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Oska and Sports Medicine

Introduction and Mechanism of Action

The Oska Pulse is a handheld, wearable medical device that produces a pulsed electromagnetic field or PEMF. The Oska Pulse safely and effectively treats the body with no risks of harmful side effects, overuse or addiction.

PEMF has been used and studied since the 1960's with over 680 studies available on PubMed and thousands of publications on Google Scholar. While PEMF itself isn't new, the Oska Pulse uses a unique method to deliver a sequence of specially crafted electromagnetic signals, or pulses, that stimulates cellular regeneration, designed to mimic endogenous electrical activity.

It has been observed (Levin et al., 2007) that the level of resting potential in cells can switch from a diseased potential to that of a healthy one. PEMF therapy may trigger the tendency of the resting potential into the direction of a switch back from diseased to normal state.

Studies have also shown that PEMF treatments can promote cell activation and endothelial cell proliferation through the cell membrane which is vital for angiogenesis. Neovascularization is essential for the survival of growing, injured, and ischemic tissue (Ross et al., 2013). PEMF has also been shown to hypo polarize nerve cells effectively decreasing nociception and pain (Ross et al., 2019).

Oska Pulse and Sports Medicine

The Oska Pulse has a number of useful applications in the field of sports medicine and recovery. Effective post workout recovery is essential for an athlete in order to keep improving and avoiding a performance plateau. Efficiently and safely pushing through muscle fatigue and soreness is a crucial key to optimal performance. Using the Oska Pulse after a workout allows increased blood flow to the target area while reducing swelling, soreness and pain.

Jeon et al. studied 30 fit college students in 2015 to determine if PEMF therapy was effective at addressing delayed onset muscle soreness (DOMS). The research team found PEMF to be effective in reducing the physiological deficits associated with DOMS, including improved recovery of perceived muscle soreness, median frequency and electromechanical delay during isometric contraction.

A randomized, double-blind, placebo-controlled trial (Cohen et al., 2000) treated experimentally induced muscle injury and soreness with PEMF therapy. Results suggested that

PEMF therapy can reduce pain, muscle stiffness and enhance recovery time when applied to muscles after exercise. PEMF has also been shown to increase healing times in soft tissue and bone while ameliorating the effects of inflammation by decreasing inflammatory cytokines (Wade, 2013). Similarly, a double-blind RCT was performed with patients who were recovering from shoulder impingement syndrome (SIS) which found significant improvement in pain and functionality, in the active PEMF therapy group when compared to placebo (Freitas et al., 2014).

PEMF therapy is also advantageous to active athletes as they can apply the treatment and go on with their normal, daily activities. PEMF is safe, easy to use and was shown in a recent review article to be a "well tolerated, effective treatment with no negative side effects" (Paolucci et al., 2020).

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