

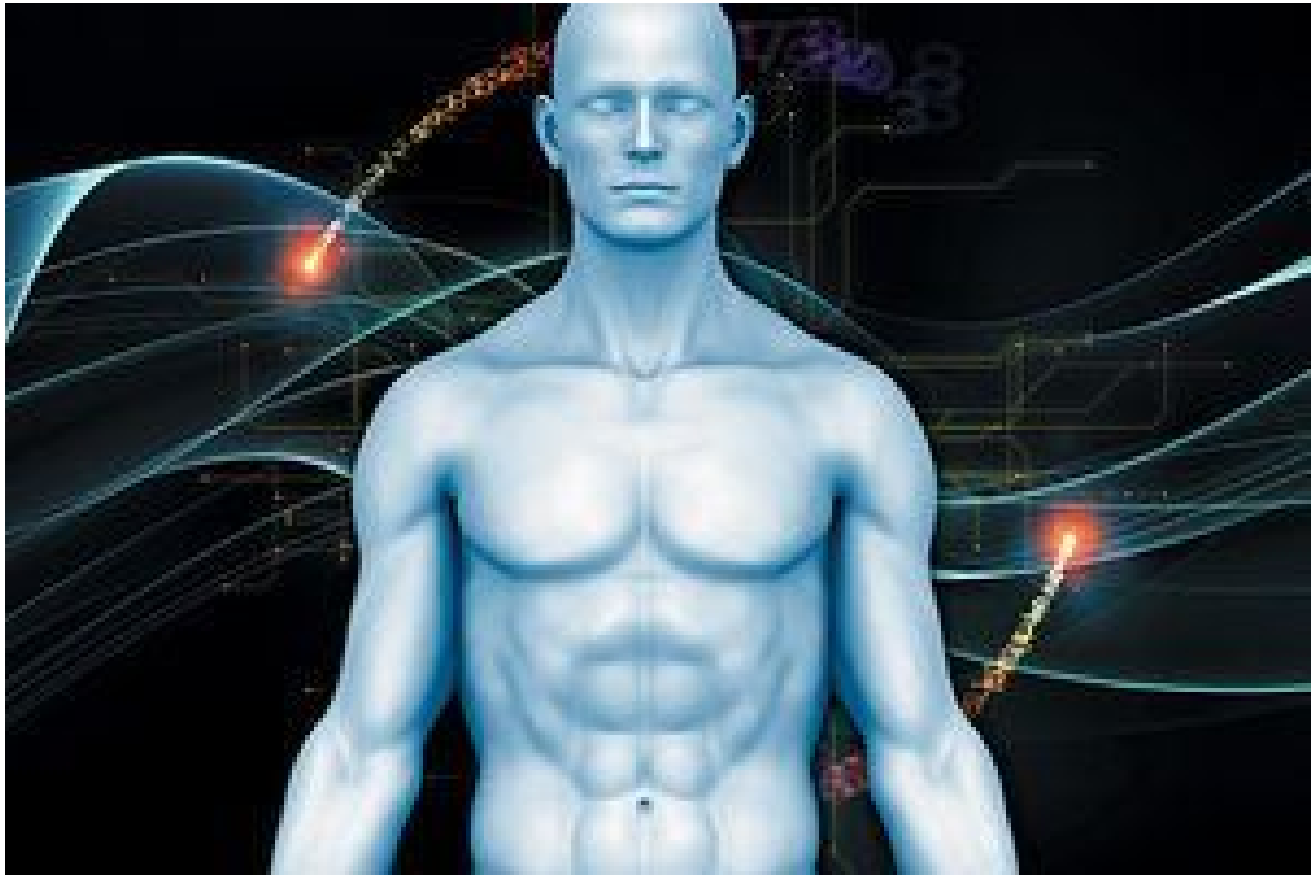
LASERS & TENS

## **Microcurrent Technology: Latest Trend for Improving Patient Wellness**

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For the growing number of chiropractors who combine a traditional practice with medical spa treatments – nutraceutical therapy, massage, injections, chemical peels – and are looking to expand their client base, one noninvasive, anti-aging innovation is gaining popularity among patients seeking safer, evidence-based care that fosters greater wellness and overall self-esteem.

A microcurrent device delivers a low-level current that stimulates collagen, elastin, adenosine triphosphate (ATP) production and facial muscles for both instant and cumulative results. Offering microcurrent therapy represents a significant new revenue center that can extend a chiropractor's capabilities and complement overall goals to restore and optimize health. The therapy is utilized to treat serious demands and indications such as muscle lifting and toning, skin firming, acne, pigmentation, scars, pre- and post-operative healing, cellulite treatments, product ionization and lymphatic drainage of the face and body.



Microcurrent uses electrical currents up to 1000 $\mu$  (microamps) to systematically reduce the signs of aging by maintaining or increasing muscle tone in three ways:

- Circulation
- Muscle re-education via a cerebral effect.
- Hydration
- Increased cellular function.

For patients, microcurrent restores youthful skin tone without surgery, downtime or injections, thus revitalizing the entire face and body. A series of treatments rejuvenates skin tone, increases skin elasticity and smooths lines, wrinkles and texture irregularities. The "massage-like" current penetrates deep into the face or body to boost the production of lost collagen and elastin proteins. The experience is relaxing and pleasurable, with most sessions lasting about an hour.

#### A Closer Look at Microcurrent Technology

During a session, the user isolates approximately 30 muscles of the face and stimulates the muscle fibers with low-level Faradic microcurrent impulses to restore proper tone to the facial muscles. The skin of the face and neck are the only area of the body where skin is directly attached to muscles. Therefore, as facial muscles lengthen or contract with age, the first signs of aging appear in these areas. Muscles can be either relaxed or tightened depending on the desired effect. As the muscles move, the skin moves with them, diminishing fine lines and wrinkles.

By increasing circulation, microcurrent provides muscles with the nutrients they need to maintain tonus. The tissue is flooded with blood, providing nutrition and removing waste products. The proper

chemical balance is achieved and the tissue becomes healthier. Increased circulation and the resulting effects alter the function, color and overall health of the skin in a very positive way.

Emily Chi, PhD, director of the University of Washington's Department of Pathology, who performed clinical studies using microcurrent equipment, states, "The fact that technology works in harmony with the body is evident. Examination of the skin tissue treated with microcurrent showed a 45% increase in the number of elastin fibres in the dermis and the length of the fibres on average doubled. The collagen thickness in the connective tissues increased 10% and the numbers of blood vessels increased by 35%. The application of microcurrent to skin and tissue produced a firmer and tighter feeling on the skin surface."

The cerebral effect occurs in part because microcurrent mimics the body's own electrical impulses. As people age, the brain's ability to "sense" a muscle's condition is dulled, while its ability to initiate neural impulses is slowed and diminished because of changes in the peripheral nervous system.

The brain uses specialized proprioceptors called the Golgi Tendon Organ (GTO) to gather information about the facial muscles and help decide whether or not to initiate neural impulses to contract muscles, relax muscles, or just maintain tonus in them.

It was proven by George Goodheart Jr., DC, in the 1970's that muscles can be re-educated via the GTO and returned to a more natural state.

Thomas Wing and George Goodheart combined the GTO and microcurrent therapy to achieve a method for stimulating muscles to re-educate them. Microcurrent effectively "reminds" the brain to initiate more impulses. With a specific placement of the probes and subsequent gentle manipulation of the muscles to move them to the correct location, the brain "senses" and remembers the new desired location.

As the brain sends and receives more signals, the effect of microcurrent therapy is re-educated, freshly toned muscle memory. By stimulating the facial muscles, microcurrent rebuilds the facial structure from the inside, truly giving the face a non-invasive "lift."

Hydration is paramount to skin health so in addition to the alternating Faradic current for muscle stimulation, a second type of microcurrent is used to hydrate the skin.

[pb]Galvanic positive or negative DC current allows the user to infuse the skin with special ionized serums by a method called "iontophoresis." This well-documented procedure allows for deep hydration of the skin, as well as increased circulation, lymphatic drainage and stimulation of collagen and elastin production.

Microcurrent increases cellular metabolism to enhance healing and hydration of the skin, which can produce a latent tissue repair that is cumulative.

The mechanism that lies at the core of this process is an increase of ATP production caused by a chemical reaction stimulated by the microcurrent at a cellular level.

In the right current range, a three- to five-fold increase was seen in clinical studies. ATP is referred to as the "energy of life."

A massive production and cumulative stockpiling of ATP over multiple treatments has profound effects

on the skin and muscles of the face. Stimulating the fibroblasts to produce collagen and increasing cellular metabolism of proteins, like elastin in the mitochondria, leads to a plumping effect of the skin and an increase in elasticity and texture, as well. Furthermore, muscles are provided with the energy and nutrients needed to maintain tonus in the desired "re-educated" location.

Research has shown that ATP reserves and collagen and elastin formation are increased in a way that accelerates wound healing. What's more, scar tissue can be softened with increased collagen and elastin. For patients, microcurrent decreases inflammation, hastens the healing process after injury or surgery, and reduces pain.

## Testimonials

Michael A. Fiorillo, MD, FACS, a double-board certified plastic surgeon, uses microcurrent to give patients the most natural post-operative appearance possible.

He states, "As one of the best next-generation, non-invasive procedures available, the treatment pairs well with injectable and topical regimens, enabling more efficient penetration of medical serums, resolves pre- and post-surgery edema and swelling and improves healing times."

Deborah Winter, president of Deborah Winter Skin Care, recommends microcurrent treatment for anyone who is not ready for a facelift, has undergone a face lift but doesn't want to go through it again or who is looking for the next-generation, noninvasive procedure.

She says, "Microcurrent can achieve exceptional results that far exceed other procedures by allowing the user to remodel the tissue, make textural changes to the epidermal, and achieve skin-tightening."

Myotonologist/esthetician Sharon Friend uses microcurrent treatment on facial muscles after extended Botox treatments have left the skin atrophied, swollen and sagging.

She said, "My clients, who are highly knowledgeable about anti-aging treatments, love this rejuvenation treatment because it is a truly effective and natural option. With its rapid return-on-investment, skin care professionals can build a successful practice that focuses on this treatment alone."

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