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## Bio-cybernetics\_\_\_\_\_



Fig. 1 Treatment of wrinkles due to age in the face: before



Fig. 2 Treatment of wrinkles due to age in the face: after ten treatments

# A gentle way to firm skin tissue and shape the body

**Disfigurement, aging processes, beauty and eternal youth.** The fear of humans of aging is surely the most important reason to be “forever young”(1). This has not changed throughout the centuries. The currently prevailing increased awareness of the body in connection with a pleasantly increased life expectancy and a lasting, reaching into high seniority, physical and mental fitness, make this wish more and more powerful.

Youth is usually associated with beauty and attractiveness; beautiful people are assigned sexual charisma, but also social competence and professional qualifications. It is a proven fact that beautiful people have advantages when it comes to partner selection, leisure time and the business world (2). Already in their early ages, Germans become fatter, almost 50 percent of all Germans today are overweight. Very often this is accompanied by a disproportionate fat distribution. Overweight and lack of exercise are the main reasons of “cellulite” besides a genetic disposition and accelerated body growth. By the age of 30, the aging process of the skin starts. The skin becomes rough and dry, and increasingly shows more wrinkles and relaxation. In the face, forehead wrinkles

become noticeable, nasolabial furrows, double chin formation and crow's feet and approximately between the age of 50 and 60, larychmal sacks, sinking in of the eyes and prominent nasolabial bolster. Between the ages of 60 and 70, the platysma muscles show in strings (3). The underlying processes are only partly known as of today (4).

The described phenomena are contrary to the ideal perception of human aesthetic. Numerous therefore are the attempts to turn these phenomena around, or at least to alleviate them. External, systemic, invasive, chemical and physical methods and numerous combinations compete for the favor of the affected. Generally, only methods should be recommended and applied which have a recognizable concept to solve problems, whose effect is measurable and which have no unacceptable, unwanted effects. In the following will be researched to what extend the “beautytek by medilab” method fulfills these requirements.

**beautytek - a bio-cybernetic method** beautytek is a bio-cybernetic feedback method, which, by applying electrical currents with differing characteristics after measuring the physical potentials in the

treated regions, creates an energetic balance. Today in the medical field – at the latest since the findings by genetic technology – there is no argument as to the basic structure and relevance of programs to regulate biological systems through cybernetic controls, even though, the consequences are not lucid and have not been part of medical science for very long.

Correcting the program for biological sequences (not the biological program!) is only possible on a non-material (molecular) and non-biological level - on the level of information technology. The communicative problem here however is that the information technology is expressed on an abstract, energetic level to which the rules of classical natural sciences do not apply. Approaches of the energetic information technology – also in connection with the biological processes in humans – have been around for a while. Due to the relative inexplicableness of the necessary abstractions was it mostly used as black-box method, often ideologically, esoterically or pseudo-religiously justified. Examples therefore are Far Eastern energetic methods, like Reiki. Other energetic methods have been put to the biologic functional test, where they

naturally do not fit (5).

The beautytek program follows the following concept on the basis of bio-cybernetic:

- measuring the body potential of the region to be treated
- estimation of the parameters of intracellular resistance, extracellular resistance, membrane capacity
- calculation of the optimum model
- energetic balance through electrical currents of different characteristics

The electrical currents are mediated through electrolyte containing gels.

A cybernetic method has to have the results tested according to natural scientific methods.

**The beautytek study H.** Tronnier and U. Heinrich, Institute for experimental dermatology "Derma Tronnier" of the University Witten-Herdecke, researched in a survey "About the effectiveness of cosmetic treatment – beautytek study" the results of beautytek treatments of 12 volunteer test persons, who received treatments 12 times over the period of six weeks. The goal of the study was to achieve a body modulation of the chest

Scan)

3. Measurement of the capillary skin circulation and the oxygen saturation (O<sub>2</sub>C)
4. Photo documentation

The elasticity of the skin was measured by cutometer, measured were the viscoelastic traits and the biological elasticity.

The ultra structure of the skin has been depicted through a device with the frequency of 20 MHz (Derma can, Vers. 2) with 2-D configuration (Cortex Technology, Denmark).

Measuring the capillary skin



Fig 3 Fat reduction: before



Fig 4 Fat reduction: after 12 treatments

The indications for the method are:

- fat reduction
- firming of tissue
- cellulite
- acne
- wrinkles
- limp (atrophic) scars
- Striae cutis distensae

area as well as thigh and hip area.

The effectiveness was to be verified with the aid of preliminary examinations:

1. Measurement of the elasticity
2. Measurement of the ultra structure of the skin (B-

saturation (O<sub>2</sub>C) was conducted through means that are known as Laser-Doppler method to measure blood circulation and as tissue spectrometry to determine hemoglobin and oxygen parameters.

Measurements were taken

without treatment (0 weeks), after three weeks and six weeks respectively. With some test persons an additional measurement three weeks before the beginning of the treatments was documented, in order to exclude possible deviations due to the monthly cycle.

Designated treated areas were chest as well as thigh and hip area respectively.

### **Abstract of the results**

#### 1. Measurement of the elasticity

- the viscosity could be increased to up to 61 percent (average up to 30 percent).
- The bio-elastic elasticity could be increased to up to 28 percent (average up to 11 percent).

#### 2. Measurement of the skin density (ultra sound) – Cellulite reduction

- in the thigh area, cellulite could be reduced to up to 34 percent (average up to 20 percent).
- in the chest area, skin density could be improved to up to 50 percent (average up to 17 percent).

#### 3. Measurement of the capillary skin circulation and the oxygen saturation

- skin blood circulation could be increased up to 585 percent (average up to 104 percent).
- oxygen supply could be increased up to 600 percent (average up to 78 percent).

The study leaders established, that the goal of the study, the modulation of the chest-, hip- and thigh area could be unconditionally confirmed.

Through clinically observing over 800 test persons, we can validate the results.

The beautytek by medilab treatment to firm tissue and shape the body is surely not a method which satisfies the urge for eternal youth, however, it is a proven successful method to noticeably correct in a non-invasive way signs of skin aging and disproportions due to overweight.

**Summary** Introduced is a non-invasive bio-cybernetic method to shape the body and firm tissue, that is demonstrably capable, through computer

algorithms, to apply electrical currents into the tissue so as to create an energetic balance. Through this, a statistically significant improvement of the skin elasticity, the skin structure (skin density) and the blood circulation and oxygen saturation can be achieved.

#### Sources:

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