

# IONTO-EPIL<sup>®</sup>

## Instructions for Treatment



*Simply well  
treated*

# IONTO-EPIL®

## Hair removal with the IONTO-EPIL® using the IONTO-IMPULS BLEND METHOD

### General

The growth of hair in the wrong place is a far greater problem than generally known. Especially women suffer under this condition. In particular, the excessive growth of hair on the upper lip and the chin can often lead to an inferiority complex, a loss of self-confidence and in some cases even to a state of depression.

To counter the problem, the unwanted hair can be plucked out using tweezers, however, due to the increased blood circulation caused by plucking the result can be an increase in hair growth. Also, the hair starts to naturally grow again after just a short time. Attempts to remove the hair by the application of a chemically based cream, will also prove unsatisfactory due to the necessity for repeated treatment. Another option which is often employed is the use of a razor apparatus. This unfortunately leads to the feared 'stubble beard', as the hair at the point of cut is thicker and after just 24 hours becomes visible again and is distinctly noticeable to the touch. It can be seen therefore, that the problem is not only of a cosmetic nature.

The two types of excessive hair growth are shown below :

### Hirsutismus

The term used to describe abnormal growth of hair on the female body in a manner similar to masculine hair growth. The pubic hair grows up to the navel and forms into the shape of a diamond. Furthermore, an increased growth of hair becomes visible on the underarm and the area of the breasts, and around the mouth.

### Hypertrichosis

The term used to describe an increased and abnormal hair growth either in certain limited body areas or generally covering the whole body.

During the last years, an answer has been found to the question as to whether the excessive growth of hair is due to a genetic trait or to a glandular disturbance. It has been found out that the cause is an hormonal imbalance.

To enable a better understanding of the physiological processes, it should be explained at this stage that in both the female and male glandular system, androgens (male hormones) as well as oestrogen's (female hormones) are produced. The amount of hormones secreted in a healthy human body are in a natural balance determined by gender, and this leads accordingly to the typical masculine or feminine hair growth.

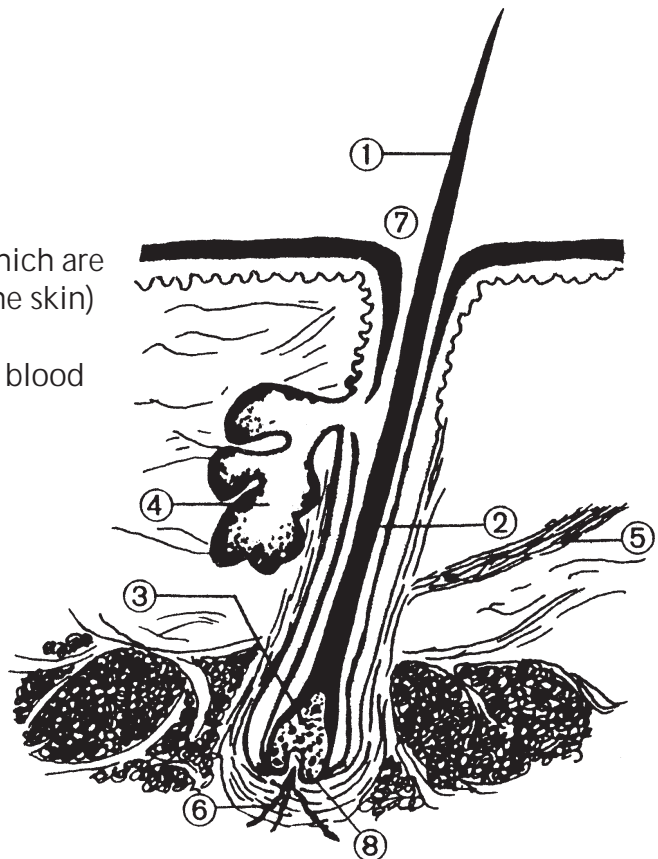
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The cause of excessive hair growth is due almost entirely to an imbalance in this gender and racially specific balance between androgens and oestrogen's. This hormonal imbalance however, can be due to a variety of different causes. The most likely cause is a genetic imbalance, which is also the most difficult to correct. This is followed by a reduction in oestrogen's following the menopause. Finally, an abnormal function of the ovaries can also be the cause

Treatment of the growth of unwanted hair can be performed on a medical basis by attempting to reinstate the correct physiological balance between the gender hormones. The treatment can be performed in a cosmetic practice by quite literally, 'getting to the root's of the problem', whereby the 'problem' in this case is an excessive growth of hair. In most cases co-operation between a doctor and the beautician will be found to be most beneficial.

## The anatomical structure of a hair

1. Hair shaft (the part of the hair which is visible)
2. Hair root (all parts of the hair which are under the surface of the skin)
3. Hair papilla (the hair bulb and the blood vessels which feed it)
4. Sebaceous gland
5. Arrector pili muscle
6. Blood vessels / Capillaries
7. Hair follicle (cavity containing the hair root out of which the hair grows)
8. Hair papilla (small nipple-like protuberance which enters the hair follicle from underneath. It does not contain any blood vessels or nerve endings)



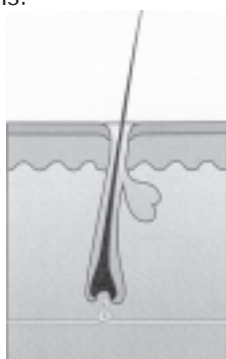
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## Hair growth cycle

The name given to the stage during which the hair is actively growing is the **ANAGEN** stage. The hair matrix cells separate and the keratin they contain forms the hair shaft. During this stage the lowest part of the hair follicle is embedded deep in the dermis.

The growth rate of a hair is approx. 0.3 mm / day. When the skin is healthy, approximately 90% of the hair will be in the Anagen stage. This stage lasts between 2-6 years. It is followed by a transition stage which is known as the **CATAGEN** stage, during which the cells cease to separate, the hair bulb shrinks and the hair root shrivels. This stage is short, lasting only for a period of approx. 14 days.

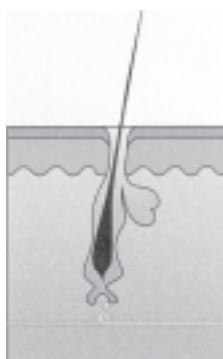
During the third stage, which is known as the **TELOGEN** stage, (or in other words the period during which the hair does not grow), the hair which has been forced up due to the shrinking action of the hair bulb remains at the height of the sebaceous gland. However, it is not 'anchored', and can easily fall out when subjected to a mechanical force such as brushing. The hair follicle is completely inactive. When the anagen stage begins again, the 'old' hair is pushed out by the new growing hair, (in the case that it has not already been removed). This stage lasts between 3 - 5 months.



**ANAGEN** stage (growing)

Duration: 2 – 6 years

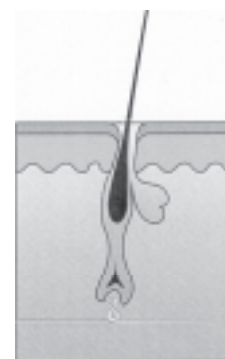
Ratio to complete hair: 86 - 90%



**CATAGEN** stage (transition)

Duration: 2 weeks

Ratio to complete hair: 1%



**TELOGEN** stage (restperiod)

Duration: 2 – 4 months

Ratio to complete hair: 9 - 14%

Each different stage varies not only from person to person, but also from one part of the body to another, and in some cases even from follicle to follicle. This characteristic is made most evident by the differing lengths of bodily hair which are visible on the human body.

It is not possible for the beautician to decide which stage of growth the hair is in. It does not apply to a particular area for a fixed period of time, instead, the hair is a continually developing entity which passes from stage to stage without any hesitation.

Therefore, the situation can occur that a follicle is treated in the belief that it is in the anagen stage, whereby in actual fact it is in the catagen or the telogen stage. The result is that when the epilation needle is inserted, it misses the hair papilla entirely.

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## Methods of hair removal

### 1. Depilation

Removal of the hair shaft (1) visible above the surface of the skin

### 2. Epilation

Removal of the complete hair including the hair root by the application of electrical current

In order to effectively and permanently remove each hair, it is necessary to expose the hair papilla and the surrounding tissue which provide the necessary nourishment to an effective and destructive treatment. The **IONTO-EPIL®** makes this possible as the appliance operates using high frequency current as well as galvanic current.

When epilation is performed **only** using high frequency current, the question arises, "Why does the hair grow again although the hair papilla has been destroyed?"

The answer is, "The hair grows again because sometimes the high frequency current does not meet the hair papilla exactly". i.e. the epilation needle was not used in the correct position and therefore the connecting tissue which provides the necessary nourishment was not destroyed.

When performing epilation with the **IONTO-EPIL®**, hairs are destroyed in all stages of growth. The electrolysis method is successful because the cell growth is destroyed irrelevant as to which stage of growth the hair has reached, and this in turn leads to a permanent loss of hair growth. **IONTO-EPIL®** is the method of epilation which removes the basis for the further growth of new hair.

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## Electrical current

In order to perform epilation, i.e. to stop and prevent further hair growth by the application of electrical current, one must be aware of what destructive effect the current has on the hair.

First of all, **IONTO-EPIL®** functions with direct current (galvanic current). This produces an electrolysis on the epilation needle, whereby the needle serves as the **cathode**. To complete the electrical circuit, an opposite electrode or **anode** is required, which is best attached to the client when using this method.

Our bodily fluids contain minerals, salts and water. Therefore, with the help of galvanic current and due to electrolysis it is possible to produce an alkaline solution (or lye) in the hair follicle in the form of sodium hydroxide (chemical formula = NaOH). This alkaline solution destroys the cells which produce the hair.

It is important to note that when the appliance is switched off, the alkaline solution is immediately neutralised by the body itself, so that there is absolutely no possibility of any damage being caused to the surrounding tissue.

As stated above, we cannot know in which stage of the growth the hair is at a particular moment. This is why the electrolysis treatment is so extremely effective because it treats the complete hair in all stages of growth.

To optimise the epilation process, and at the same time to minimise the time required to carry it out, an additional high frequency (HF) current is applied - this is known as thermolysis. The supply of current causes the temperature of the needle to increase, and this in turn heats the alkaline solution. This reaction intensifies the effectiveness of the solution. Also, thermolysis has its own individual effect on the hair root, it is used for the purposes of coagulation.

## The IONTO-IMPULS METHOD

Epilation with the **IONTO-EPIL®** is a result of a particular combination of **electrolysis** and **thermolysis** developed by **IONTO-COMED**.

Some electrologists state that they can feel when the needle makes contact with the follicle and hair papilla, irrelevant as to which stage of growth the hair has reached. However, there are no recognised test results available to support this statement.

A hair which is in the telogen stage possesses a hard keratin structure which can make it difficult to distinguish it from the hair root when the epilation needle is inserted. Unfortunately, it is not possible to see whether the needle is inside or outside the papilla. It is a fact that treatment using the combination of electrolysis and thermolysis can take somewhat longer. Nevertheless, as far as the removal of the individual hairs is concerned, it is considerably more effective. Up to 80% of the hairs so treated will not grow again.

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## The IONTO-EPIL® Appliance

The **IONTO-EPIL®** is a computer controlled needle epilation appliance which is fitted with the most modern technology. It operates with galvanic current (blend) as well as with high frequency (HF) current.

As a result of the production of galvanic current which in turn produces an alkaline solution, and of the production of high frequency current which causes thermolysis, each hair is destroyed at all stages of growth and in the complete hair follicle. When the electrolysis comes into contact with the body's own fluids, an alkaline solution is produced which thoroughly scours the complete follicle.

Thermolysis produced by the high frequency current heats the alkaline solution, which serves to concentrate and improve the effect of the solution.

It is important to note that at the moment the current supply is interrupted, all effects of the treatment immediately stop and that the same moment, the body itself starts a neutralisation process. Therefore, there is no possibility of the surrounding tissue becoming damaged.

Based upon practical experience, the **IONTO-EPIL®** has been provided with six different programmes which accord to differing thicknesses of hair. The intensity (strength of current) and the time required for treatment are pre-set according to the programme used.

## The IONTO IMPULS-BLEND Method

Programme	Hair Type	Hair thickness (approx. / mm)	Location (mainly)	HF Intensity (% of max. HF)	HF duration	Direct Current (initial / sec.)
1	fluffy	0.02	upper lip	20%	0.25	1
2	thin	0.04	upper lip	20%	0.25	1
3	medium	0.08	chin	30%	0.25	2
4	strong	0.09	chin / body	35%	0.50	2
5	very strong bristle	0.11	face / body	50%	0.25	3
6	strong bristle	0.14	face / body	60%	0.10	4

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## The Programme consists of : Hair type – Current strength – Treatment time

Because the sensitivity of different people is extremely variable, the possibility must be available for treatment to be performed according to the needs of each client. Therefore, the programme offers the capability to individually adjust the degree of current applied and the treatment time according to the sensitivity of each individual client. For this purpose, **IONTO-COMED** has developed a new and simple procedure which enables the requirements of each individual client to be conformed with.

In order to determine the degree of sensitivity to pain, the client co-operates with the beautician by holding a so called 'interrupter' in the hand. This allows the client to stop the flow of current at any time, simply by the press of the button mounted on the 'interrupter'. At the same time, a check can be made to see whether the hair can be removed without further effort. This function takes away any fear the client may have regarding the application of electrical current, and also prevents any unpleasant sensation developing as a result of the treatment. This method which has been developed by **IONTO-COMED** enables the settings for current strength and treatment time to be set very quickly and is very easy to learn.

Due to the relatively short treatment time, the epilation process can be described as being almost completely free of pain and discomfort.

In order to simplify the costing for treatment and to be in a position to provide the client with detailed proof of what has been achieved, the number of hairs removed are automatically counted and the total amount shown in the digital display.

### In practical use

In the above explanation an attempt has been made to provide reasons for the cause and problems of excessive hair growth. The manner and rhythm in which the treatment is carried out is determined in consultation with the client, and if applicable, also the financial outlay which the client is prepared to make. Also, the probable period of time which will be required for treatment can be discussed at the same time. **Please do not make any false promises.** The client may not be led to believe that success will be reached after just a short time.

The client should be lie in a well protected, comfortable and relaxed position. The treatment couch must be so positioned and adjusted for the person to be treated, so that the person carrying out the epilation can work comfortably from a seated position. It is advisable and recommended that a treatment couch be used which can be fully electrically adjusted to any position required by means of electrical motors. This enables the beautician to work in a relaxed manner without experiencing any discomfort whatsoever.

For hygienic reasons, and to avoid the chance of infection, it is strongly recommended that disposable gloves be worn when performing treatment.



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## Contra-indications

Heart pacemakers, heart disease, allergies, skin cancer, tumours, fever, illness of the nervous system (such as Parkinson's Disease), epileptic fits, etc. In the case of doubt, medical advice should be sought before commencing treatment.

To work in co-operation with a doctor is always advantageous, as the cause of excessive hair growth is often due to an hormonal imbalance.

## The epilation needle

The most important tool is the epilation needle. The needle is manufactured almost entirely from fine surgical wire. A sterile disposable needle for one time use should be used, and be safely disposed of following each epilation treatment. The needle has two functions. One is that it must be easy to insert it into the hair follicle, and the other is that it must be able to conduct both types of electrical current right into the follicle and to the root of the hair. The quality of needles which are available on the commercial market today can vary considerably. However, the needles used for **IONTO-EPIL®** are of high quality, extremely thin and highly polished, and are formed with a shaft which locates into the needle mounting in the hand-held tool.

The needles range from approx. 4 - 6 mm in length. It is recommended that the longest needle be chosen, as it is not possible beforehand to determine the length of the hair beneath the skin.

The needle should somewhat thinner than the hair to be removed, never thicker! In the case of hairs which are of different thicknesses, a medium thick needle should be chosen with which almost all hairs can be removed.

For clients who suffer from an allergy against nickel, stainless steel needles should not be used as they contain traces of nickel. Instead, gold plated needles are available as a replacement.

When a client is to be treated whose hair growth is particularly strong and whose hair cannot be removed during just one visit, it is recommended that following initial cleansing, **once and only once** and only **during the first visit**, that warm-wax be applied to the area which is affected. The hairs which remain following this application are then removed by epilation.

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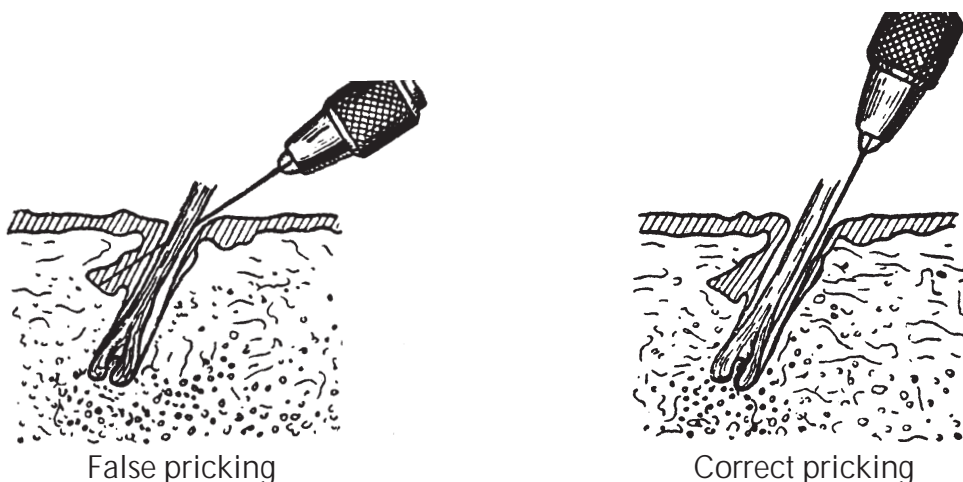
## Working with the IONTO-EPIL®

Following completion of all preparatory measures, the epilation needle required should be chosen. Remove it from the sterile packaging by gripping the shaft with tweezers and carefully drawing the needle out. Hold the hand tool in a vertical position and insert the needle shaft into the needle mounting (or holder), so that approx. 1-2 mm of the needle remains visible. Screw the mounting tight until the needle is held firmly. Carefully examine the needle in the mounting to ensure that it is held firmly and seated correctly. It is important that it cannot move.

Now the type of hair is selected on the **IONTO-EPIL®** appliance. For facial treatment, it is best to commence with Type 1. The client holds the 'interrupter' in the hand and can, in the event of any unpleasant sensations becoming felt, immediately interrupt the flow of current simply with the press of button. As a result, the optimal degree of tolerably effective intensity can gradually be determined. Current supply and time are proportional, i.e., more current requires less treatment time, or less current requires more treatment time. Of course, less current also means less possible discomfort. Each time a new client undergoes initial epilation treatment, the settings required are recorded in writing on the table provided. This means that the sensitivity of the client to electrical current must only be tested once.

The hand tool containing the needle is gripped in the right hand for right-handed people, or in the left hand for left-handed people. The other hand spreads and tensions the skin which is to be treated made between two fingers (or between thumb and finger). The tweezers should be laid within easy reach.

The needle is then inserted alongside the hair in the direction of the hair root. This must be performed without force or resistance being felt, i.e., the needle must glide into the hair follicle without any pressure being used. As soon as a light resistance is felt, the needle should be located in or on the root of the hair. Of course, it is possible that the needle was inserted incorrectly and is now located outside the hair follicle. The result will be that the hair cannot be removed with the tweezers without it being plucked out. When epilation is correctly performed, the hair can be removed easily and without any force. 'Practice makes Perfect'. With increasing experience, the operator will become an expert in precise pricking and thereby in successful epilation.



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The foot pedal is pressed and the current flows as according to the settings pre-programmed on the **IONTO-EPIL®** appliance. A beep signal indicates that the process is completed. Using tweezers, a check is then made to see if the hair can be removed without any force. Should this not be the case, the appliance must be switched to Hair Type II and the same process repeated. The object is to epilate the hair with the minimum of discomfort and in the shortest possible time, and to be able to remove it from the follicle without any resistance. If the hair has been epilated during the anagen stage, this will be indicated by a small black point which resembles the shape of a violin being visible at the end of the hair.

## Equipment

Good working conditions with consideration for the needs of the person carrying out the treatment or beautician are essential for successful epilation. **IONTO-COMED** offers professional epilation cubicles which are fully equipped with everything which is required to carry out epilation, based upon the following requirements:

- the treatment couch must be electrically adjustable to all positions in order that neck, back and shoulder discomfort is eliminated, and that the client can lie comfortably
- the work area must be well illuminated, and provided with a magnifying lamp mounted on the equipment trolley
- the **IONTO-EPIL®** appliance stands on the equipment trolley. The trolley is fitted with a drawer, and serves as a rest for sundry equipment
- the work chair must be adjustable for angle and height, and have an adjustable back-rest
- it must be possible to effortlessly and firmly grip the hair with tweezers
- for those who are prepared to invest in an **IONTO-SCOPE®** appliance too, it is possible to show the client the epilated hair in 300-600 x magnification, whereby the stage of growth the hair had reached is clearly visible. Furthermore, a picture of the situation before and after the treatment can be permanently recorded

## Tuition

In order to learn the **IONTO-IMPULSE BLEND METHOD** we recommend the tuition provided by us which takes place on the respective company branch premises. The costs for this tuition are included in the purchase price of the **IONTO-EPIL®**.

# IONTO-EPIL<sup>®</sup>



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