



BCN LUMEN-PEPTIDES

Advanced Whitening Cocktail

The formula of BCN Lumen-Peptides lightens hyperpigmented areas of the skin and prevents the formation of new imperfections on the face and body thanks to the synergy of three types of active ingredients which reduce melanogenic factors, inhibit melanin synthesis and increase cell detoxification.

These are the new generation peptides, the pigment-removing tyrosinase inhibitors (α -arbutin and extract of liquorice root) and finally, powerful anti-oxidant active ingredients (3-O-ethyl ascorbic acid, thiocetic acid, vitamin B3 and glutathione).

The other ingredients of this product, hyaluronic acid, vitamins, minerals and amino acids, help overall to maintain a healthy skin, that is well-nourished, perfectly-hydrated, clear, blemish-free and younger-looking.

It is suitable to be used for melasma, age spots, hyperpigmentation during pregnancy, post-inflammatory hyperpigmentation and blemishes associated with sunburn.

DETAILED INFORMATION

Skin pigmentation is caused by the synthesis of melanin by the melanocytes through a process called melanogenesis. After the melanin pigments are synthesized, they are then transferred to the keratinocytes (the most abundant cells on the skin surface), in cellular vesicles called melanosomes. The more melanosomes that reach the keratinocytes on the surface, the darker the skin becomes. In fact, the skin produces two types of melanin: pheomelanin, in people with pale skin and red hair and eumelanin, in people with darker skin and hair and people with black skin.

Melanin synthesis is produced from the amino acid tyrosine. Tyrosine, in the presence of the enzyme tyrosinase and oxygen, is oxidized to dopa, which, in turn, is oxidized to dopaquinone. The dopaquinone then spontaneously converts to leucodopachrome, which easily oxidates to dopachrome. The dopachrome loses its carboxyl and is reorganised to form melanin.

The combination of active ingredients in BCN Lumen Advanced-Peptides acts on all stages of this process of melanin production in order to achieve a depigmenting, lightening and balancing effect on the skin, thanks to the synergistic and combined action of the three types of active ingredients: the new generation biopeptides (oligopeptides 51, 34 and 58, the decapeptide 15 and the acetyl-glycine-beta-alanine), the pigment-removing tyrosinase inhibitors (α -arbutin and extract of liquorice root) and the anti-oxidants, such as ascorbic acid, thiocetic acid, vitamin B3 and glutathione.

This product also reduces melanogenic factors, inhibits melanin synthesis and increases cell detoxification. These actions have the following effects:

- A reduction in melasma (excess pigmentation).
- A reduction in age spots.
- A reduction in hyperpigmentation during pregnancy.
- A reduction in post-inflammatory hyperpigmentation.

The function and mechanism of action of each component is as follows:

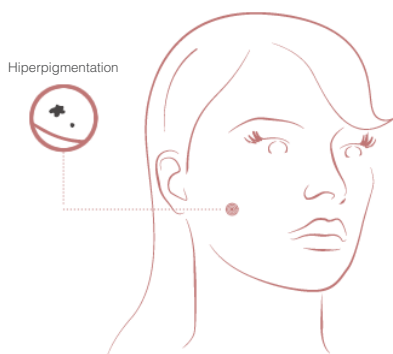
- Biopeptides:
 - **Oligopeptide-51**, whose lightening effect is due to its inhibitory action at a cellular level of the microphthalmia-associated transcription factor (MITF), which is the master gene for melanocytic survival and a key factor in regulating transcription of the proteins which generate melanin in the physiology of normal pigmented cells, such as proteins related to type 1 and type 2 tyrosinases (TRP 1 y TRP 2). The result is a reduction in both the transcription factor and the tyrosinases. It also inhibits expression of the markers of melanogenesis and induces morphological changes in the melanocytes.
 - **Oligopeptide-34**, also acts by inhibiting melanin synthesis by reducing both the MITF factor and the tyrosinase-related proteins 1 and 2. This peptide also acts on the melanosomes, reducing their levels and blocking the transfer of pigment from the melanosomes to the keratinocytes. In addition, the oligopeptide-34 has an anti-inflammatory effect, as on the one hand it reduces the proliferation of activated T cells and lowers the volume of proinflammatory cytokines, as well as their level of transcription, translation and expression where the inflammation is due to the polysaccharide endotoxines. On the other hand, it reduces translocation to the p65 subunit nucleus of the protein complex, nuclear factor kappa-light-chain-enhancer of activated B cells (Nf-kB), which plays an important role in inflammatory and immune responses. Finally, this peptide increases the expression of collagen and fibronectin and therefore has an anti-wrinkle effect.
 - **Oligopeptide-58 and Oligopeptide-68**, just like the peptides mentioned above, inhibit the action (through the MITF cell pathways) and therefore, the transcription of the principal melanogenic proteins, tyrosinase 1 and 2, as well as protein kinase C- β (PKC- β). In this way, synthesis of melanin in the melanocyte is reduced. There is also a reduction in the formation of dendrites or extensions of melanocyte, the part of the cell that allows the melanosome to reach the keratinocytes in the epidermis.
 - **Decapeptide-15** has the same mechanism of action as the peptides above.
 - **Acetyl-glycine-beta-alanine** is a peptide that inhibits the two cytokines which stimulate the generation of melanocytes: the stem cell factor and endothelin 1, which are activated by UV rays and which modulate the melanocyte response. It also inhibits the expression of the MITF gene, it reduces the content of intracellular melanin, as well as melanophilin, both at the messenger RNA level and at the protein level.



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- Pigment-removing non-peptidic enzymatic tyrosinase inhibitors:
 - **Alpha-Arbutin** is the glycosylated derivate of hydroquinone, which is the standard depigmentation agent used in dermatology, but it is better tolerated, so can be used in cosmetics. Its depigmentation effect is produced because it effectively inhibits tyrosinase activity and, therefore, the production of melanin. It accelerates the decomposition and elimination of the melanin. Thanks to structural similarities with the tyrosinase substrates, the arbutin acts by following a competition mechanism, binding itself to the active areas of the enzyme. It is also able to inhibit the DHICA polymerase (5,6-dihydroxyindole-2-carboxylic acid), a product resulting from the oxidation of the tyrosine by the tyrosinase. It also inhibits the maturation of the melanosomes, therefore, resulting in a reduction in the synthesis of melanin.
 - **Extract of Glycyrrhiza Glabra root**, which contains glabridin, a molecule which is structurally very similar to hydroquinone, as well as liquiritin and isoliquirtin. It disperses the melanin and affects melanogenesis and skin inflammation. It reduces the dopa-positive melanocytes (a dopa-positive reaction occurs when dopa is added to a tissue that contains melanocytes with tyrosinases). It also shows anti-inflammatory (cortisol-like) and healing properties.
- Principle anti-oxidant active ingredients:
 - **3-O-ethyl ascorbic acid**, is a more stable acid than Vitamin C. It has an anti-oxidant action for reactive oxygen species (ROS) related to melanogenesis. It inhibits the activity of tyrosinase by binding itself to the active site of the copper-containing enzyme. It also reduces the oxidized dopaquinone.
 - **Thioctic or α-lipoic acid**, which, additionally, is also a non-enzymatic inhibitor of the tyrosinase. It acts by inhibiting the expression of MITF. Its anti-oxidant capacity is the basis of its depigmenting action. It has both an anti-oxidant and an anti-inflammatory action.
 - **Vitamin B3, niacin or nicotinamide**, acts similarly to the above, as an anti-oxidant and anti-inflammatory, it prevents photoimmunosuppression and the transfer of the melanosomes (containing the melanin) from the melanocytes to the keratinocytes, so that the melanin is not released into these epidermal cells.
 - **Glutathione** neutralizes the free radicals, increases cellular detoxification and changes the production of dark pigmented eumelanin to light pigmented pheomelanin. It inhibits the tyrosinase indirectly by binding itself to the active site of the copper-containing enzyme.
 - **Vitamin E**, through its powerful anti-oxidant action slows down the ageing of the skin cells. It also combats free radicals which contribute to the deterioration of skin tissue and which are responsible for the early appearance of wrinkles. It also offers protection from the sun as well as regenerating skin that has been damaged by the sun, due to its regenerative and healing properties. It protects the skin from environmental toxins caused by pollution and harsh weather conditions.

BCN Lumen-Peptides also contains other ingredients, among which it is worth mentioning retinol and adenosine, which promote the loss of pigmented keratinocytes through peeling, so improving the appearance, luminosity and softness of the skin. Vitamins, minerals, amino acids and other components of the product act together to help overall to maintain a healthy skin, that is well-nourished, perfectly-hydrated, clear, blemish-free and younger-looking.



PRESENTATION
Vial 5 ml 0,176 fl. oz. Box of 5 vials
PEPTIDES
Decapeptide-15, Oligopeptide-34, Oligopeptide-51, Oligopeptide-58, Oligopeptide-68
TREATMENTS
Hiperpigmentation
CLAIM
Whitening treatment softens pigmentations on face and body acting on the melanin synthesis.

TREATMENTS AND RECOMMENDED MIXTURES¹

HYPERPIGMENTATION AND DEPIGMENTANT	BCN Lumen - Peptides	5 ml
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¹ Create most appropriate mixture individually for your client's skin problem.

More information: www.institutebcn.com












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].

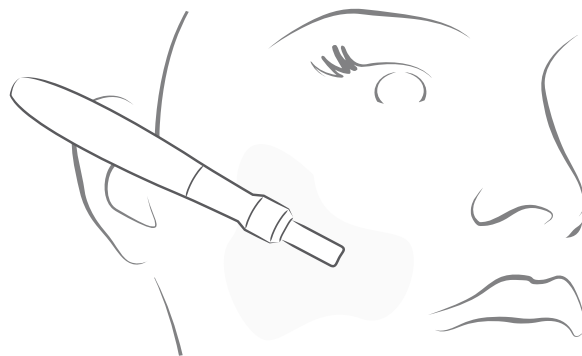
It is not indispensable to apply the combined technique Meso Pen + TDS. It is also possible to perform the treatment only with Meso Pen, Meso Roller or TDS individually. For traditional mesotherapy treatments see the applicable law in your country.

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:

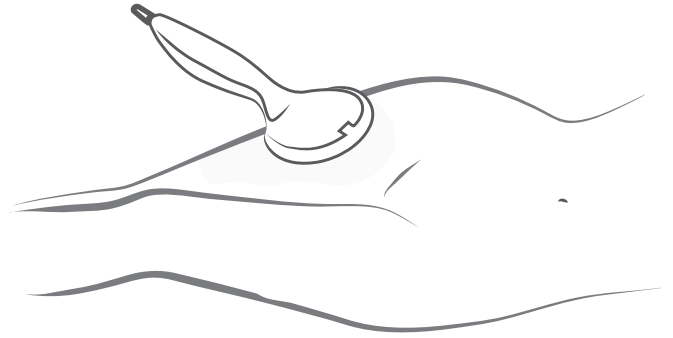
- Stimulates **collagen and elastin** creation.
- Has a **firming and rejuvenating** effect.
- Improves the appearance of **scars and stretch marks**.
- Improves skin **wrinkles** and fine expression lines.
- Reduces **pore** size.
- Stimulates **hair** growth and prevents hair loss.
- In addition, favours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



ACNE



ANTI-AGEING



CELLULITE



EYE AREA



STRETCH MARKS AND SCARS



LOCALIZED FAT



HYPERPIGMENTATION



HAIR LOSS



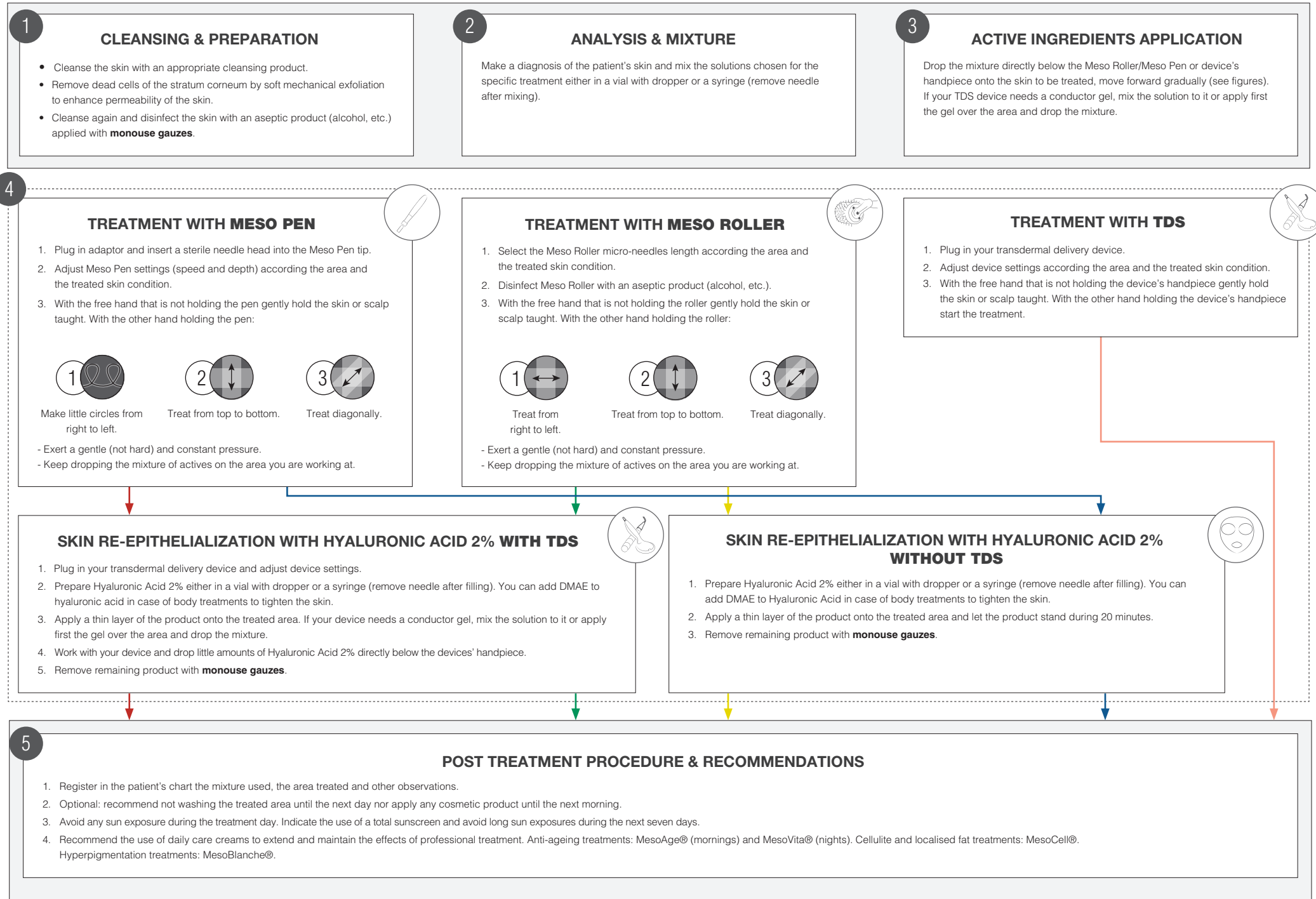
FIRMING



COUPEROSE

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.

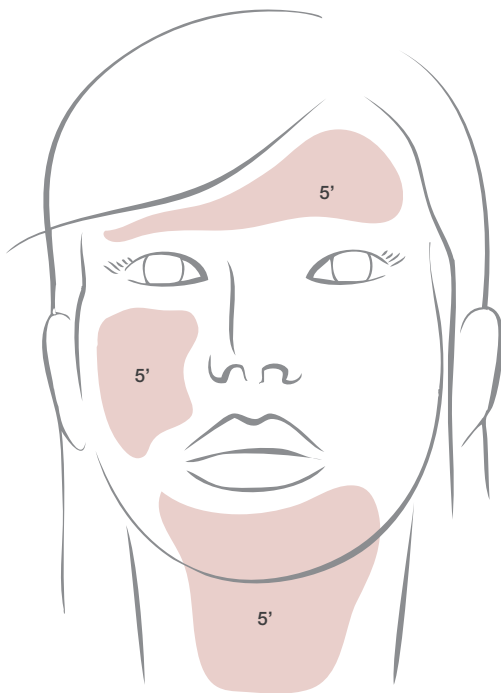
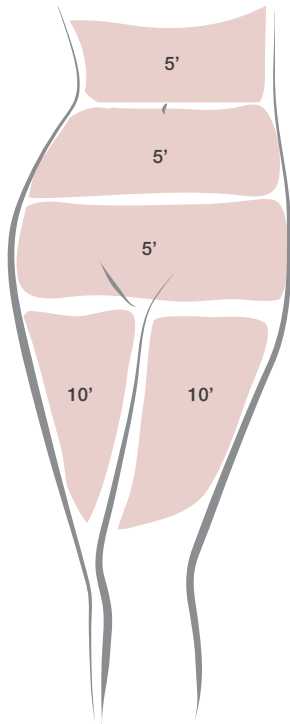


Legend:

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

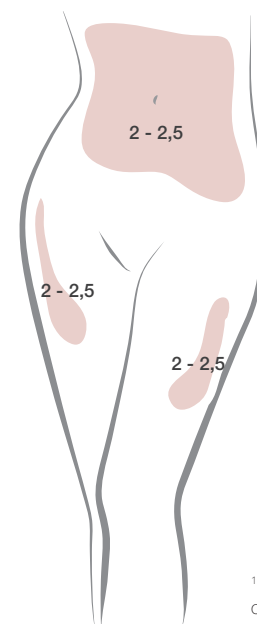
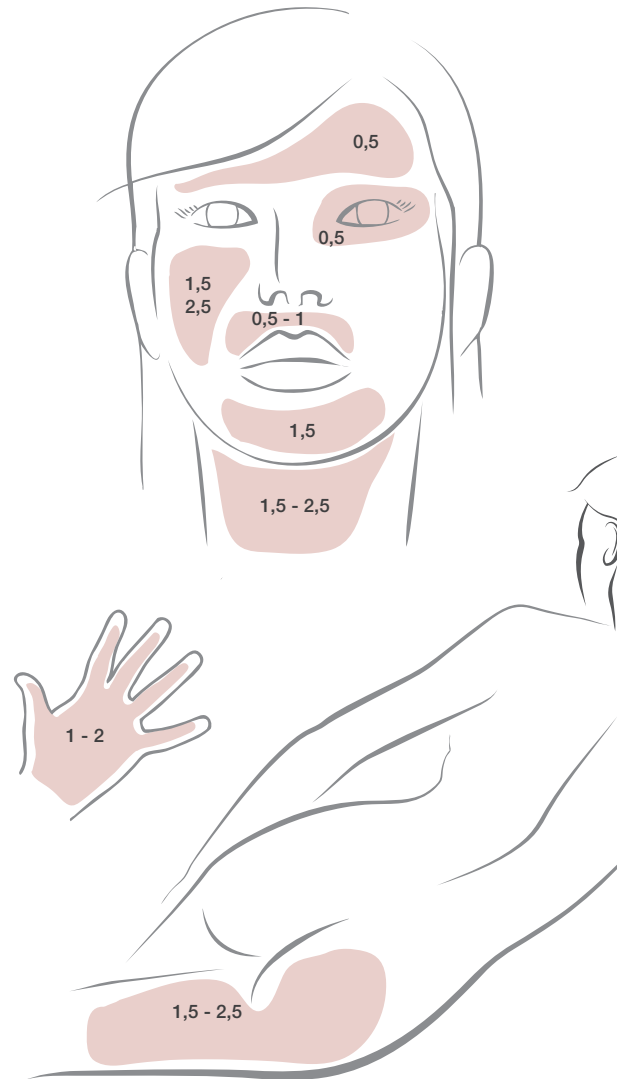
TDS

RECOMMENDED TREATMENT TIME PER AREA



MESO PEN

RECOMMENDED DEPTH PER AREA¹



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