

Managing Pain through E-Tec Technology

An Analysis of the Oska Pulse Device





Introducing the revolutionary Oska™ Pulse a wearable pain-relief device intended to help reduce muscle stiffness, relieve minor pain and increase mobility through its proprietary eTec™ pulse technology. eTec pulse technology optimizes pulsed electromagnetic field (PEMF) therapeutic technology to help individuals live a more active, pain-free lifestyle. Oska Pulse is a small, portable, wearable, safe, noninvasive, drug free technology that has no side effects and is made in the USA.

The Pain Landscape

Chronic pain has become an unfortunate reality of life for over 100 million Americans (1). Among these millions of Americans, over half feel that they have little to no control over their pain (2). The standard of care for chronic pain is currently focused on the prescription of opioid pain medications with more than 15 % of persons over the age of 45 having taken painkillers in the last 30 days (3). This reliance on painkillers has many short term negative effects on our bodies as well as a wider societal cost. It is estimated that opioid dependence cost the United States over \$55 billion in 2011 alone (4). As a result of this dependence we have witnessed an increase of nearly 10,000 deaths per year from prescription opioid drug use since 2002 (5, Figure 1).

Introducing chemicals and bio-reactive agents into the body carries an inherent set of risks, and even well understood “over-the-counter” drugs can have deadly side effects (6). Despite this, many physicians and organizations are increasing the prescription of potentially harmful drugs to patients (7). Today, in the United States, many people are turning to drugs with serious repercussions for their bodies. In a world where pharmaceutical companies are raising drug prices by exorbitant amounts, and the dangerous effects of drugs is becoming better understood, it is increasingly more important to consider different and innovative ways to address pain. For thousands of years, out of necessity, humans managed pain without drugs, however, it is only recently that we have rediscovered the power of the body to heal itself which minimizes, or

potentially eliminates, the need for drugs. With the positive health effects of yoga and meditation increasingly becoming fixtures of clinical research, it is time for us to leave the idea of a “quick fix” pill behind. Our bodies are incredibly resilient and are capable of incredible feats. Today, we are too inclined to interrupt the natural healing process. We use drugs and surgery instead of thinking about how we might best help the body to heal itself. With that in mind, it’s time to focus on strengthening our body by giving it the tools to help alleviate pain and to encourage natural self-repair, both of which can be stimulated by moderate exercise (8).

It was in this challenging, and sometimes questionably motivated, landscape that Oska Wellness was founded. Oska Wellness is focused on bringing innovatively simple to use, pain management devices to the individual and reducing the need for pain medications. The Oska Pulse, a noninvasive device, optimizes clinically proven PEMF technology to help your body reduce pain and enable mobility that promotes the occurrence of the body’s natural healing processes. This device uses safe and effective electromagnetic waves known to activate cellular level responses as demonstrated in clinical research (11, 12, 13). The underlying technology has been used effectively since the 1990’s when it was shown to reduce pain for those suffering from arthritis of the knee (9, 10). Oska Wellness wants to put similar tools into your hands to help you manage your pain.

Prescription Opioid Overdose Deaths

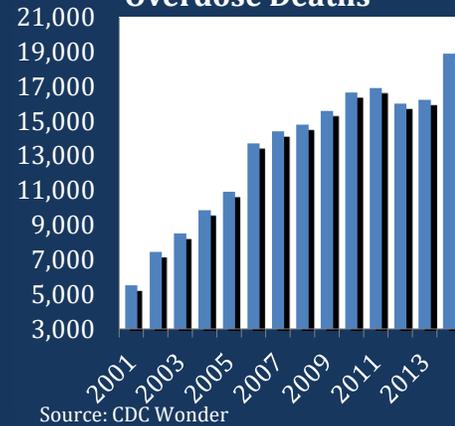


Figure 1: Deaths from prescription opioid abuse in the United States from 2001-2014. Data courtesy of CDC Wonder: <http://wonder.cdc.gov/>

Pulsed Electromagnetic Field Technology

Pulsed electromagnetic field (PEMF) technology takes advantage of the electronically sensitive environment of the body to activate natural repair mechanisms leading to reinvigoration of tissue. We see this reflected in consistent evidence that PEMF technology has proven effective in reducing chronic pain and, rather impressively, it has been shown to be capable of reducing pain by a factor of 10 even at low dosage levels (14). Further, when surgical recovery is paired with PEMF treatment, reliance on pain management medication was reduced by 50% when compared to recovery without PEMF treatment (15).

PEMF technology has been a legitimate tool in medicine as far back as the early 1960's where it was demonstrated to have applications in helping bones heal themselves (9, 10). Since then, PEMF technology has become a field of increasing interest in academia with a quite staggering 350% rise in articles being published on the topic over the last 15 years (16, Figure 2).



Articles Published Including "Pulsed Electromagnetic Field" per Year



Figure 2: Number of articles containing "Pulsed Electromagnetic Field" by year as indexed through NCBI's Pubmed search engine, accessed and appraised February 15th 2016.

PEMF devices first saw development and serious clinical analysis beginning in the 1960's throughout Eastern and Western Europe. In the period between 1974 and 1977, the first PEMF device was approved by the FDA in the United States for use in fusing bone fragments. Since then, PEMF devices have been shown to improve wound healing, increase bone growth, reduce pain, and potentially even slow the growth of cancer (9, 10, 11, 12, 13, 17, 18). PEMF devices work by running electricity through a coil to create an electronically powered magnet. This magnet creates an electromagnetic (EM) field which is then alternated in power and frequency to reduce pain and encourage bodily healing. While PEMF devices do create tangible EM fields, they are similar in power output to a cell phone. The unique healing properties of PEMF devices are derived from the shape and properties of the field produced. These fields, at varying frequencies, have specific effects on biology (11, 13, 14, 17).

eTec™ Pulse Technology

The Oska Pulse uses proprietary eTec pulse technology which was developed based on PEMF research and clinical use. This technology uses several unique wavelengths and waveforms to offer the body pain relief and the best possible chance of encouraging the natural recovery process. The technology system is designed to help address pain in four electromagnetic phases; the Angio Vascular (AV), Osseous Structural (OS), Chondrocytic Development (CD) and Pain Modulation (PM) phases.

AV Phase

In the AV Phase, the Oska Pulse device delivers low power electromagnetic waves at a shorter frequency, and therefore longer wavelength, to the target area. These waves have been clinically shown to cause the release of VEGF, a growth factor which causes blood to be more readily available by increasing blood vessel growth (19, 21). Increased blood flow promotes the body's immunological and reparative functions which, over time, may decrease pain. Additionally, the AV phase has been shown to affect inflammation by reducing cell death and by modifying internal cell structure (22).

OS Phase

In the OS phase, slower waves and pulses deliver stimulation to the cells that help keep your body strong. This phase has been shown to improve the strength of bones and to promote overall wellness. This is accomplished by activating osteoblasts, a cell type that encourages stronger bone structure (19). Additionally these waves have been shown to reduce local inflammation by helping cells maintain healthier membranes or outer shells (20). By maintaining cellular integrity and bone strength, injuries may be reduced and old wounds may heal more effectively.

CD Phase

In this phase, another set of waveforms have been shown to stimulate chondrocytes which are responsible for creating cartilage (19). This increase in cartilage is crucial for reducing joint pain and has been shown to greatly increase the quality of life of those suffering from arthritis and other forms of joint pain (9, 11). By promoting restructuring of cartilage, pain can be decreased and long-term health can be improved. Waveforms similar to those in the CD phase have been shown to reduce reliance on pain medication by over 50% in recovering adults (15).

PM Phase

In the final phase of the Oska Pulse's program, pain reduction is the focus. Through the use of proprietary higher frequency magnetic waves, we create an environment that alters intercellular processes and has been shown to enhance the regeneration of nerve cells which can repair long standing pain pathways (23). Further, this phase can impede the growth of several harmful types of bacteria which have been clinically shown to be associated with increased pain (24, 25). By enhancing growth and impeding the spread of infections the PM phase offers effective and innovative pain management.

Our Customers

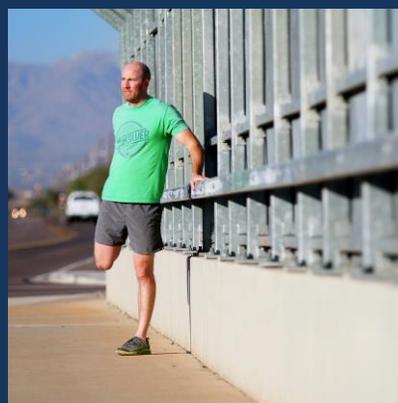
The research is clear and is becoming more widespread in respect to the use of PEMF technology. The bottom line is this; the Oska Pulse device really works and that is echoed in the following comments from people who have found relief from chronic pain and constant medication.

Suzanne C.



“What causes me the most pain is when I sit for a long period of time, and so, by using my Oska Pulse, I am able to sit, focus, and concentrate on what I need to get done for the next day without worrying about my back hurting. One of my friends had the device, so I went ahead and I tried it, and I honestly could not believe the difference. I didn’t feel that tightness I always feel and it was remarkable. It’s the best living pain free and when I use Oska Pulse every day, regularly, I absolutely feel 100% better.”

Travis L.



“Running is a huge part of my life and the only way I can get that in is if I can get through the work day pain free so that I have the ability to go and do the things that I really love to do. Oska Pulse has given me that opportunity. I’ve been able to use Oska Pulse as a treatment while I work, during class time, and when I get off work I feel good, I feel strong, and I am able to get outdoors and enjoy that part of my life.”

The Future

It is likely that the Oska Pulse device has a bright future because of what it offers prospective users by way of a credible alternative in respect to the treatment of acute and chronic pain. With the clear increase in PEMF research outlined above, coupled with the incredibly exciting prospects in terms of PEMF target areas, I believe that there will be other devices following the Oska Pulse lead. Its innovative breakthrough eTec pulse technology gives Oska Pulse a distinct advantage because of efficacy across the pain spectrum. The scope and future use of PEMF offers the possibility of it becoming a new and pain free tool to help tackle a wide array of ailments, including that it has been shown to inhibit the development of cancer (18). Further promising indications in wound healing and stimulation in diabetic models points to a future where we can more successfully manage diabetes in a noninvasive manner (13, 21).

The future of PEMF technology is bright because many of us, myself included, seek ways to help empower our bodies and those of our loved ones as each of us faces the blight of aging, general injury and acute and chronic pain. By working with scientific partners, Oska Wellness is hoping to help put exciting new technologies and treatment options into the hands of people who need them now as scientific discoveries are often slow to commercialize.

I believe the team at Oska has a few simple goals; to become a trusted partner in helping you to manage your pain as well as being your “go to” option for over-the-counter pain relief. In pursuit of these goals they have committed themselves to clarity of purpose and focus in the delivery of this first device; the Oska Pulse. Underpinning Oska Wellness’ purpose is a desire to empower customers to take control of their pain management, on their timetable, with effective and affordable wearable technology. As a result of the Oska Pulse’s ease of use and efficacy, it is probable that a strong referral impact will occur and by virtue of that, Oska Wellness will find itself bedded into a host of different communities. If you are interested in learning more about Oska Wellness, the Oska Pulse device, or about the author, please visit www.oskawellness.com or reach out to sales@oskawellness.com.

As stated earlier, our bodies are incredibly resilient and have an intrinsic ability to heal. The goal at Oska Wellness is to provide you with a tool that will complement the body’s natural healing ability. On all counts, I would contend “mission accomplished”.



About the Author



Andrew Cross, Scientific Advisor/Program Manager

With over five combined years of work in biomedical research, medical management, and patient advocacy, Andrew currently functions as a scientific and educational consultant and has experience consulting globally in China and the United States where he works in the education and scientific fields. He received his Bachelors of Science from UCLA where he graduated magna cum laude with a degree in Molecular, Cell, and Developmental Biology and a minor in Biomedical Research. He spent two years working in a UCLA AIDS Institute lab researching abortive viral products and drugs of abuse and worked as a Volunteer Director at UCLA's Ronald Reagan hospital. If you are interested in contacting Andrew about this device you may contact him at Andrew@Oskawellness.com.

OSKA™

Oska Pulse™ performance characteristics have not been evaluated by the U.S. Food and Drug Administration. Oska Pulse is intended for the beneficial effect as set forth in the directions and instruction literature. These products do not claim to diagnose, treat, cure, or prevent any medical condition. Always consult your medical doctor regarding any health concerns. At the time of writing, the author of this document, Andrew Cross, is the son of the current chairman of Oska Wellness, Leslie Cross.

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