Clover Medical Solutions

Microcurrent Electrotherapy

Mitigates pain by stimulating the healing process

Microcurrent electrical stimulation more closely approximates the naturally occurring bio-electric current in the body. The current therefore is considered subsensory and cannot be felt. It provides "bio-stimulation" that stimulates cellular physiology and growth. It increases the adenosine triphosphate (ATP) generation, amino acid transport and protein synthesis. This causes the body to heal itself at a much faster rate.

It has long been known that all life processes involve electricity, and that biological processes can be affected by electrical treatment. The cells of the human body are basically tiny electrolytic batteries and microcurrents flow through the body in an orderly manner when there is no pathology present.

However, since injury disrupts the bio-electrical functions of the cells, the electrical activity of damaged cells is quite different from that of healthy ones. There is more electrical resistance in injured cells, so the normal energy flow through these cells is lower, impeding the healing processes and maintaining the presence of pain. If the electrical resistance of such injured cells can somehow be reduced, allowing the body's own electrical energy easy access to those cells, the health of the cells will improve. Inflammation may decrease, the healing process will be enhanced and pain can be lessened.

Traditional TENS versus Microcurrent Electrical stimulation

Traditional TENS	Micro-Z Microcurrent Therapy
"Blocks Pain"	"Therapeutically Mitigates Pain"
Stimulates the non-nociceptive large diameter nerve fibers, which blocks the pain coming from the nociceptive small diameter nerve fibers.	Small electrical charges can be helpful in initiating and perpetuating the numerous electrical chemical reactions in the healing process.
At the milliampere range, ATP generation was depleted, amino acid uptake was reduced up to 73% and protein synthesis was inhibited by as much as 50%.	At the microampere range, ATP generation increased about 500% and amino acid transport was increased by 30 to 40%.
Electricity will always take the path of least resistance. Traditional electrical charges placed on the body will travel around the traumatized cells.	A smaller current can penetrate the traumatized cells, balance the cell electrically, and can restore a more normal physiological state to those damaged cells.
Energy Load Milliamps=slower ramp speed= poor skin penetration	Energy Load Microamps=faster ramp speed= delivers current deeply through the tissues
Waveform AC Current=biphasic=minimal potential on ion movement	Waveform DC Current=monophasic=maximum potential on ion movement