



# Revolutionizing Osteoarthritis Management with eMedica micro-current therapy

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## Abstract:

Osteoarthritis is a major source of pain, disability, and socioeconomic cost worldwide. Advances in imaging and biochemical markers offer potential for diagnosis and treatment of early osteoarthritis. eMedica microcurrent therapy is a potential method that stimulates nerve cells, triggers endorphin release, and relaxes tense muscles, improving blood circulation and pain relief. This therapy helps to stimulate nerve cells, aid in muscle activation/contraction, and gradually promote regeneration of damaged organ function. Diagnostic tests for osteoarthritis include blood tests, X-rays, MRI, and CT scans. Treatment typically starts with acetaminophen and progresses to nonsteroidal anti-inflammatory drugs. Exercise, glucosamine and chondroitin supplements, corticosteroid injections, and hyaluronic acid injections are recommended for moderate to severe knee osteoarthritis. Total joint replacement is often recommended for persistent pain and disability. Arthritis involving bones needs to be controlled by working out, acupuncture, warm and cold treatments on joints, and applying creams or ointments directly to the skin. Electronic medical treatment programs from eMedica have proven to be beneficial.

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## Introduction:

Osteoarthritis is a major source of pain, disability, and socioeconomic cost worldwide. The epidemiology of the disorder is complex and multifactorial, with genetic, biological, and biomechanical components. Aetiological factors are also joint specific. Joint replacement is an effective treatment for symptomatic end-stage disease, although functional outcomes can be poor and the lifespan of prostheses is limited. Consequently, the focus is shifting to disease prevention and the treatment of early osteoarthritis. This task is challenging since conventional imaging techniques can detect only quite advanced disease and the relation between pain and structural degeneration is not close.

Nevertheless, advances in both imaging and biochemical markers offer potential for diagnosis and as outcome measures for new treatments<sup>1-2</sup>. Joint-preserving interventions under development include lifestyle modification and pharmaceutical and surgical modalities. Some show potential, but at present few have proven ability to arrest or delay disease progression. One of the potential methods is using eMedica microcurrent therapy. eMedica is an electronic medical device that adjusts human body's electromagnetic frequency to its precise levels. Cell charge is enhanced as produces precise frequency, voltage and current combination, thus boosting cell membrane potential to heal the ailment by allowing flow and penetration of natural body



chemicals into the blood stream<sup>3-6</sup>. The optimized blood flow promotes production of these necessary chemicals that penetrate deep into the blood stream like neurotransmitters formed in nerve cells which transmit signals between nerve cells to regulate muscle contraction, pain and prevent further degenerative changes in joints.

eMedica microcurrent therapy:

- Stimulates nerve in the affected area to reduce perception of pain.
- triggers release of endorphins that reduce pain;
- relaxes tense muscles and improves blood circulation to give pain relief,

healing and sense of well being to patients suffering from arthritis.

eMedica therapy helps to stimulate nerve cells, aids in muscle activation/contraction, thus gradually promote regeneration of damaged organ function. eMedica program therapy enhances cell charge in a cell, where its potential decreases during illness or from degenerative changes in body. eMedica increases this activation of cell membrane, prevents deterioration and improves blood circulation thus reducing inflammation around joints having potential to control symptoms of osteoarthritis preventing further damage.

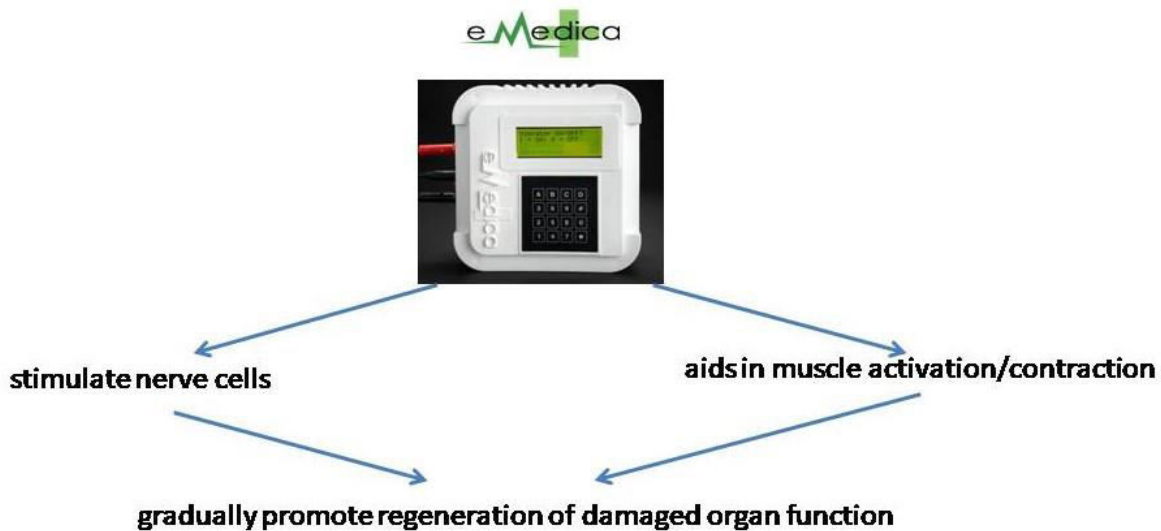


Figure 1: Mechanism of action of eMedica to improve Osteoarthritis

### Diagnostic tests to detect osteoarthritis

When patient visits physician with pain in joints, stiffness, reduced mobility, swelling with deformed joints then several tests are advised to confirm diagnosis. These include blood tests, X-rays, MRI, CT scan that help physician to diagnose osteoarthritis.

The condition is identified through a history of joint discomfort that intensifies with movement, potentially resulting in limitations in everyday tasks. While plain X-rays can aid in the identification, further tests from the lab are often unnecessary. Treatment typically starts with acetaminophen and progresses to nonsteroidal anti-inflammatory drugs. Incorporating exercise into the treatment plan is beneficial, as it has been proven to

lessen pain and improve mobility. For those with moderate to severe knee osteoarthritis, the combination of glucosamine and chondroitin supplements is a viable option. Corticosteroid injections offer a cost-effective, temporary solution (four to eight weeks) for sudden knee pain from osteoarthritis, whereas hyaluronic acid injections are pricier but can sustain symptom relief over a longer duration. For individuals experiencing persistent pain and disability despite the best medical care, a total joint replacement of the hip, knee, or shoulder is often the recommended course of action<sup>6-10</sup>.

Arthritis that involves the bones needs to be controlled by working out, getting acupuncture, using warm and cold treatments on the joints,

and applying creams or ointments directly to the skin to alleviate pain. Additionally, electronic

medical treatment programs from eMedica have proven to be beneficial.

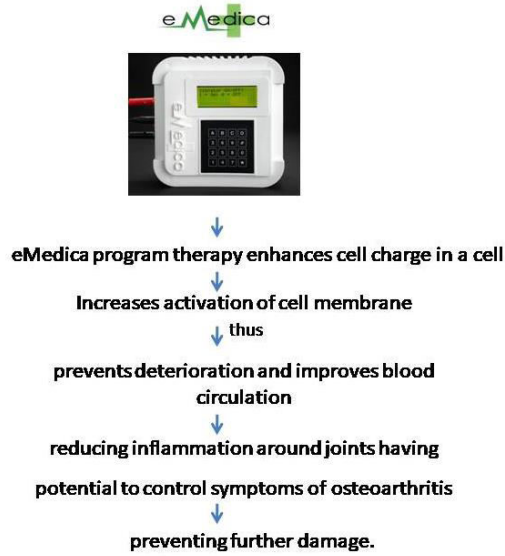


Figure 2: Cellular action of eMedica

**eMedica treatment protocol for osteoarthritis:**

Program specification	Duration
Osteoarthritis	60 mins after 45 mins of food intake.
Immunity and cholesterol	30 mins after 45 mins of food intake—to reduce pain and inflammation.(When kidney functions are normal and when there is no autoimmune disease state.)
Pain relief	30/60 mins after 45 mins of food intake
Viral infection (at times viral infection triggers pain.)	30/60 mins after 45 mins of food intake, according to intensity of symptoms
movement disorder	30/60 mins after 45 mins of food intake, when mobility is restricted
Osteoporosis	for 30 /60 mins after 45 mins of food intake (when patient has osteoporosis.)

Our previous findings have given positive results in the management of type 2 Diabetes mellitus, Hypertension control and COVID-19 patients <sup>3, 11-12</sup>.



Figure 3: the eMedica Device



Figure 4: patients using the eMedica Device

## Conclusion:

Osteoarthritis is a global challenge involving joint pain and limited mobility, with joint-specific causes. Traditional treatments aim for late-stage disease, emphasizing joint replacements, but focus is shifting towards disease prevention. eMedica microcurrent therapy shows promise as a technology that promotes cell health to alleviate pain. Diagnostic tests can confirm osteoarthritis, while treatment encompasses medications, exercise, supplements, and injections. For severe cases, joint replacements are recommended. Additional strategies include exercise, acupuncture, and warm and cold treatments, coupled with eMedica electronic medical treatment.

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