

# THE MESOLIFT

*Dr. Grislaine Beilin*

The mesolift is a variation of technique called mesotherapy that was invented by Doctor Pistor more than 20 years ago. It is based on local injection of micronutrients aimed at stimulation and renewal of aging skin cells.

## Indications

The treatment improves skin hydration and smoothes the fine wrinkles. The primary action is related to stimulation of cellular and mitochondrial activity by introduction of micronutrients, vitamins, oligo elements, nucleotides, hyaluronic acid and other products. The process also activates intercellular exchanges and improves local metabolism. Multiple mesolift treatments stimulate fibroblasts and in turn increase collagen production.

The treatment is not aimed at pigment disorders like hypo or hyper pigmentation, vascular disorders, blotches or telangiectasia.

The mesolift is indicated for any age and it can be done on a 25 year old female model as well as on a 60 year old woman. It can be used on the face, neck and hands.

Mesolift is a part of total ageing treatment strategy along with fillers injections, peeling, laser, IPL, botulinum toxin and others.

## Main formulations ingredient

### Non reticular Hyaluronic acid

Non reticular hyaluronic acid is a linear polysaccharide identical to the conjunctive tissue hyaluronic acid (HA). It belongs to the family of the glycosaminoglycans (Gags) or mucopolysaccharides.

It is a translucent viscous -elastic gel, highly purified which contains 1% of hyaluronic acid in the form of sodium salt.

Its viscosity and molecular weight is extremely close to natural hyaluronic acid and its concentration (1%) enables it to integrate perfectly into the tissue.

HA is a major component of conjunctive tissue that is actively manufactured by fibroblasts. It was discovered in 1934 per Meyer

and Palmer in the bovine vitreous liquid. It is produced by fibroblasts and especially present in the conjunctive tissue with concentrations of about 0,1% to 1%. Although the quantity is relatively low (0,1 - 0,2 mcg/mg dry weight) its concentration around the cells can go up to 2,5 mg/ml.

HA takes integral part in proliferation, migration and differentiation of keratinocytes and takes part in all regulating exchanges. Provides extra cellular matrix space for the nutritional exchange, captures free radicals and with its fast metabolism (half life of 15 days) contributes to dermis renewal and elimination of harmful compounds from the skin. The natural loss of skin thickness that various authors estimate at 6% per decade is mainly related to loss of hyaluronic acid. Supplementing HA by direct injection makes it possible to reconstitute the skin thickness and to fight against inescapable volumetric reduction.

Hyaluronic acid also acts on angiogenesis by supporting the proliferation of endothelial cells and thus allowing better cutaneous vascularization.

## Other formulations ingredients

### Vitamins

- Vitamin A acts on the flexibility of the skin by controlling the growth of the epidermis cells, keratinisation, supports cicatrisation and corrects partial thinning of the dermis related to ageing.
- Vitamin E is an antioxidant and helps maintain the integrity of tissues by opposing the formation of free radicals.
- Vitamin C stimulates synthesis of collagen and inhibit production of melamine.
- Vitamin B group is essential to the good biological balance of the skin.
- Vitamin K plays an important part in regulation of micro-circulation.

A pharmacological study in vitro was carried out on a response of normal line of human skin fibroblasts to polyvitamins

stimulation. The test measured a degree of mitochondrial stimulation (method of MOSMANN) of human origin fibroblasts in relation to the time of exposure. It was an average 12 – 28% increase in mitochondrial activity after 72h of contact with polyvitamins solution and 13 – 35% after 168h of exposure to the same quality solution.

## Other sometimes used components

### Aminoacids\*.

Aminoacids are stable, water-soluble compounds which constitute the structural molecular elements of proteins. There are 20 essential amino acids and a certain number of nonessential amino acids. Together, they form polypeptides which represent the base of tissue architecture, consequently that of the skin. A specific amino acids complementation makes it possible to restructure or even repair aged skin.

### Minerals.\*

### Coenzymes.\*

Coenzymes are organic compounds that combined with an enzymes play an essential role in the action of enzymes. They are thus primarily “activators” of a biochemical reaction. Direct introducing coenzymes into the dermis tissue supports biochemical reactions and increases the speed of tissue rebuilding.

### Nucleic acids.\*

Nucleic acids (or polynucléotides) are represented by ribonucleic acids (RNA) and the deoxyribonucleic acids (DNA).

Their function is extremely complex. Nucleic acids carry information that makes it possible to control the synthesis of proteins. In fact, they have a role of controlling the way in which various amino acids are assembled to form a given polypeptide. Transcutaneous complementation of nucleic acids stimulates synthesis of important skin proteins and helps restructure the whole cutaneous tissue.

## Injecting techniques

### - manual

Classically described by Dr. LeCoz, it consists of injecting a micro drops of the solution. The depth of injection does not exceed 1 mm. It is done by multiple micro punctures separated by space of 2 to 4 mm. The difficulty consists in not allowing the needle to trail on the skin between each puncture.

The other name of the technique is “point by point” (PPP)

### -mechanical

Using a mesotherapy gun helps to avoid the manual technical faults of (PPP). Frequency, depth and quantity of the injected fluid could be programmed. It also helps lower total time of the procedure.

## Technique of the mesolift

We use a mixture of polyvitamins (4ml) and hyaluronic acid (1ml) meaning of total 5ml for a face and neck treatment. The mixture must be shaken vigorously to obtain a homogeneous solution. We use 5 cc syringe and 30G gauge needle.

The treatment protocol consists of 3 to 4 treatments at 15 days interval for the first 2 months, then 1 treatment per month for 3 months, then the frequency needs to be adjusted for each patient according to the results.

The treatment does not require preliminary skin or allergy tests. Contraindications include cutaneous infections such as acne, herpes, shingles, dermatitis and allergy to any formulation components. Appearance of a pruritus or edema in the course of treatment requires its interruption and the application of antihistamine or corticoid cream. Anticoagulants are to be avoided 48h before the treatment.

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*\* Coenzymes, nucleic acids, aminoacids and minerals formula supplementing will be discussed in a separate article.*

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