The Benefits of Microcurrents on Wound Healing

What are Chronic Wounds?

Chronic (non-healing) wounds take a long time to heal and are often a result of an underlying condition such as venous valve backflow, edema, diabetes, or peripheral vascular disease. Chronic wounds are most often related to elderly people and are a growing concern in long-term care homes.

There are roughly 9 million Americans over the age of 65 living in long-term care (2012) and that number is projected to increase to 27 million by 2050.[1] Chronic wounds affect 6.5 million people in the United States.[2] It is estimated that $25 billion is spent annually on the treatment of chronic wounds.[2]

How Microcurrent Therapy Can Help

The effect on wound healing is one of the most widely studied uses of microcurrents. A review paper written by Chao *et al.* (2014) examined multiple studies and compiled them into a review. One showed that "[Microcurrents] significantly reduced the TPA-induced edema response, thus inhibiting excessive inflammatory response."[3] Another showed that, "an applied microcurrent stimulated … the lymphatic vessels, increased oncotic pressure, and drew fluid into the vessels, thus reducing edema formation in the limb"[3] The paper explains that the inflammatory response phase of healing is often far too drawn out and actually reducing the inflammatory response time is ideal for healing. The study called for more robust research into microcurrent therapy regarding wound healing and the integration of microcurrents into clinical practices.

In parallel, a study by Whitcomb *et al.* (2013) found that wounds treated with microcurrents heal 45.4% faster than wounds healing without the assistance of microcurrents.[1] The paper concluded that, "Improved wound healing characteristics compared to SOC in the rehabilitation center patient population translates to greater patient comfort, quality of life, decreased resource utilization and potentially significant cost savings."[1]

Cell MedX

Cell MedX has developed a state of the art microcurrent therapy device called the ebalance Pro. Using unique software, the ebalance Pro is able to read the body and use this information to emit electrical frequencies best suited to specific issues in different areas of the body. The treatment is completely non-invasive, has no known negative side effects, and is potentially useful in helping treat an array of ailments including diabetes, Parkinson's disease, high blood pressure, insomnia, edema, and different neuropathies.

References

1) Whitcomb, *et al.* (2013*). Demonstration of a Microcurrent-Generating Wound Care Device for Wound Healing Within a Rehabilitation Center Patient Population*. J Am Coll Clin Wound Spec. June; 4(2): 32-39.
2) Chandan, *et al.* (2009). *Human Skin Wounds: A Major and Snowballing Threat to Public Health and the Economy.* Wound Repair Regen. Nov-Dec; 17(6): 763-771.
3) Chao, *et al.* (2014). *Effects and mechanisms of a microcurrent dressing on skin wound healing: a review.* Mil Med Res: 1:24.