OSKA | PULSE

# OSKA PULSE FOR HEALING, REDUCE SCAR FORMATION, REDUCE/CONTROL INFLAMMATION, AND ASSIST IN ECZEMA RECOVERY

## HOW PEMF INFLUENCES HEALING AND REDUCES SCAR/KELOID FORMATION

### INJURY

Injury is a very normal part of human existence and few are exempt from sprains, strains, scrapes and bruises that can occur with everyday life. Fortunately, our bodies are designed to recognize and respond to injury whether the cause is biological, chemical, physical or from radiation. The body is adept at changing the normal physiology and starting a cascade of events that ensure survival.

### BODY'S RESPONSE TO INJURY

Inflammation is the body's default initial response to injury. Necrosis, or accidental cell death will cause inflammation. This inflammatory response occurs acutely throughout the body and ceases once the tissue returns to normal and the injury has healed.

### INFLAMMATORY PROCESS

Upon tissue injury the damaged cells release chemical signals which cause coagulation (phase I) and vasodilation (phase II). This vascular response leads to increased blood flow which results in the reddening color, increased temperature and increased permeability of the blood vessels which causes swelling.

Phase III or the proliferative phase is the process of manufacturing and laying down the fibrous protein collagen. New blood vessels are formed, and epithelial cells are created to migrate and cover the wounded area. The maturation stage is phase IV and involves the injured tissue being reinforced with collagen, gaining strength and restructuring in response to the body movement and function.

### HOW PEMF INFLUENCES HEALING

Almost all electrical activity in the body happens in the cellular membrane, regulating ion flow both in and out of cells. Sickness or injury may reduce the voltage potential across the cell membrane, diminishing flow of essential ions. This can cause a domino effect leading to a worsening condition. Applying PEMF to injured tissue repolarizes ions and helps to sustain the voltage potential. As the electrical potentials are restored, beneficial cellular processes can be stimulated. The long-term effect of healing can also cause problems like scarring and the formation of keloids. PEMF reduces the bodies inflammatory state and when used consistently will allow the body to heal normally leading to fewer hypertrophic scars and keloids.

## OSKA PULSE AND ECZEMA

Eczema is a painful condition that results in itchy, red and rough skin patches typically caused by inflammation of the skin. The Oska Pulse, when used consistently over the affected skin, helps to restore the cellular electrical balance which leads to reduced inflammation and effectively treats the painful Eczema outbreaks.

## OSKA PULSE AND HEALING

The Oska Pulse uses a sequential treatment program that contains four sets of treatment parameters which have been proven support the four phases of the healing process along with helping to maintain the cell membrane electrical potential. The Oska Pulse sequential treatment program is aimed at assisting with the capillary arcade, leading to increase blood flow and a stimulated lymph system. The treatment also assists in the process of collagenization which is important for replacing blood vessels to damaged areas, reducing scarring and improving tensile strength. PEMF has been shown to increase healthy cell proliferation while the normal apoptosis rates remain steady.

## OSKA PULSE AND DIABETIC WOUNDS

Diabetic wounds are typically difficult to treat because of the compromised immune and vascular system of these patients. PEMF treatment can be extremely valuable in these complex cases as it supports both systems. Research has shown (Kwan, 2013) an 18% decrease in wound size using PEMF treatments when compared to a 10% reduction in non-treated patients. The study also found a 28% increase in capillary velocity and 14% increase in capillary diameter, meaning a much needed increase in blood flow to these affected areas.

## OSKA PULSE AND BACTERIAL INFECTIONS

Research has been conducted to test the effects of PEMF on harmful bacteria such as Staph aureus (Ahmed, 2013). Once bacterial cultures were exposed to PEMF, the growth rates decreased and there was a reduction in the number of colony forming units. In the clinical setting PEMF would not only help the immune system to respond to the infection efficiently but would actually slow the bacterial growth rates as well.

**To find out more about the Oska Pulse and PEMF technology please visit: www.oskawellness.com.**

**Michael Hawker**
***Medic Technology International***
***Perth, Western Australia.***

**Dr Jeff Marksberry**
***Chief Medical Officer, Oska Wellness***
***Carlsbad, California***

**References**

Ahmed et al. *Evaluation of the effects of Extremely Low Frequency (ELF) Pulsed Electromagnetic Fields (PEMF) on Survival of the Bacterium Staphylococcus Aureus.* Nonlinear Biomedical Physics 2013, 1-5.

Kwan et al. *Pulsed Electromagnetic Field Therapy Promotes Healing and Microcirculation of Chronic Diabetic Foot Ulcers: A Pilot Study.* Advances in Skin and Wound Care 2015, 28: 212-219.