

BCN CAPILLUM - PEPTIDES

Advanced Hair Loss Cocktail

BCN Capillum-Peptides is a sterile solution that combines three groups of active principles for the treatment of hormonal type alopecia (androgen). Also alopecia caused by other internal & external factors such as nutritional deficiencies and/or stress. It is rejuvenating hair and an excellent coadjuvant of other aesthetics techniques doctors use for this indication.

Its exclusive composition includes peptides of new generation that, through cellular engineering, emit biomodulating protein signs to regulate the expression of the elements that intervene in the complete cycle of capillary growth. These peptides, in synergy with other specific active principles, regenerate and reinforce the extracellular matrix (ECM) and the dermal papilla, act on the dihydrotestosterone synthesis. The microcirculation, nutrition and oxygenation increase, they lengthen the anaphase and avoid the miniaturization of the follicle.

BCN Capillum-Peptides is completed with other active ingredients for the overall care of the scalp such as vitamins, minerals, amino acids and hyaluronic acid among others. They improve the appearance of the hair and provide a more abundant and body hair.



Vial | 5 ml | 0,176 fl.oz. | Box of 5 vials

INDICATIONS

Indicated for hair loss hormonal type treatment (androgenetic) or caused by nutritional deficiencies and/or stress.

It is an excellent coadjuvant of other medical aesthetics techniques for this indication, and also acts as a capillary rejuvenating booster.

ACTIVES COMPONENTS

Peptides	Non peptidic components	Overall care components
Copper tripeptide 1	Glutathione	Hyaluronic Acid
Biotinoyl tripeptide 1	Silica	DNA
Octapeptide 2	Biotin	Amino Acids
Acetyl tetrapeptide 3	Panthenol	Nucleic Acids
Decapeptide 28	Rutin	Minerals
Oligopeptide 71	Group B vitamins	Coenzymes
	Clover extract	
	L-Tryptophan	
	Apigenin	
	Taurine	
	Ornithine	
	Adenosine	
	Citruline & Arginine	

RESULTS

- Gets a more abundant hair, with more body.
- Prevents the capillary aging process.
- Reactivates hair growth.
- Protects the hair structure to grow strong and more resistant.
- Reverses hormonal cause hair fall, by inhibiting the 5- α -reductase.

The results are optimized with other ingredients in addition to the hyaluronic acid for a hydrated and shiny hair.

APPLICATIONS

HAIR LOSS Scalp and capillary structures preparation	BCN Base Ginkgo Biloba Asian Centella	3 ml 5 ml 2 ml
HAIR LOSS Intensive subcellular treatment with peptides	BCN Capillum	5 ml
HAIR LOSS Mineral, complementary and nutritive treatment	BCN Scalp Trace Elements	5 ml 2 ml

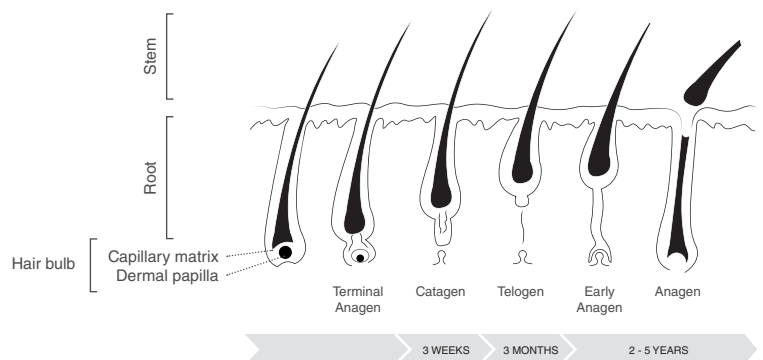
In the context of an 8 to 10 sessions treatment we recommend to alternate the indicated mixtures at the top to optimize the results. Also, according to professional criteria, type of alopecia and needs of each case, BCN Capillum-Peptides can be mixed with other active principles for hair loss of the BCN Classics range.

DETAILED INFORMATION

Composition of hair

- Stem** (visible part)
- Root** (not visible part, between the bulb and the departure of the scalp)
- Hair bulb** (capillary array (elements structure capillary) + dermal papilla (blood vessels))

NATURAL CYCLE OF THE HAIR FOLLICLE



THERE ARE THREE PHASES IN THE GROWTH HAIR

- ANAGEN:** Lasts for 2 to 6 years, stage of hair growth.
The dermal papilla receives nutrients through the blood vessels.
The extracellular matrix is in cell regeneration process.
- CATAGEN:** Dura entre 2 a 4 semanas. Fase en que el pelo ya está muerto. La papila dérmica empieza a retraerse.
- TELOGEN:** Lasts around 6 weeks. Hair in process of fall, residual hair.

The system responds to the action of growth factors and the destructive ones at each time, depending on the stage of the cycle:

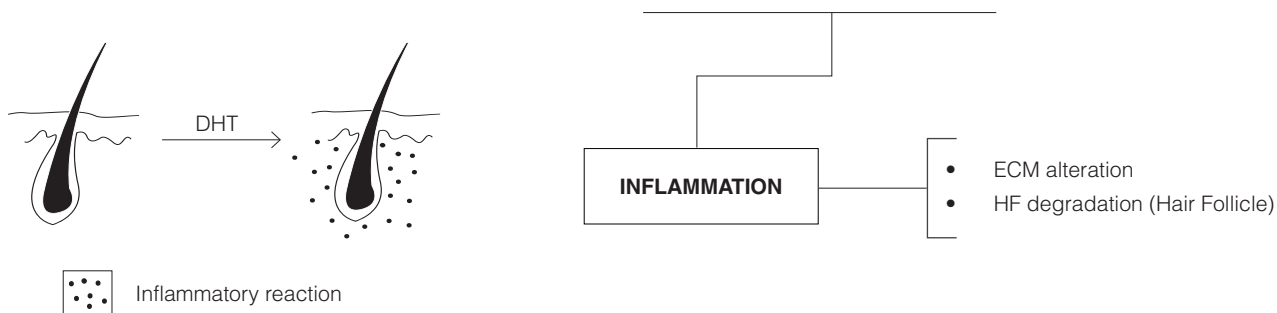
- GROWTH FACTORS -> ANAGEN PHASE
- DESTRUCTIVE FACTORS -> CATAGEN PHASE

The peptides included in BCN Capillum act by emitting signals (genetic expression of the elements involved in those processes prior to the action of these factors):

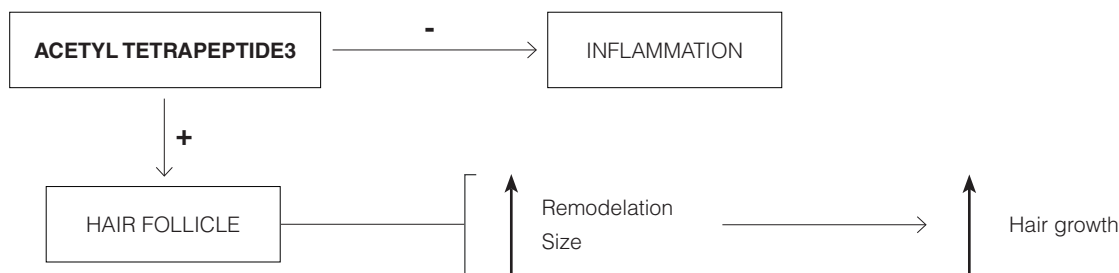
- By ACTIVATING the growth factors
- By INHIBITING the destructive factors

Its target, being to keep the time required for the capillary cycle, ensuring adequate duration of anaphase, avoiding its shortening, and minimizing the hair miniaturization.

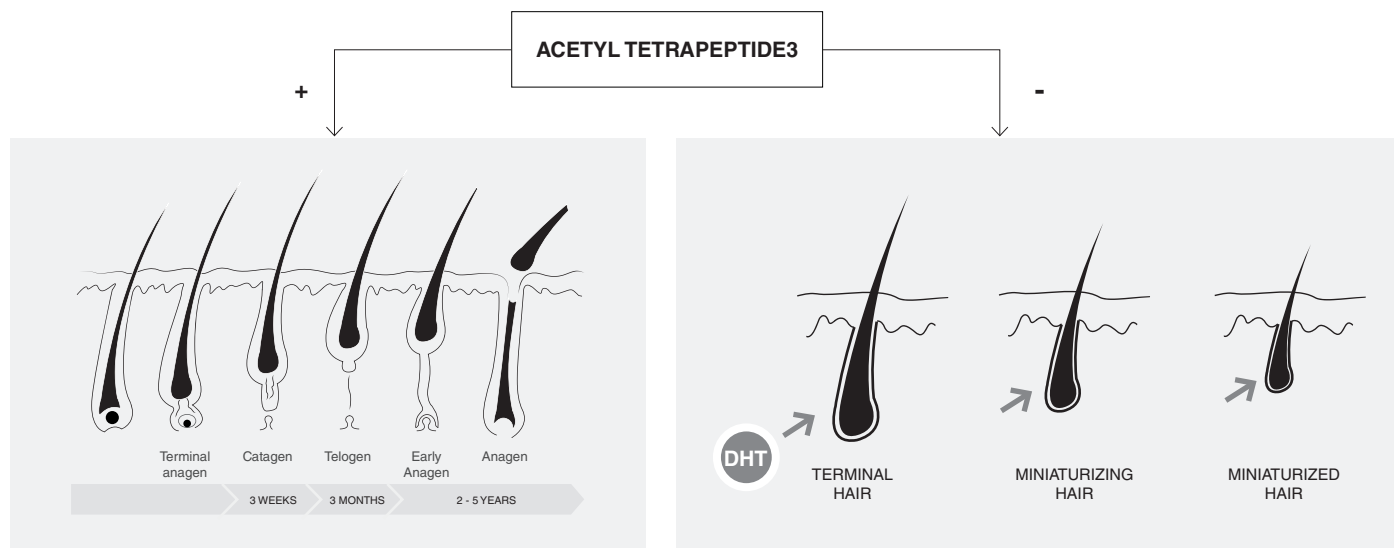
Internal factors such as hormonal changes, the DHT (dihydrotestosterone), stress, malnutrition, certain drugs; external factors (UV-AB rays, pollution etc.), accelerate the physiological aging process creating in addition **PROINFLAMMATORY CYTOKINES**.



BIOPEPTIDES ACTION



Is a small peptide complex that regulates extracellular matrix proteins and thus fragile hair shafts are more readily anchored to the scalp and are less shed prone. Acetyl tetrapeptide 3 has been shown to be superior to minoxidil in ex vivo testing. In addition, Acetyl-tetrapeptide-3 is a potent anti-inflammatory agent, helping to treat the white blood cell inflammation that is associated.



DECAPEPTIDE 28

Lengthens the anagen phase and reduces the catagen phase. Intervenes at the level of multipotential stem cells protein signalling of the follicular matrix: through a greater expression of the cateninB, responsible for signs promoting hair growth. Stimulation of dermal papilla cells (fibroblasts and keratinocyte) with release of growth factors (TGF) to the extracellular matrix, which activates the cycle of follicular growth; with revitalization of the follicle. It increases the expression of transcription factors EP2 and Lef-1 for regeneration fibroblasts.

OCTAPEPTIDE 2

Increases the proliferation of fibroblasts, and causes an increase in the expression of collagen, fibronectin and elastin. Stimulates the production of keratinocytes and acts by inhibiting its apoptotic phase ProG1. Activates hair follicle stem cells and the growth factor responsible for the migration and proliferation of follicular cells to build the stem with a more resistant keratin. The intercellular union at level of the stem is reinforced, resulting a stronger hair.

BIOTINOYL TRIPEPTIDE 1

Active form of biotin. Promotes scalp micro-circulation and reduces follicle atrophy and aging. Helps to slow aging effects and miniaturisation of hair by lessening the production of dihydrotestosterone (DHT), and so, improving the irrigation of the hair follicle. Enhance adhesion molecules stimulate hair strengthening genes, and increase the proportion of anagen hair.

OLIGOPEPTIDE 71

Inhibits the expression of IκB factor, component promoting hair fall. This activates the necessary signal NFκB to promote hair growth.

COPPER TRIPEPTIDE 1

Its benefit relates to its ability to efficiently bind and transfer copper ions. Copper tripeptide 1 is a member of a large family of copper-containing enzymes helpful in tissue repair, inflammation, metabolism, and synthesis of vital molecular structures. Belongs to a group of emergency response molecules which are released during injury. Helps accelerate wound healing. Increases keratinocytes proliferation, normal collagen synthesis. By modulating integrins and p63, Copper tripeptide 1 promotes the survival of stem cells in the basal epidermis.

NON PEPTIDIC INGREDIENTS ACTION

SILICA

Silica is responsible for collagen synthesis. Collagen its part of the connective tissues and skin, including hair follicles. It controls pH in the body to safeguard it against diseases. An acidic scalp is an invitation to infection, damaged follicles and hair breakage.

BIOTIN

While there is no study of the effects of biotin on alopecia, the facts that its deficiency causes hair loss and that its supplementation improves hair health are enough evidence to support the use of this vitamin (B7) as a hair loss remedy. Biotin is a crucial component to skin cells: Healthy skin cells play a major role in the health of hair follicles as well. Weak or unhealthy hair follicles result in the inability to retain hair, which leads to hair loss. Over time, follicles get weaker and hair loss increases. Not only that, but the follicles' ability to regrow and retain new hair diminishes.

PANTHOTEIC ACID

Works by improving effects of hair elasticity, moisture retention and flexibility. Panthenol, is part of the vitamin B group, but when it's applied to hair, it takes on a pro-vitamin form and converts into pantothenic acid. At this point, panthenol can penetrate the hair shaft as well as the hair's root; thus giving hair an extra boost of B vitamin which helps thicken hair as well as promote its growth.

RUTIN

Flavonoid derived used for helping Vit C absorption. Promotes blood capillaries health. Provides, more oxygen and nutrition to the dermal papilla.

CLOVER EXTRACT

Red clover is rich in isoflavones. It makes the hair stronger by preventing dandruff and scalp irritations. It is a very potent and natural inhibitor of 5αreductase.

B GROUP VITAMINS

Considering the number of biochemical processes dependent on the B vitamins, it is clear that Vitamin B included into formulation can promote hair growth and stop hair loss. They especially nourish cells of the hair follicles. Some of the B vitamins known to help reverse hair loss include Vitamin B3, B5, B6 and B12. Similarly, deficiencies in Vitamin B1, B2, B3 and B5 cause hair loss which can be stopped with adequate treatments. In treating hair loss, the B vitamins deliver great results B vitamins may inhibit the production of dihydrotestosterone (DHT). DHT is synthesized from testosterone and is regarded as the main cause of androgen-dependent alopecia. It causes the rapid decline of hair follicle cells both in number and activity. Therefore, hair treatments including B vitamins are needed to quickly reverse hair loss due to DHT.

PYRIDOXINE HCL VIT B6:

Specific types of B6 alone will inhibit DHT creation and androgen receptor activity.

**CYANOCOBALAMINE, VIT B12**

You need vitamin B-12 to form DNA, nerves and red blood cells. If you don't have properly formed red blood cells, they don't carry as much oxygen. A lack of oxygen can cause your hair to grow slowly or fall out.

RIBOFLAVINE, VIT B2

It is an antioxidant in which it searches the body for damaged particles called free radicals. These free radicals naturally occur in the body, but they damage DNA and cells. DNA signals the body to make various protein, if the DNA becomes damaged, protein would not be functioning properly, which means hair growth may slow down. It increases energy levels, boosts functions of the immune system and maintains healthy hair, skin and nails. Activates vitamin B6 (Pyridoxine) and niacin; two vitamins also key to hair development.

L-TRYPTOPHAN

Is a component of many different proteins, L-tryptophan is also indirectly involved in many enzymatic reactions, enabling the building of different tissues through the so-called 'structural proteins'. A further important function of L-tryptophan is supporting the synthesis of niacin (vitamin B3) through its role as a provitamin.

APIGENIN

Apigenin showed decreased levels of TGF- β 1 expression. Growth factor β (TGF- β 1) derived from dermal papilla cells (DPCs) is a catagen inducer that mediates hair growth suppression in androgenetic alopecia. In addition, treatment with apigenin also significantly increased the proliferation of (human DPCs) cells. Furthermore, apigenin stimulated the elongation of hair follicle organ culture. Taken together, these findings suggest that apigenin, which is known to have antioxidant, anti-inflammatory, upon others, stimulates hair growth through downregulation of the TGF- β 1 gene.

AMINO ACIDS

There is a simple relationship between amino acids and hair. Amino acids are the building blocks of all the proteins found in the body and hair is composed of keratin, a protein. It is this keratin which gives hair strands their strength. If amino acids are insufficiently supplied to the cells of the hair follicles, the level of keratin production will drop or the keratin produced might lose most of its strength. Both of this will lead to reduced hair growth, discolored hair and hair strands that easily fall off. The hair is an example of the complexity and beauty of how amino acids form into proteins. They are not simply strung together. Rather, each protein is made from specific sequence of amino acids to form a superstructure. This superstructure must then be folded into the exact 3-dimensional form for the protein to function at all or properly. For example, the set of amino acids making up keratin, the hair protein, must not only be pieced together in a perfect sequence but must also be folded up in the right way to fulfill its role. Lastly, amino acids have different functions and they do not all perform the same ones.

TAURINE

Taurine has a great potential as anti-alopecia effect especially against the one caused by the chemical stress.

ORNITINE

Ornithine Decarboxylase (ODC) expression is linked with hair follicle growth. We can easily find it in proliferating bulb cells of anagen follicles. A down regulation of ODC expression is noticed when the follicle enters the catagen phase.

ADENOSIN

Adenosine increases hair growth and thickened miniaturized hair. The efficacy of hair growth results from the effects of FGF7 fibroblast growth factor 7 and VEGF vascular endothelial growth factor which are stimulated by activation of adenosine receptors on dermal papilla cells. Adenosine stimulates growth of hair fiber due to the action of FGF7 and VEGF for epithelial cells in hair follicles.

CITRULLINE

The medulla and inner root sheath cells develop a protein rich in arginine residues, that through a side-chain conversion into citrulline residues having an important role of the hair follicle. Growing process.

ARGININE

Is a precursor of nitric oxide, essential for hair growth. Hair growth is stimulated due to the properties of arginine increasing the amount of nitric oxide in the body to help potassium openings. This helps to improve blood supply to the roots of the hair and encourage hair growth. Arginine also improves capillary microcirculation to the cells of the skin follicles through the vasodilatation caused by the nitric oxide it produces in the body. It is also known to strengthen hair shafts and accelerate the development of hair follicles.

CYSTEINE

This is one of the non-essential amino acids that our bodies are able to produce. Cysteine is one of the many amino acids that are necessary for healthy hair growth. Cysteine also supplies sulfur to hair cells to improve hair strength. Cysteine is also known to bind to and transport minerals such as iron and zinc which are essential agents in the reversal of hair loss.

CYSTINE

This non-essential amino acid actually makes up approximately 10 to 14 percent of our skin and hair. Cystine is formed from the disulfide bonding of two cysteine molecules. This bonding of two amino acids provides strength for hair shafts. Since cystine is formed from cysteine, it shares the same nutritional benefits and dietary sources as that amino acid. Cystine can be used to treat hair loss, and has been known to promote natural hair regrowth.

TYROSINE

Tyrosine is produced in the body from another amino acid, phenylalanine. This is another non-essential amino. This amino acid creates melanin, which is the pigment that colors our hair and skin. Tyrosine is also known to contribute to reduction in stress hormone levels in the body. Since stress is a strong factor in hair loss, tyrosine can slow alopecia too by reducing stress.

SERINE

It has the ability to replenish cysteine levels in the hair to keep it strong and smooth.

HYDROXYPROLINE (4-HYDROXYPROLINE)

Is a non-proteinogenic amino acid formed by the post-translational hydroxylation of proline. Hydroxyproline is a major component of collagen, where it serves to stabilize the helical structure.












TREATMENT PROTOCOLS

Initial considerations

THE IMPORTANCE OF INGREDIENTS: THE MESOCEUTICALS®

It is very important to use sterile and aseptic products in treatments with Meso Pen or Meso Roller. You have to keep in mind that this type of treatment produces small wounds on the skin's cutaneous surface. Therefore, the application of non-sterile products on the patient's skin may improve the risk of different cutaneous infections. Plus, the additives, preservatives and perfumes added to non-sterile products suppose a higher risk of allergies because when applied with Meso Pen or Meso Roller they reach a higher depth than with topic use.

The Institute BCN's mesoceuticals® are:

 Meticulously selected pure active ingredients	 Based on original mesotherapy formulas	 Sterile (no preservatives or additives) and highly tolerant	 Pharmaceutical formulations
 Safe	 Highly concentrated	 Proven effectiveness	 Comfortable application using a gentle cosmetic procedure
 Products can be combined to obtain a specific mix for each individual case to be treated	 Monodose	 Mesotherapeutic product for aesthetic purposes	

RECOMMENDED PROTOCOL

Institute BCN team works hard to know and prove the **latest improvements on techniques and procedures applied to transdermal mesotherapy treatments**. The recommendations you will find below are the result of our daily work.

Institute BCN strongly recommends the following two-phase protocol:

1. Meso Pen (ideally) or Meso Roller treatment.
2. TDS treatment (Transdermal Delivery System)* for the application of a hyaluronic acid layer on face treatments and hyaluronic acid + DMAE layer on body treatments.

* [Electroporation, iontophoresis, ultrasounds, thermotherapy, vacuum therapy, galvanic and continuous currents or radiofrequency, among others].

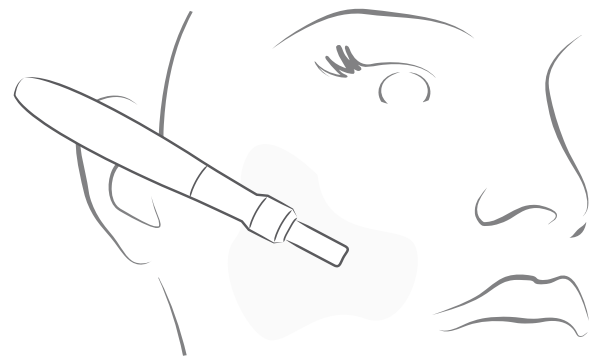
It is not indispensable to apply the combined technique Meso Pen + TDS. It is also possible to perform the treatment only with Meso Pen, Meso Roller or TDS individually. For traditional mesotherapy treatments see the applicable law in your country.

BENEFITS OF MESO PEN + TDS PROTOCOL

Meso Pen is an electronic micro needle mechanism that opens more than **1.000 micro channels per second in the skin**. These cutaneous micro channels or micro trauma create an innate response on the organism that helps repair the skin, which leads to the following benefits:

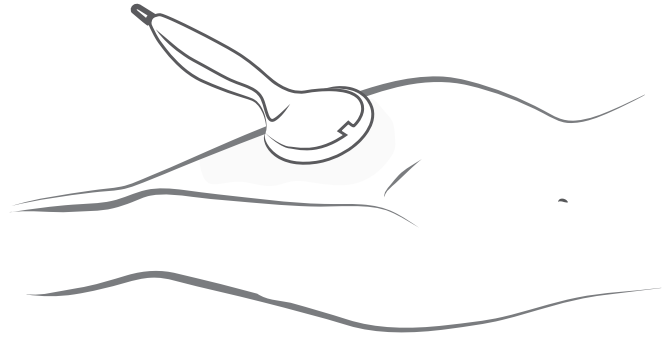
- Stimulates **collagen and elastin** creation.
- Has a **firming and rejuvenating** effect.
- Improves the appearance of **scars and stretch marks**.
- Improves skin **wrinkles** and fine expression lines.
- Reduces **pore** size.
- Stimulates **hair** growth and prevents hair loss.
- In addition, favours the penetration of **active ingredients**.

Meso Pen is the **most secure, hygienic, quick and effective** transdermal penetration system of the market.



The infiltration of a **Hyaluronic Acid 2% (BCN Classics, sterile vial)** layer after the Meso Pen treatment, applied with any of the transdermal delivery systems (TDS), leads to the following benefits:

- Creates a **'sealing effect'** that fixes the product or mix applied during the treatment, increasing its results.
- This 'sealing effect' contributes to **prevent transdermal water losses** that may arise from Meso Pen treatments and increases skin hydration.
- **Protective** action. It creates a non occlusive film that protects the skin from environmental aggressions.
- **Scarring** effect. It favours a quick skin re-epithelialisation, in other words, the recovery of its normal functions and cellular communication after disturbances induced by Meso Pen treatment.
- **Filling** action. Hyaluronic acid retains water molecules creating a filling effect and increasing skin volume.
- Also, it offers a **warm and nice sensation** to the patient as the final part of the treatment.



SESSIONS' INTERVAL / ACTIVE INGREDIENTS QUANTITY

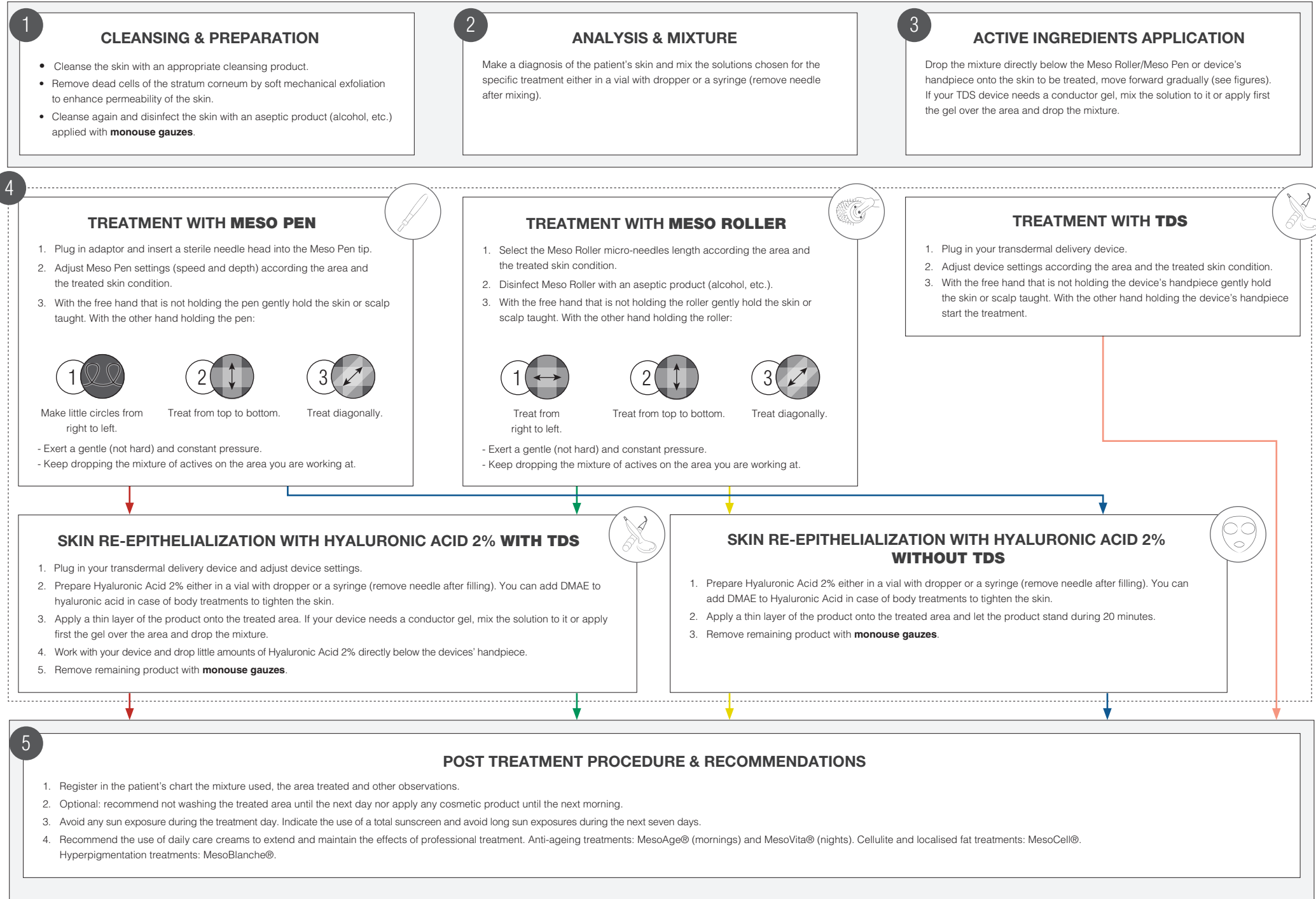
Sessions	<p>We recommend a 14 days interval between sessions with Meso Pen.</p> <p>We recommend a 7 days interval between sessions with Meso Roller.</p> <p>We recommend a 6 days interval between sessions with TDS.</p>
Quantity / area	Mixtures quantities can be changed according to the treated area and the system used.

TREATMENTS WITH MESOCEUTICALS®



WARNINGS

- See the applicable law in your country.
- We recommend getting a signed consent from each patient before starting the treatment.
- To avoid infections, make sure the device is not in touch with other objects before the treatment.
- Follow the hygienic standards of medical-aesthetic practice (disinfection, use of gloves, treatment room's proper cleansing, etc.).
- Examine skin's patient before treatment. Do not perform the treatment if the skin is infected, inflamed, injured or if there is any other anomaly.
- Make sure you check the seal, damage and term of validity of the active ingredients before starting the treatment.
- Meso Pen needles are for single use only. Meso Roller is for personal and not transferable use and should be disinfected before and after each treatment.
- Do not exert excessive pressure with Meso Pen nor and Meso Roller.
- Avoid the contact of Meso Pen and Meso Roller with lips and eyelids, as the skin is thinner in these areas.
- Do not perform this kind of treatments to underage people.
- Redness and burning/ itching mild sensation are absolutely normal reactions after the treatment with Meso Pen or Meso Roller. Duly inform the patient about it.
- Follow the instructions, contraindications and warnings supplied by the manufacturer of the device used for the treatment carefully.
- You should pay special attention to patients who have or have suffered from various diseases such as heart abnormalities, blood clotting problems, platelet abnormalities, anticoagulant therapy, facial cancer (past or present), chemotherapy, steroid treatment, facial skin diseases, diabetes and other chronic diseases. It is not recommended to use Meso Pen to pregnant or lactating women. It is also not recommended to apply a Meso Pen treatment to people who have undergone a botox treatment after 2 weeks minimally or 4 if they have some kind of filler.
- If rashes, allergic reactions or other unwanted effects occur, stop the treatment immediately and contact Institute BCN customerservice@institutebcn.com.

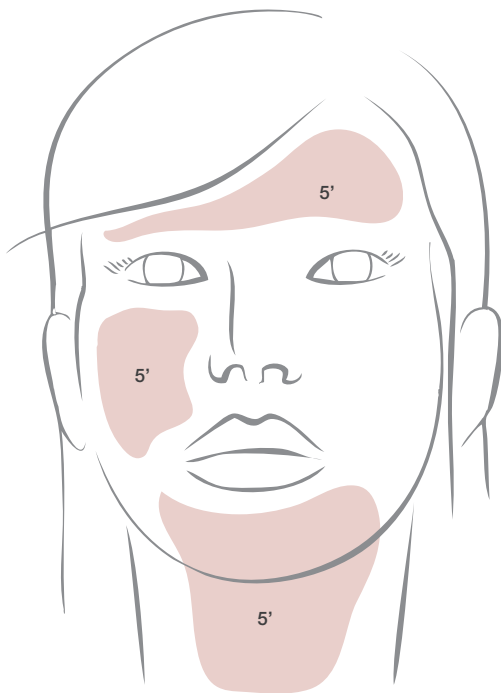
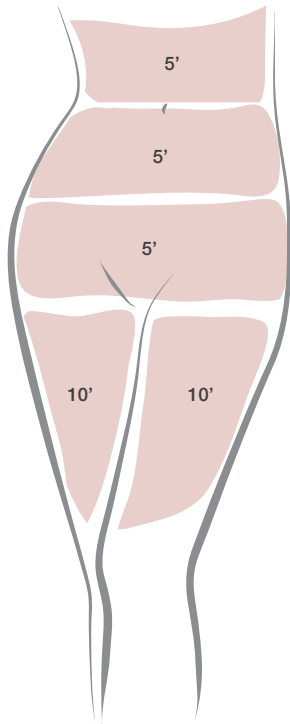


Legend:

- TDS (Red arrow)
- Meso Roller (Yellow arrow)
- Meso Roller + TDS (Green arrow)
- Meso Pen (Blue arrow)
- Meso Pen + TDS (Red arrow)

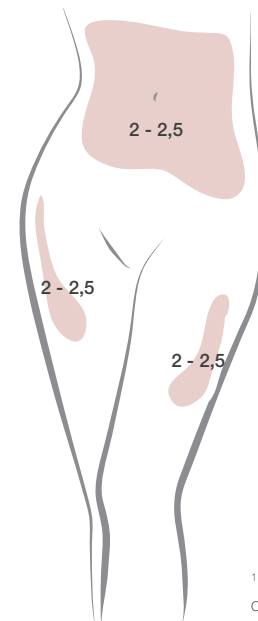
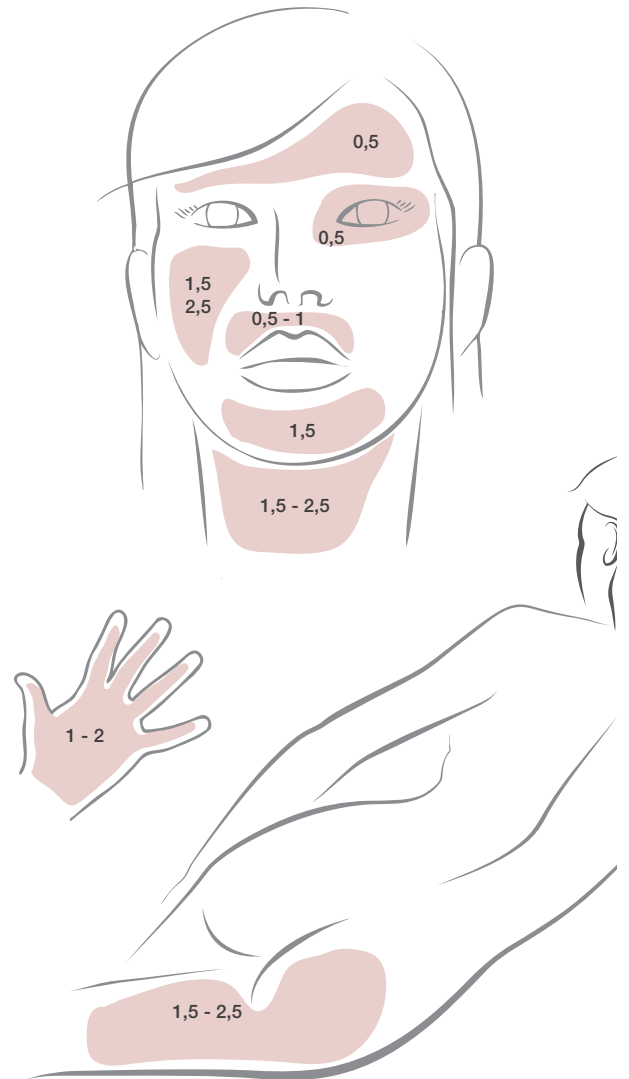
TDS

RECOMMENDED TREATMENT TIME PER AREA



MESO PEN

RECOMMENDED DEPTH PER AREA¹



¹ Depths over 2mm can only be applied by qualified medical professionals.