

What they are saying

about **Micro-Current Technology**
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Throughout the ages, people have experimented with treatments intended to enhance their appearance and slow the ageing process. From the early Egyptian's use of kohl and mineral pigments to the tightly drawn corsets of the Victorian era, women have endured much in the name of youth and beauty.

Micro-current is a diamond-in-the-rough when it comes to wellness and anti-ageing. Its use in esthetics has existed since the late '70's, and like many good things, has come full circle and now is in bloom for today's estheticians.

In the modern world, people are fortunate to be able to turn to technology for their fountain of youth, and one of the most important innovations to have sprung from this well of technological advances is the use of micro-current.

WHAT IS MICRO-CURRENT?:

Micro-current is a low level of electrical current that mirrors the body's own natural current, sub-sensory in most cases. Its proven and accepted properties and potential range in applications - from wound healing, muscle rehabilitation, and macular degeneration to lymphedema - continue to assist medical practitioners with amazing results. Although micro-current is credited by hundreds of medical studies, it's necessary to stay focused on how these studies and this technology can benefit and support you as an esthetician in pursuit of your mission to beautify the skin.

The intended use of micro-current in esthetics is to allow the esthetician a powerful and effective tool to aid in the battle of anti-ageing by diminishing the appearance of fine lines and wrinkles, improving the texture and appearance of the skin and reducing the overall visual appearance of ageing.

Most micro-current applications and results, whether they are medical or esthetic, rely on the same mechanisms of action. Even without defining each in detail, the list is very impressive, and the underlying principles logical.

- Increased circulatory benefits: blood and lymph
- Muscle re-education
- Iontophoresis: product penetration
- Increased natural production of collagen and elastin
- Increase in protein synthesis, gluconeogenesis and membrane transport
- Increase in mitochondria activity, adenosine triphosphate (ATP)
- Dispersion of hardened collagen

MICRO-CURRENT IN ESTHETICS:

The noted principal micro-current mechanisms of action occur simultaneously and harmoniously during a typical 45 minute micro-current facial treatment. One attribute is no more important than the other since they work as a team with the common purpose of creating a healthier, more youthful appearance.

Muscle re-education is most related to the term "facial toning or non-surgical face lifting." There are 32 different muscles on the face that are manipulated during the average micro-current facial treatment. True micro-current uses less than 500 microamperes (Ua) and because of its low intensity, it typically is sub-sensory and cannot cause a physical or visual manipulation (contraction) of the muscle via the electrical current. Small hand held devices or adhesive electrodes are definitely not advised as they cause a physical contraction on the tiny facial muscles that potentially shock and weaken them. Bearing this in mind, accessories such as probes or electric gloves are used with micro-current to physically move the muscle into the desired position to perform what is known as muscle re-education - the process of lengthening and shortening muscles.

Muscle-re-education conceptually can be done without electrical current, such as in massage therapy by a therapist however when done with micro-current the results were extraordinary. Working a muscle from the belly outward will have a lengthening effect that is necessary on muscles that have become increasingly contracted over years of facial expression. Working a muscle from the origin and insertion point inward will have a shortening effect that is necessary for the majority of the muscles that have become elongated over many years of age and gravity. This widely-accepted concept was coined as the golgi tendon organ (GTO) by George J. Goodheart Jr., DC, in the late 60's and is still used today.

Adenosine triphosphate (ATP) molecules are the storage and distribution vehicles for energy in the body. Energy is made through an electrochemical process within the mitochondria when the nucleotide adenosine diphosphate (ADP) passes a strong phosphate high-energy bond to another nucleotide ATP. This energy conversion, or electron transport, is made within the mitochondria. The mitochondria then send the energy electron to wherever it is needed within the cell. ATP is known as the "energy of life" and drives a number of biological processes such

as photosynthesis, muscle contractions/re-education, protein synthesis and membrane transport.

The 1982 Cheng study proves that ATP levels were increased by 500% on tissue that was treated utilising less than 500 microamperes (Ua). The study also indicated that ATP levels plummeted and depleted when treated with more than 500 Ua.

“MICRO-CURRENT IS A LOW LEVEL OF ELECTRICAL CURRENT THAT MIRRORS THE BODY'S OWN NATURAL CURRENT, SUB-SENSORY IN MOST CASES. ITS PROVEN AND ACCEPTED PROPERTIES AND POTENTIAL RANGE IN APPLICATIONS - FROM WOUND HEALING, MUSCLE REHABILITATION, AND MACULAR DEGENERATION TO LYMPHODEMA - CONTINUE TO ASSIST MEDICAL PRACTITIONERS WITH AMAZING RESULTS.”

The idea that ATP can be stockpiled or stored is the reason why micro-current treatment results are cumulative and become better as a series of treatments progresses. The dramatic increase of ATP levels allows muscles to stay in the re-educated positions for longer periods of time. In the same study, Cheng also observed the aminoisobutyric acid uptake increased dramatically which led to a 30-40% increase in protein synthesis and membrane transport. Bearing the Cheng study in mind, it is understandable why individuals who use EMS-type devices, such as some hand-held devices use as much as 5000 Ua, do receive some instant tone, however, when used cumulatively, create flaccid and lifeless muscles that are completely void of ATP. Aside from muscle re-education and massive increases in ATP levels, micro-current has other proven benefits from esthetic applications. Emil Y. Chi, PhD, director of the University of Washington's department of pathology, performed clinical studies using micro-current equipment. He notes, “The fact that this technology works in harmony with the body is evident. Examination of skin tissue treated with micro-current 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 connective tissue increased 10%, and the number of blood vessels increased by 35%. The application of micro-current to skin and tissue produced a firmer and tighter feeling on the skin surface.” Many of the studies detailing the massive increase in speed regarding wound healing refer to the ATP as one of the attributing factors. The other attributing factor is an increase in blood circulation. Blood circulation has everything to do with the function, condition, colour and overall health of the skin, as well as underlying tissue. Chi's 2003 study performed at the University of Washington further notes a 35% increase in blood circulation in tissue treated with micro-current. In terms of product penetration, micro-current offers specific

iontophoresis that allows superior penetration of products into the skin. The idea that electrical current emits from one probe and returns to the other allows specific focus of product penetration, versus traditional methods that send incredibly high electrical currents unnecessarily through out the body to achieve a simple task. Profound results can be achieved by products through iontophoresis.

Lymphatic drainage is a very over looked treatment in esthetics, although it has been gaining momentum in recent years. Clinical studies performed using micro-current at Hong Kong's Tuen Muen Hospital in 1988 indicated that lymphatic drainage was increased by 28% on post-cancer patients suffering from lymphodema.

Chi's 1999 study also proved that the redness, irritation and inflammation of surgically traumatised tissue could be decreased significantly when treated with micro-current. Related to this, the build up of hardened collagen that makes up scar tissue was noted to be three to five times less in tissue treated without micro-current. Further studies also indicated an amazing dispersion of existing scar tissue when treated with micro-current. This indicated that in the realm of plastic surgery, you can see the obvious place for micro-current technology. By administering a series of treatments before surgery, muscle and tissue condition is maximised, inclusive of an excessive storage of ATP.

Micro-current treatment of sutures and trauma post-op decreases the down time by reducing inflammation, redness and irritation, while enhancing the healing ability and minimising scar tissue. Post-surgery treatments also are vital to maintain the results of the surgical work.

MICRO-CURRENT TREATMENTS:

Although the level of current used in micro-current devices is very minute, there are some contraindications to consider. This includes a client who wears a pacemaker, is pregnant, or suffers from epilepsy, phlebitis or thrombosis, and of course any client who currently is under the care of a physician.

Although a remarkable difference is seen after the first treatment, the benefits of micro-current are cumulative, and typically are performed in a series to gain maximum anti-ageing results. The average treatment series consists of 12 treatments, generally administered over a 6 week period, each treatments takes around an hour if performed properly. It is important that preparation for a microcurrent treatment consists of cleansing and exfoliating using only water-based products, as oil will inhibit the current.

The financial rewards of microcurrent treatments meet the criterion of today's business-savvy esthetician. Microcurrent treatments nationally average around \$100 per treatment. It typically requires approximately eight clients for an therapist to recover her initial investment. Furthermore, beauticians who realise this profit potential succeed in evolving into specialised

anti-ageing clinics truly focusing on attracting the baby boomer clients who now represent the single largest, and single wealthiest, segment of the population today.

NOT ALL EQUAL:

What is the difference between a modality that can be purchased on television for \$99.00 and a true microcurrent that costs thousands? The old adage, “You get what you pay for,” definitely applies here. The way that electrical current affects the tissue and the results that are achieved are completely dependent on the sophistication of the engineering that takes place between the power source and the output accessory. Progressive manufacturers of microcurrent devices offer completely computerised, automated devices. Most systems virtually walk the operator through each phase of the treatment step-by-step, and even visually indicate on the LCD screen what program they are using.

During the average five-step 1 hour facial, the MDX3000 system will automatically change its power output combination (output combination = microamperage + hertz + waveshape) more than 500 times, and will also check the skin resistance over 1024 times per second to ensure the current is going into the correct depth for the program you have selected. Once again, all guess work is eliminated. This patented technology is called microcurrent sequencing. The output combination controls the depth, purpose and effect that the electrical current will have on the tissue being treated. Low levels of output combinations usually are associated with deep tissue muscle re-education work, whereas high levels of output combinations usually are associated with circulatory benefits and iontophoresis.

Leading microcurrent manufacturers equip the devices with diagnostic monitoring and metering systems that confirm via LCD screen the exact percentage of conductivity that is flowing from probe to probe through the tissue, as well as the level of resistance that may be present, rather than simple blinking lights. This information is processed through an internal computer and the output combination has the potential to adjust itself 1024 times per second if necessary to accommodate the lack of conductivity or overabundance of resistance. This information also allows the esthetician to make appropriate adjustments to the treatment protocol.

Responsible manufacturers require every device purchaser to attend an education and certification class where the esthetician learns the operation and theory of the equipment in depth as well as appropriate esthetic applications.

SYNERGETIC CROSS MARKETING:

Microdermabrasion may be performed as an outstanding exfoliation service before a microcurrent treatment, and serves as the most synergetic ally to microcurrent in its battle against ageing skin. Many spas that have been successful with microdermabrasion are turning to microcurrent to extend yet

another non-invasive anti-ageing treatment to their established customer base. Larisa Miron of Spa 5 in Fort Lee, New Jersey, notes, “About 90% of my clientele who try microdermabrasion opt to try microcurrent and vice versa. The treatments are natural partners for each other as microdermabrasion works from the outside in and microcurrent from the inside out, both working to achieve the same anti-ageing goal.”

SHOPPING FOR THE RIGHT TECHNOLOGY:

The success of any device must contain the following attributes:

- It must be marketable
- It must be proven
- It must be psychologically satisfying
- It must show quick, lasting, cumulative results

David Gerard of Born of Earth Day Spa in Westport, Connecticut, notes, “Gaining clientele for anti-ageing is never a problem — repeat business is. If clients don’t see and feel results, they never achieve the psychological satisfaction necessary for repeat business. Bottom line — no results, no return. Microcurrent results are noticeable after the first treatment; once they see the potential they never can seem to get enough.”

Marketing a service because you found a good deal or because a sales rep left equipment free of charge with the agreement that you would split the profits is a formula for disaster. “As estheticians we have worked hard to establish a well respected, educated and professional image. This perception should never be jeopardised by introducing services that do not meet all of the appropriate criteria for success,” states Lori Nestoe, president of Eva’s Esthetics, San Jose, California.

“IN TERMS OF PRODUCT PENETRATION, MICROCURRENT OFFERS SPECIFIC IONTOPHORESIS THAT ALLOWS SUPERIOR PENETRATION OF WATER-BASED PRODUCTS INTO THE SKIN. AN EVOLUTION”

History has shown that beauty and anti-ageing techniques fade with the changing times, however, technologies such as microcurrent evolve with these changes. This constant evolution and efficacy of treatments is what will maintain microcurrent’s status at the forefront of anti-ageing skin care, never to become considered a trend. This efficacious technology has only revealed the tip of its iceberg, and promises longevity beyond our expectations.

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