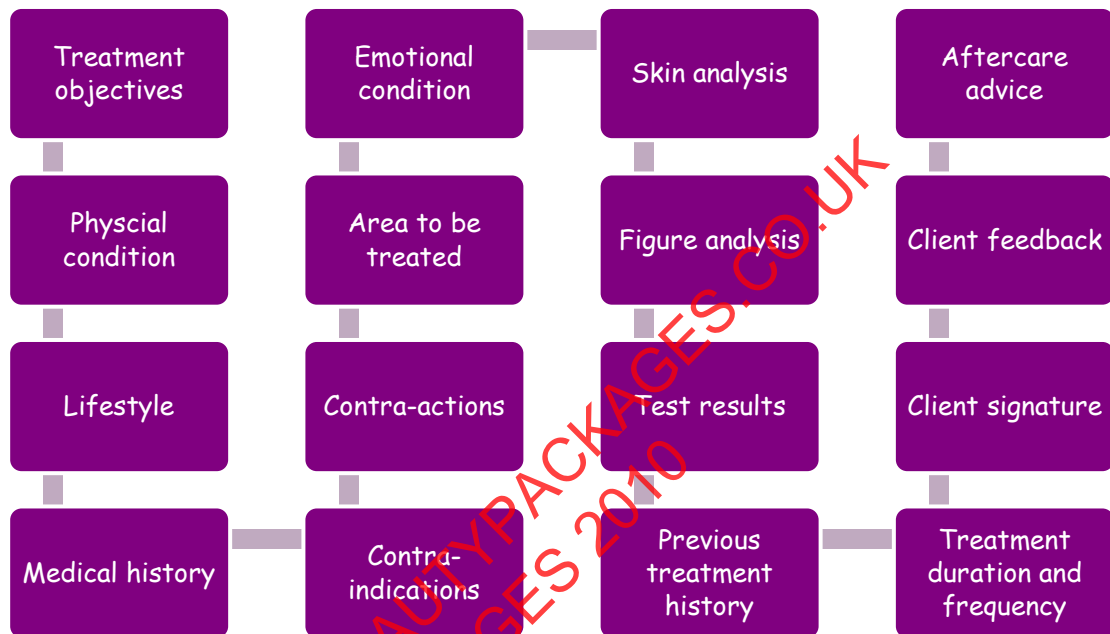
After each treatment, you should update the record card. This would be particularly useful in the following instances:

- You need to contact a client urgently due to a cancellation, double booking etc.
- You need to check up on a particular detail of the treatment.
- If another therapist is to take over the treatment.
- The client wishes to purchase a product that you used in a previous treatment.
- The record card would be an important piece of evidence if a client was to take legal action against a salon or therapist.

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Treatment Planning

When devising an individual treatment plan you will need to take into account different points; however, primarily the main reason for the client's visit. All the details are noted on the record card and agreed to by the client. It is very important that you write down the contents of the treatment plan as important details can easily be forgotten. In addition, another therapist may need to refer to the treatment plan. The following information should be taken into consideration:



- Treatment objectives** - this is what the aim of the treatment is for the client. Your treatment plan should always be in line with the client requirements. For example, it would not be an effective treatment if you gained good skin condition, however the client's initial objective was improved muscle tone.
- Physical condition** - this is probably the main point that needs taking into consideration when devising the treatment plan. The skin type and condition, muscle tone, areas of tension, client's size, age, health and any specific problems are all taken into account. You need to look realistically at the client's physical condition and provide a honest opinion to the client of what is achievable. For example, a client who is five stone overweight should not be offered an EMS treatment as the treatment would be ineffective due to the insulating layer of the adipose tissue. Remember, as therapists we cannot cure all of the

clients problems, however, most conditions can be improved and you must sell this point to the client.

- **Lifestyle** - the client's lifestyle plays a very important part in the treatment plan. It will affect how often the client can/should receive treatment, application of treatment, effectiveness of treatment and the homecare advice given. All the following points need to be discussed with the client and considered:
 - * **Occupation**
 - * **Domestic situation**
 - * **Dietary and fluid intake**
 - * **Means of relaxation**
 - * **Exercise habits**
 - * **Smoking habits**
- **Medical history** - certain conditions may affect how the client needs to be positioned for the treatment, how long the client can lie still for, treatment choice or how the treatment should be performed.
- **Contra-indications** - contra-indications may restrict how the treatment is applied or equipment selection and this would need to be taken into account.
- **Contra-actions** - if a client has developed contra-actions to a previous treatment, you will need to adjust the treatment accordingly to prevent the contra-actions from reoccurring. This may indicate that the treatment needs adjusting such as: selecting an alternative product, method of application, intensity of the machine or treating the condition with a different piece of equipment.
- **Area to be treated** - this should be taken into consideration as the client may wish the therapist to concentrate on a specific area.
- **Emotional condition** - due to the nature of body treatments, it is imperative that you are considerate to the client's feelings whilst still being able to give a truthful evaluation of the client's condition and subsequent treatment needs. For example, a nervous client would usually require all the procedures explaining to them and would not wish to be left alone during the treatment. A client that lacks confidence in their appearance would need extra encouragement and reassurance.

- **Skin analysis** - you should record information on the client's skin type to make sure that appropriate products and treatment are selected.
- **Figure analysis** - keep a record of the details of the client's figure analysis, as this is a reliable method of measuring the progress and effectiveness of the treatment.
- **Test results** - results from any tests that have been carried out are noted as evidence.
- **Previous treatment history** - this is recorded as it provides guidance on the client's level of commitment and results of previous treatments.
- **Treatment duration and frequency** - this outlines the commitment you expect from the client in order to meet the client's objectives.
- **Client signature** - is required to confirm that all information is correct, this is particularly important in the case of contra-indications. It is also beneficial as they are saying that they understand the level of commitment required in order to achieve their desired outcome.
- **Client feedback** - should be taken into account when producing the treatment plan. How you produce and adapt your treatment plan will depend on the feedback that you receive.
- **Aftercare advice** - the aftercare and homecare advice that the client is following will determine the effectiveness of the treatment. If a client is following an excellent homecare routine then they will often not require treatment as frequently, and vice versa.

It is important that the treatment plan is realistic, as you will find that the client will follow the plan, and the improvements will be far greater than that of a client who is trying to follow an unrealistic treatment plan. Remember, that you must always advise the client that the results will be more noticeable when combined with the use of exercises, a healthy eating plan and a good homecare routine.

Assessment Techniques

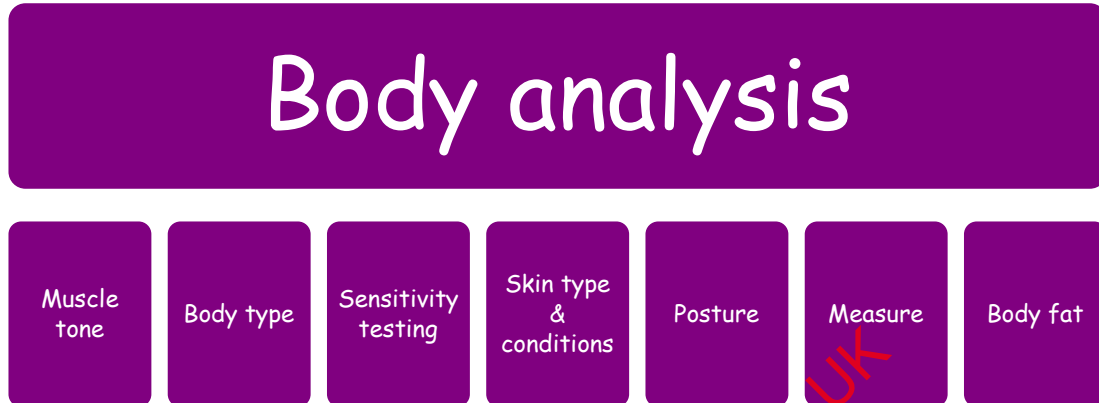
Clients are more satisfied if they have received a thorough assessment/consultation and necessary tests before a treatment is carried out. Information received during an accurate assessment will ensure that the most effective treatment is planned for the client. When carrying out any tests on a client you should:

- Explain the procedure to the client and encourage them to ask any questions.
- Instruct the client what clothing, if any, needs removing.
- Ensure that the client is warm and comfortable and that any areas not being examined or tested are covered over.
- Conduct the examination in a private place, preferably in the treatment room.
- Before commencing any examination or tests, you should wash and dry your own hands.
- Sanitise the area that you will be examining.
- Good lighting is necessary when conducting the assessment.
- Tactfully question the client to determine the cause of any conditions.
- Record any details you notice during the examination.

There are three techniques that should be used when assessing the client's requirements for a body electrical treatment:

1. **Questioning** - should be carried out in a polite and professional manner to find out all the information required from the client. There are some things which only the client can tell you such as:
 - "Have you had a body electrical treatment before?"
 - "What is your main reason for wanting the treatment?"
 - "How long have you had this condition?"
 - "Which area would you like me to concentrate on today?"
 - "How often do you normally receive this treatment?"
 - "What were the results from the previous treatments?"
2. **Observation** - you will need to look at the condition of the client's skin, muscle tone, general appearance, areas of fluid retention and posture. You will also need to observe the client's body language as this will give you an indication of how the client feels about the treatment.

3. **Body analysis** - you need to carry out a body analysis in order to make a decision about the client's needs and select a treatment and products to meet those needs. When carrying out your body analysis you will need to use methods to assess the following:



Muscle tone

Check the client's muscle tone by feeling and looking at the area. It is also beneficial to ask the client to perform a series of movements/exercises to observe their muscle tone. Tissues that are firm to the touch would indicate good muscle tone, whereas tissues that feel softer to the touch would indicate poor muscle tone. A muscle that has good tone will display smooth and even contours with good definition.

Body fat

The amount of stored body fat varies between individuals and also is often unequally dispersed around the body, quite often being stored in greater amounts on the thighs, buttocks, hips and abdomen. A skin fold test can be used to measure the amount of fat. Skin fold callipers are used to measure the fat at various sites on the body, the measurements are added together and then the sum is converted into a body fat percentage using a comparison table.

Measurements

Measurements are used to provide evidence of inch loss after a single or course of treatments. Measurements are taken at specific sites on the body by using a tape measure before and after EMS and galvanic type treatments. Height and weight measurements are often taken for certain courses of treatments.

Body types

One consistent factor that runs through all people is body type. Our genes determine our body type, and there are three main classifications of body types, all others are a transition or a composition of these three.



Endomorph

Rounded contours with a higher proportion of fat

Tends to gain weight easily, with the majority of the fat deposited around the hips, thighs, abdomen and shoulders.

Limbs tend to be short.

Often pear shaped.



Ectomorph

Predominantly angular and lean in appearance.

Little body fat, which reduces the amount of female curves.

Little muscle bulk, which makes the bones more apparent.

Limbs appear very long with small joints.



Mesomorph

Strong and muscular, with an athletic build.

Even distribution of body weight.

Broad shoulders and slim hips.

Well toned muscles.

This body type is unlikely to have a weight problem if they remain active.

Sensitivity testing

The tests, which you may need to carry out, depend on the treatment that you are performing. Remember to refer to salon procedures and manufactures instructions before carrying out any tests. The different types of tests that you need to have knowledge of, and be able to perform are:

1. **Hot and cold** - This test checks the client's skin sensitivity to temperature change. You require two test tubes - fill one with hot water and one with cold water. You then ask the client to look away and whilst placing the test tube on the skin, ask the client to distinguish between the different temperatures. If the client cannot distinguish, it indicates a loss of skin sensation and the treatment cannot proceed.
2. **Hard and soft** - This checks the client's skin sensitivity to touch and is performed by applying a piece of cotton wool and an orange stick to the client's skin. Ask the client to look away and check to ensure that the client can distinguish between the two sensations. If the client cannot distinguish, it indicates symptoms of loss of skin sensation and the treatment cannot proceed.
3. **Allergy tests** - This checks the client's skin sensitivity to the products being used and is a recommended test if the client is prone to allergic reactions to products. Apply a small amount of product and ask the client to wait 24-48 hours to see if the skin shows any sign or a reaction. If a reaction occurs, the skin may be irritated or red and this will prevent the treatment from being performed.

Skin type and conditions

A magnifying light may be used to check the condition of the skin; by touching the skin, visually examining the skin and verbally asking the client. Conditions such as cellulite, stretch marks, fatty deposits, fluid retention, sluggish circulation, uneven skin texture, uneven pigmentation or dry skin need to be identified. The treatment/products that will have the greatest benefit can then be selected for use.

Cellulite

This is fatty tissue that has a dimpled, orange peel like appearance. It is commonly found on the thighs, buttocks, upper arms and knee area. To test for cellulite gently squeeze the client's skin, however in most cases the cellulite will be visible without squeezing. Cellulite is caused by:

- A sedentary lifestyle and poor diet
- Hormonal problems

- Poor metabolism
- Poor venous or lymphatic circulation

Advise the client to limit their alcohol, nicotine and processed food consumption. Regular exercise, application of daily body products and drinking plenty of water will improve the appearance of cellulite.

Stretch marks

These appear as long, faint scars that are usually pink or lighter than the rest of the skin. They occur due to the skin stretching with sudden weight gain for example during adolescence or pregnancy. They most commonly occur on the thighs, breasts, abdomen and upper arms. Stretch marks are permanent but can be improved by micro-current and some laser treatments. To prevent stretch marks forming, particularly during pregnancy, advise clients to apply a suitable skin care emollient on a daily basis and maintain a balanced diet. Low levels of zinc, vitamin B6 and C are thought to contribute to the formation of stretch marks.

Fluid retention/sluggish circulation

An accumulation of tissue fluid in an area will result in swelling, known as oedema. Fluid retention is common around the ankles, knees and wrists and also occurs to the abdomen and breasts during menstruation. To test for fluid retention simply press the client's skin and if the area remains indented and does not immediately spring back to its original position this indicates fluid is being retained in the area. Common causes are:

- Diet containing excess processed foods
- High salt intake
- Insufficient water intake
- Allergies
- Medication

Uneven skin texture/tone

You need to be able to identify a variety of skin conditions such as keratosis polaris - pimples that appear commonly over the upper arms, thighs and buttocks. This condition occurs due to dry skin blocking the hair follicles. Uneven skin texture and pigmentation disorders need to be identified and an appropriate treatment recommended.

Posture

A significant part of the treatment is to analyse the client's posture and figure before commencing any course of body treatments if their aim is to alter their body shape. This will ensure that:

- * The therapist recognises any serious postural faults that cannot be treated. A serious fault should be referred to a doctor.
- * The treatment will not cause harm or discomfort.
- * The most effective treatment is selected.
- * If the client has, a minor postural fault, advice can be given to prevent the condition from worsening.

When carrying out a postural check the client should wear only their underwear/swimwear or fitted gym wear. Attach a weighted plumb line or EMS pad and wire to the curtain tracking. This will provide a straight line that should be inline with the:

- Client's earlobe
- Centre of the shoulder
- Behind the hip joint
- In front of the knee joint
- In front of the ankle joint

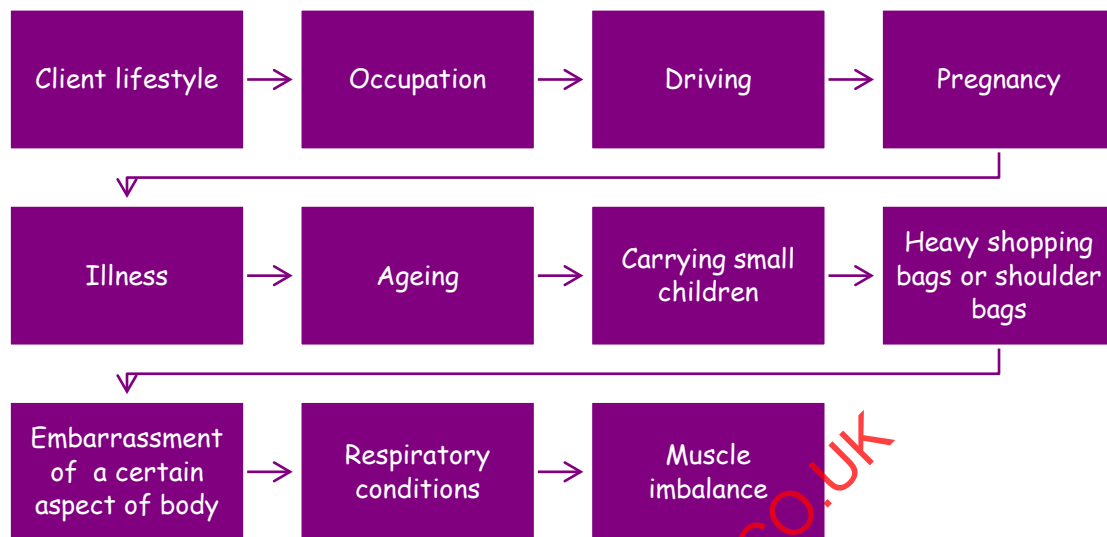


Good Posture

Points that indicate good posture are:

1. The head should not extend beyond the mid line.
2. When relaxed the arms should lie evenly at the sides.
3. The distance between the scapulas and spine is equal on both sides.
4. Scapulas are positioned equally horizontally.
5. The spinal column is straight.
6. The back has a natural curve.
7. The abdomen should appear flat.
8. The curves of the waist are level.
9. The buttocks should not protrude abnormally.
10. The legs should be equal in length, with knees facing forwards.
11. Body weight is evenly distributed.
12. The feet should face forwards and be slightly apart.

It is rare to find a person who has a perfect posture; there are some common postural faults that many people present, which are due to:



Poor posture would be any deviation away from the points listed under good posture; it may only be a minor fault or could be a more predominant postural fault. Some common examples of postural conditions are now outlined.

Dowagers hump		
Fatty deposits are laid down and build up on the back of the neck to form a hump.		
The client should keep their head and neck in correct line.	Recommend the client pushes the head & neck backwards, holds for 1 second, releases and repeats.	Massage and vacuum suction may help to break down fatty deposits.

Winged scapulae

The shoulder blades protrude. The pectoral muscles will be stretched and the adductor muscles of the scapula will tighten.

Advise the client about correct posture.	Exercises are needed to tighten the pectoral muscles.	Faradic or micro-current treatment over the chest area.	Recommend stretching exercises for the upper back.
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Kyphosis

Rounded shoulders develop. The pectoral muscles tighten and the muscles over the thoracic region of the spine become stretched. In women, it can lead to sagging breasts.

Advise the client about correct posture.	Exercises are required to strengthen the scapula adductors.	Application of EMS or micro-current treatment to the upper back will help to strengthen the over stretched muscles.	Massage over the chest area will help to stretch tightened muscles.	Recommend stretches for the pectoral muscles.
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Lordosis

Recognised by increased curvature of the lumbar area of the lower back. This causes the muscles of the lower back to tighten and the abdominal muscles to become over stretched.

Advise the client about correct posture.	Recommend exercises to strengthen the abdominal muscles.	Application of faradic or microcurrent treatments to the abdominal muscles will improve muscle tone.	Recommend stretching exercises for the lower back.	Manual massage to the lumbar area will also help to relax tightened lower back muscles.
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Scoliosis

Recognised by a lateral curve of the spine, which could be either in a C or S shape. This causes the muscles on one side of the body to shorten which results in uneven shoulders, hips or waist.

Advise the client about correct posture.	Recommend exercises to strengthen the stretched muscles- (this would be the side of the body which is higher up).	Faradic or microcurrent treatment to the side that is higher.	Recommend stretches to the shortened side to lengthen the tightened muscles.
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Relationship Between Height, Weight And Body Type

During the consultation, you should check the following client characteristics to ascertain how you will proceed with the treatment and it will also influence the advice that you give.

Weight

Weight should be checked, as this will give you a guideline when deciding on the client's fitness levels and ability. If a client is overweight, they may suffer from:

- joint problems
- immobility
- breathing problems
- backache
- varicose veins

A person's weight is also linked strongly with blood pressure problems and diabetes, which will restrict the treatment. Being underweight is also undesirable, as it often means that the body is not getting all the nutrients it requires for efficient functioning.

Size

The client's body size and height should be taken into account when deciding on the treatment application. For example, a larger person will require more strokes to cover the area and the opposite applies for a smaller person, therefore your procedure will need to be adapted. The body size will also affect how much product will be needed for an effective treatment.

Calculating ideal weight

A simple way of working out the client's ideal weight is to use a body mass index more commonly known as BMI. This will provide you with a BMI figure that will indicate what category applies to the client.

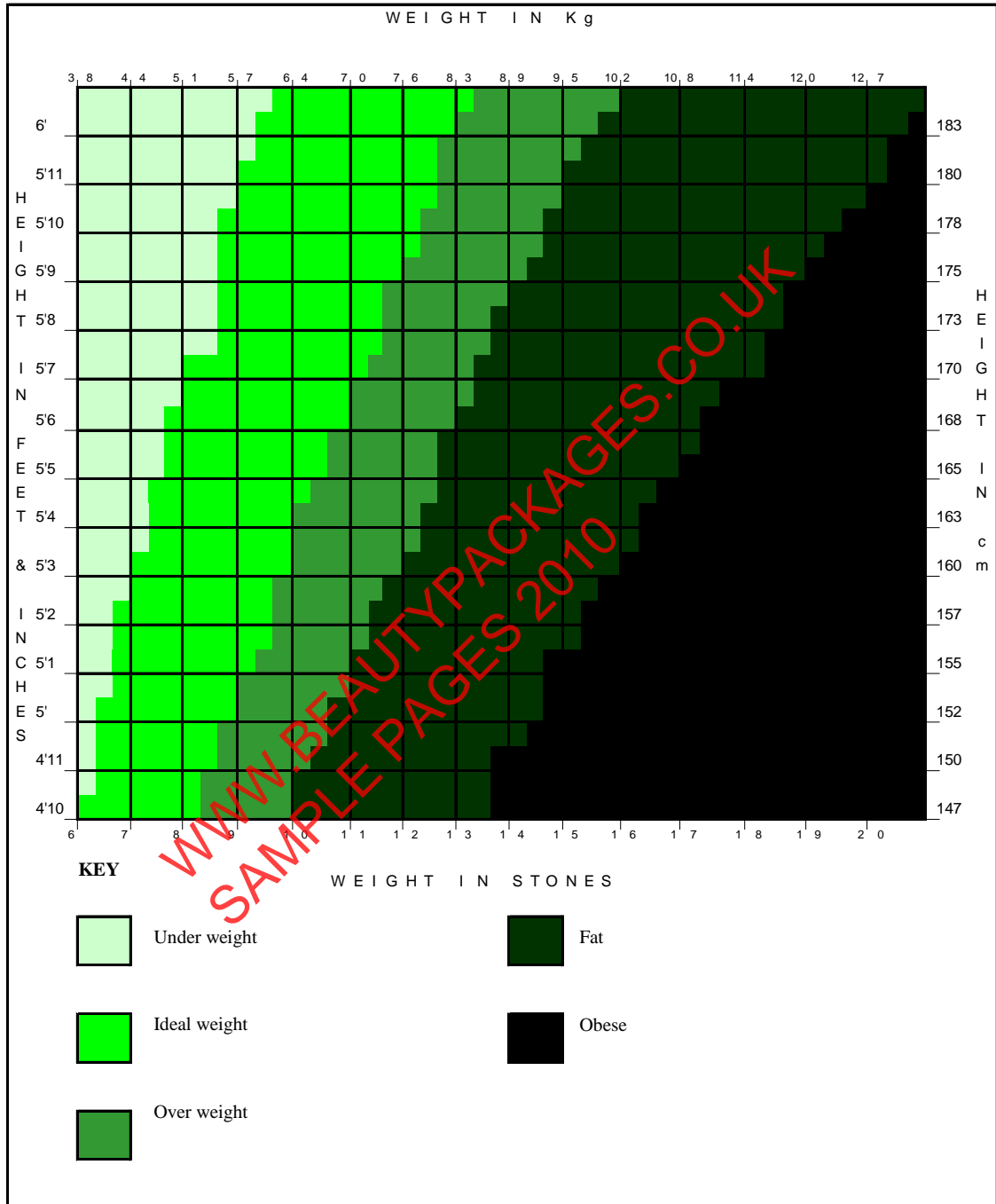
This is calculated as:

$$\frac{\text{Weight (kg)}}{\text{Height (m)} \times \text{height (m)}}$$

Underweight	Correct weight	Overweight	Obese	Very obese
BMI less than 20	BMI between 20 and 24.9	BMI between 25 and 29.9	BMI between 30 and 39.9	BMI greater than 40

Body norms chart

To use this you simply trace a line from the height, and trace a line from the weight and this will indicate what category a person falls into. This will therefore allow you to work out what that person's ideal weight should be.



Acceptable weight norms in relation to gender, height and frame size

Female							
Height		Small		Medium		Large	
Ft ins	cm	lb.	Kg	lb.	Kg	lb.	Kg
6'	183	138-151	63-69	148-162	67-74	158-179	72-81
5'11	180	135-148	61-67	145-159	66-72	155-176	70-80
5'10	178	132-145	60-66	142-156	64-71	152-173	69-79
5'9	175	129-142	59-64	139-153	63-69	149-170	68-77
5'8	173	126-139	57-63	136-150	62-68	146-167	66-76
5'7	170	123-136	56-62	133-147	60-67	143-163	65-74
5'6	168	120-133	55-60	130-144	59-65	140-159	63-72
5'5	165	117-130	53-59	127-141	58-64	137-155	62-70
5'4	163	114-127	52-58	124-138	56-63	134-151	61-69
5'3	160	111-124	50-56	121-135	55-61	131-147	59-67
5'2	158	108-121	49-55	118-132	54-60	128-143	58-65
5'1	155	106-118	48-54	115-129	52-59	125-140	57-61
5'	152	104-115	47-52	113-126	51-57	122-137	56-62
4'11	150	103-113	47-51	111-123	50-56	120-134	55-61
4'10	147	102-111	46-50	109-121	49-55	118-131	54-59

Male				
Height		Small	Medium	Large
Ft ins	cm	lb.	lb.	lb.
6'4	193	162-176	171-187	181-207
6'3	190	158-172	167-182	176-202
6'2	188	155-168	164-178	172-197
6'1	185	152-164	160-174	168-192
6'	183	149-160	157-170	164-188
5'11	180	146-157	154-166	161-184
5'10	178	144-154	151-163	158-180
5'9	175	142-151	148-160	155-176
5'8	173	140-148	145-157	152-172
5'7	170	138-145	142-154	149-168
5'6	168	136-142	139-151	146-164
5'5	165	134-140	137-148	144-160
5'4	163	132-138	135-145	142-156
5'3	160	130-136	133-144	140-153
5'2	158	128-134	131-141	138-150

There are 14 lbs in a stone

There are 0.45kgs in 1 lb.

A general point that is used to give the indication of a persons frame size is the circumference of their wrist:

14 cm (5 ½ ins) = small 16.25 cm (6 ins) = medium 16.5 cm (6 ½ ins) = large

Selecting An Appropriate Treatment To Meet Objectives

It is important that you can match the treatment to the client's requirements. A client may have more than one need and in this situation, you should encourage the client to prioritise their most important objective, and choose a treatment that meets as many of the client's requirements as possible.

Objective	Galvanic	EMS	Micro-current	Lymphatic drainage	Micro-dermabrasion
Improved skin and body condition	No	No	Yes	Yes	Yes
Improved contour and muscle condition	Yes	Yes	Yes	Yes	No

Improved skin and body condition

- A micro-dermabrasion or gyratory vibrator treatment may help a skin with a 'bobbly' appearance (keratosis polaris) on the backs of the arms or legs.
- A client may suffer from poor circulation or a general unhealthy complexion and in this instance a vacuum suction treatment or gyratory vibrator treatment would be most beneficial.
- If a client suffers with stretch marks a micro-dermabrasion treatment, galvanic treatment using specialist skin care products or a micro-current treatment should be recommended.
- If a client is concerned about pigmentation or uneven skin tone recommend micro-dermabrasion.

Improved contour and muscle condition

- Recommend a galvanic or micro-current treatment for a cellulite condition or inch loss,
- EMS or micro-current for improved muscle tone.
- A gyratory vibrator treatment or micro-current for improved contour.

Contra-indications

It is important that you can recognise a contra-indication so to prevent any further harm to the client, and to prevent cross-infection or secondary infection.

The contra-indications that **prevent** a body electrical treatment from being carried out are:

- **Contagious skin conditions** - i.e. **impetigo, tinea corporis and scabies** - to prevent the spread of infection or making the condition worse.
- **Dysfunction of the nervous system** - i.e. **Parkinson's disease, Muscular dystrophy and Multiple sclerosis** - the client may not be able to feel sensations if the machine was too strong etc. or they may be hypersensitive to the sensations created by the treatment.
- **Heart disease or disorder** - anti-coagulation drugs prescribed to treat these conditions would interfere with the skin healing process.
- **Undergoing medical treatment** - it would be unprofessional to treat and may interfere with the results of the treatment.
- **Pacemaker** - the electrical current would interfere with the pace maker.
- **Any cancer related treatment** - the treatment could cause the disease to spread around the body.
- **Recent scar tissue** - it could cause the scar tissue to open and may cause secondary infection.
- **Undiagnosed lumps, inflammations and swellings** - as you are not sure of the causes of the swelling it would be unprofessional to treat as it may worsen the condition.
- **Medication causing thinning or inflammation of the skin** - i.e. **steroids, retinol, accutane** - due to the effects these medications have on the skin treatment should not proceed as the skin would be aggravated by the treatment.
- **Diagnosed sclerodema** - a disease that causes the skin and connective tissue to thicken and harden. The cause of the disease is unknown and effects vary from person to person, it may also effect the internal organs, You must not carry out a treatment as we do not know how it will effect the skin structures.

Contra-indications that **restrict** the application of the body electrical treatment, you may need to avoid the area, adapt the treatment or it may restrict your choice of electrical treatments:

- **Epilepsy** - certain electrical currents could affect the client adversely.
- **Diabetes** - A diabetic client has reduced healing and therefore certain electrical treatments such as micro-dermabrasion would not be recommended.
- **High or low blood pressure** - could be made worse by the treatment.
- **History of a thrombosis or embolism** - treatment may cause movement of the thrombosis or embolism resulting in it blocking a vital capillary such as to the lungs or heart, which could be fatal.
- **Dermal fillers** - may make the results of the treatment unpredictable.
- **Metal plates or pins** - these would conduct the current making it uncomfortable for the client.
- **Medication i.e. retinoid or oxytetracycline** - certain medication causes drying or irritation of the skin and treatments such as micro-dermabrasion would aggravate the skin further.
- **Pregnancy** - if the client is pregnant they cannot receive a galvanic or faradic treatment. In addition it would not be ethical to apply a treatment to the client's abdomen.
- **Piercings** - you may catch the piercing or the current could intensify in this area which would be uncomfortable for the client.
- **Anxiety** - certain treatments make noises or sensations that would make the client even more anxious.
- **Varicose veins** - treatment may cause discomfort or the veins to burst. Avoid the area when providing treatment.
- **Cuts or abrasions** - would make the treatment uncomfortable and may cause secondary infection to occur.
- **Bruises** - treatment would be uncomfortable if applied over the bruise.
- **Recent dermabrasion or chemical peels** - cause mild thinning of the skin, treatments would aggravate the skin further.
- **IPL or laser hair removal** - may make the skin more sensitive to further treatments.
- **Epilation** - may make the skin more sensitive to further treatments or cause secondary infection to occur.

Task

Please answer the following questions to demonstrate your knowledge of contra-indications.

- Why can you not treat a client with a heart disease or disorder?

Anti-coagulation drugs prescribed to treat these conditions would interfere with the skin healing process.

- What would you do if your client had a pacemaker?

Do not carry out the treatment as the electrical current would interfere with the pace maker.

- Why should you not treat a client with recent scar tissue?

It could cause the scar tissue to open and may cause secondary infection.

- Why can you not treat a client with sclerodema?

You must not carry out a treatment as we do not know how it will effect the skin structures.

- What treatments would you not perform on a diabetic client?

Micro-dermabrasion would not be recommended.

- If you had a pregnant client which treatments would you not recommend?

If the client is pregnant they cannot receive a galvanic or faradic treatment.

Preparation For The Body Electrical Treatment

1. Prepare work area, following general safety precautions for electrical equipment. Check that the equipment is working correctly by testing on therapist. Ensure that all dials are returned to zero.
2. Sterilise all applicator heads using appropriate methods.
3. Greet the client.
4. Explain the treatment procedure, benefits, timings and cost to the client.
5. Carry out consultation and complete record card - check verbally for contra-indications.
6. Allow the client time to ask any questions.
7. Height and weight measurements may need to be taken.
8. Instruct the client how to prepare for the treatment:
 - Ask them to remove jewellery from the area and glasses if worn. (Reinforce the importance of removal of jewellery).
 - Clothing should be removed (underclothes should be kept on).
 - Explain to the client how to lie on the couch.
 - Provide a large towel for the client to cover themselves with.
 - Leave the client in privacy to prepare for the treatment.
9. On your return, you may wish to cover the client over with a large towel and blanket. Alternatively, you may need to measure or carry out posture checks at this point.
10. Wash hands.
11. Check visually for contra-indications,
12. Sanitise the skin.
13. Perform appropriate skin tests.
14. Conduct analysis and decide on appropriate treatment plan and products for the client's needs.
15. Perform any other preparatory treatments - for example exfoliation, steam, pre-heat treatments or hot towels.
16. Explain the treatment procedure including the sensation and noises produced by the equipment.

Verbal reassurance

Due to the nature of the treatment, you will find that clients require additional reassurance to that normally provided.

Task

How can you reassure the client about the treatment?

- Only the area being treated will be exposed at any one time.
- The client will feel more relaxed as they become used to their therapist. Generally, on the first visit the client will not be as relaxed as on subsequent visits due to the new surroundings and therapist.
- If the client is uncomfortable at any time, they must let you know so that you can adapt the treatment.

Modesty, privacy and covering the client

Maintain the client's modesty and privacy throughout the treatment to comply with basic ethics and to ensure client comfort. To maintain modesty:

- You must ensure that the client is suitably covered at all times with appropriate towels (one for the upper trunk and one for the lower body), and that only the areas being treated are exposed.
- Whilst the client is changing, you must ensure that nobody enters the treatment area. This should also be maintained throughout the treatment with an exception to the therapist.
- Talk using quiet tones - particularly when in a training environment as conversations can easily be overheard.

Client positioning

Position the client on the couch ensuring maximum support and comfort. A pillow or towel roll should be supplied for support. The position of the client should be central to the bed and also allow the therapist access to the areas which are being treated. The client should be encouraged to lie straight and not cross their legs.

- In the **supine** lying position (on the back) offer support under the neck or head and support may be required under the knees.
- In the **prone** lying position (on the front) the head is usually turned to the side and support can be given under the ankles.
- In a **seated** position the client will sit on a stool and lean onto the protected couch. Pillows or towels should then be placed over the couch. Encourage the client to lean forwards, placing their arms loosely folded and upwards for maximum comfort.

Therapists positioning

To maintain correct posture - back straight, shoulders relaxed, weight evenly distributed between both feet, arms should not be strained, do not hyper-extend knee joints and bend knees rather than leaning over. In addition it is often more effective to work at the correct side of the treatment couch, a right handed operator should work at the left side of the couch and vice versa.

Possible risks of ineffective positioning

The possible risks of the client, therapist or equipment being incorrectly positioned are:

- Therapist may develop shoulder, back or neck problems which may lead to postural faults in the long term
- Therapist will find it difficult to concentrate on the treatment
- The client may experience discomfort during the treatment which could lead to muscular aches and pains
- The client will not be able to relax
- Products or equipment could easily be knocked over or broken

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Preparing The Client's Skin Prior To Treatment

Prior to commencing a body electrical treatment, you will need to cleanse the client's skin. It is also beneficial to pre-heat the tissues or exfoliate as this makes the treatment more effective.

Cleansing the area to be treated

The area that you are treating should be cleansed prior to treatment. You may be able to offer the client a shower; however, if this facility is using a shower, hot towels or skin sanitiser such as antiseptic. The skin must be cleansed to ensure that there are no dead skin cells, grease or dirt, which would **act as a barrier** to the treatment, making the treatment less effective or ineffective. The skin is also cleansed for hygiene purposes.

Exfoliation

It is beneficial to exfoliate the skin prior to the application of body electrical treatments, as this will remove dead skin cells, allowing products and electrical currents to penetrate the skin more effectively. The skin will also feel much softer and smoother, and the client will feel that they have been pampered.

Pre-heating treatments

It is beneficial to apply a pre-heating treatment prior to body electrical treatments as it increases the circulation, warms the area and relaxes the tissues and muscles making them more receptive to treatment. The skin and muscles can be warmed using a variety of methods:

- Steamer - beneficial for congested skins - particularly the back area.
- Infra red and radiant heat lamps - particularly beneficial for the treatment of muscular aches and pains.
- Hot towels - a quick and cheap method of warming an area of the body.
- Sauna - effectively warms the full body.
- Steam cabinet - effectively warms the full body and assists with desquamation at the same time.

The above treatments should take place after the skin has been suitably cleansed and once the skin has been exfoliated if applicable.

Galvanic Treatment



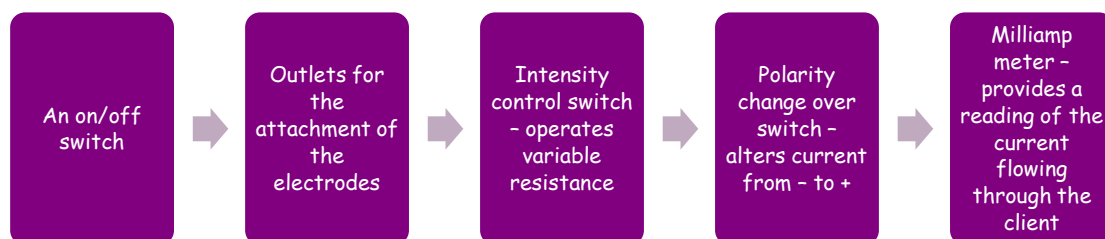
The aim of a body galvanic treatment is to soften areas of stubborn fat and disperse any fluid that is retained in the area. Therefore, the treatment disperses the lumpy fat cells associated with **cellulite**. This is achieved by using the properties of the current and often active ingredients within a gel substance, which has a stimulating effect. The products improve the interchange of tissue fluids in the area. In addition, the treatment also produces the specific benefits of the galvanic current. This treatment creates a slight warming and tingling sensation when applied, which the client must be informed about.

Galvanic currents are used in the following two ways in a body treatment:

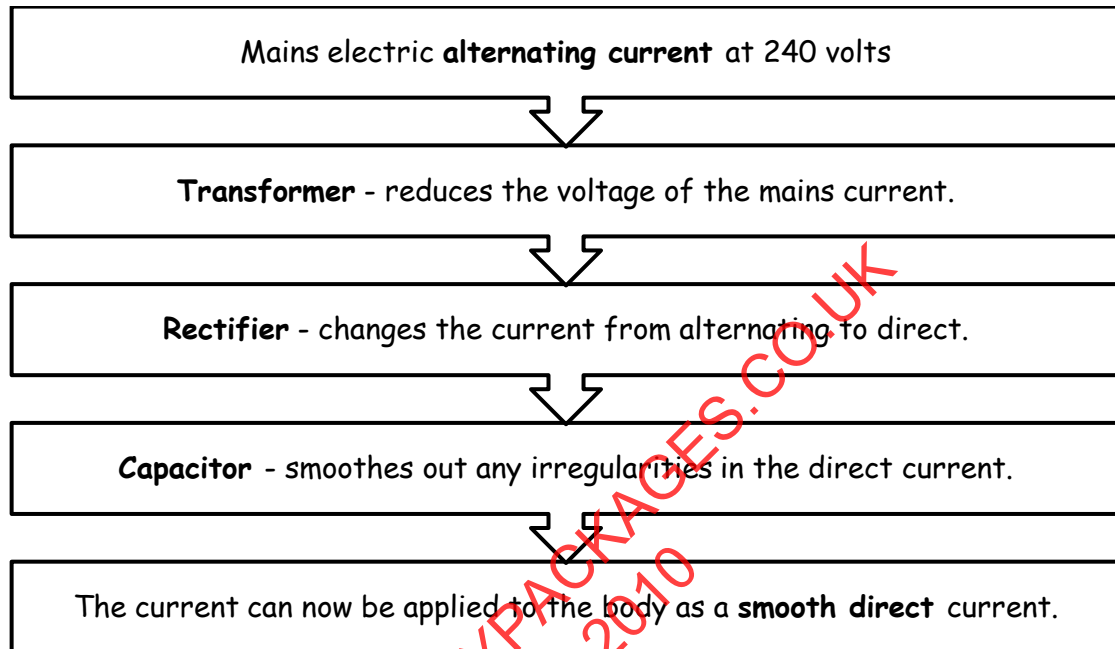
1. **Iontophoresis** - introduces water-soluble anti-cellulite substances for specific effects using both the positive and negative pole (depending on manufacturer's instructions). This substance will be repelled into the skin to produce the desired effect.
2. **Body Galvanism** - uses pads that are soaked in saline solution. The active electrode is the cathode (negative). The inactive electrode is placed opposite the active electrode.

The galvanic machine

The galvanic body machine uses numerous pairs of electrodes, which allows the therapist to treat large areas of the body. The machine will have the following features:



A **continuous** and **smooth direct current** produces the chemical effects of galvanic therapy. If a smooth current was not used it would cause the muscles to contract. Galvanic units operate from the mains electrical supply. Inside the equipment the mains alternating current at 240 volts is converted into a smooth direct current at up to 100 volts. This is achieved through a three-stage process by the following devices:



Electrical science of the galvanic treatment

During the treatment, a galvanic current is used to bring about a chemical reaction. Electrically charged water based solutions known as electrolytes are applied to the skin to increase its electrical conductivity. When dissolved in water an electrolyte partly splits and forms ions, which carry either a positive charge (cation) or a negative charge (anion).

When the galvanic current (continuous direct current) is applied, the ions within the solution start to move - they are attracted towards either the positive pole (anode) or negative pole (cathode). This is because:

Like charges repel ← →

Opposite charges attract → ←

- The current can pass through the body because the bodies' tissue fluids contain ions.

- In order for the treatment to work both positive and negative connections are required.
- The electrode that creates the chemical effect is known as the active electrode and this is applied to the area requiring attention. The other electrode is known as the indifferent electrode, and this is placed on an opposite area of the limb or trunk.
- The galvanic solution will contain active ingredients that have a positive or negative charge and this will be indicated by a + or - symbol on the product container. The solution is repelled into the skin by the active electrode, which must be the same polarity as the product.
- The most effective electrode for body iontophoresis is the negative pole due to this being most effective at treating cellulite conditions. The stimulating effect will cause tissue fluid movement which will help to improve the appearance of cellulite conditions.

Task

Outline the chemical effects created by the electrode in the table below:

Positively charged active electrode (anode)	Negatively charged active electrode (cathode)
<p>Acid reaction occurs producing the following effects:</p> <ol style="list-style-type: none"> 1. Skin tissue hardens and firms 2. Blood vessels vasoconstrict, reducing erythema 3. Soothes nerve endings 4. Astringent and germicidal action 5. Tightens pores <p>These effects are called anaphoresis.</p>	<p>Alkali reaction occurs producing the following effects:</p> <ol style="list-style-type: none"> 1. Skin tissue softens 2. Blood vessels vasodilate, increasing erythema 3. Stimulates nerve endings 4. Emulsification & removal of grease 5. Relaxes pores <p>These effects are called cataphoresis.</p>

The uses of a galvanic treatment

- Improvement of the blood circulation, aids with the removal of waste products and toxins from the area.
- Improvement of the lymphatic circulation, aids with the removal of waste products and toxins from the area.
- Iontophoresis introduces the benefits of the anti-cellulite products.
- Improves the appearance of cellulite.
- Stimulates a sluggish skin as many products used in iontophoresis contain seaweed or marine extracts improving these skin conditions.

Restrictions to a galvanic treatment

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

- Hypersensitive skin or loss of skin sensation
- Metal plates or pins in the area
- Highly nervous clients
- Pacemaker
- Pregnant women
- IUD coils in the uterus

The additional items required to carry out a galvanic body treatment:

