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## Zap pain instantly

### The miracle of microcurrents

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Fibromyalgia

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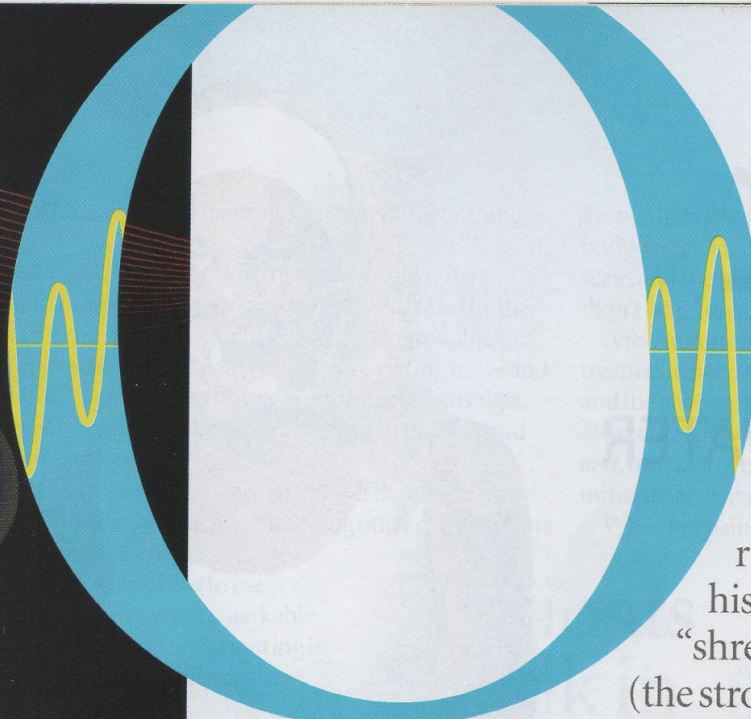
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Developing equipment that delivers specific microfrequencies to patients in pain from any source has enabled chiropractor Carolyn McMakin to achieve the impossible. Cate Montana investigates

# THE ENERGIZER



n January 19, 2004, in a football game against the Dallas Cowboys, Philadelphia Eagles wide receiver Terrell Owens fractured his fibula (the long, thin bone of the lower leg running parallel to the tibia), ripped the deltoid ligament from his tibia, sprained his ankle, and “shredded” his interosseous ligament (the strongest ligament in the body connecting the sacrum and ilium).

During surgery two days later, screws and a plate were installed to hold his tibia and fibula together, and the deltoid muscle was put back in place. Unsurprisingly, his surgeon told him he would not be able to play in the Super Bowl, which was only six weeks away. At best, Owens would be ready the following season—but he might never play again.

Owens not only played in that Super Bowl, he made nine catches totaling 122 yards and went on to play pro football for another eight years.

How was this possible? He called Carolyn McMakin.

**MCMAKIN WAS  
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Within three hours of his fracture, McMakin, a chiropractor in Portland, Oregon, had Owens receiving frequency-specific microcurrent (FSM) treatments. Within an hour of surgery, he started a 24-hour course of microcurrent stimulation. There was no swelling, bruising or pain from his injuries or surgery.

“We run frequencies to stop inflammation, to increase rates of healing and to stop bleeding in acute injuries,” says McMakin, founder of New Heights Physical Therapy. “After surgery, he had four to five hours of FSM treatment daily.

“By day three, he was running on a pool treadmill. By day six, he was bearing weight on his leg and wearing sneakers. By week two, he was doing proprioceptive retraining—balancing exercises. At four weeks, images showed the fracture and ligaments had healed.”

A clinical researcher, lecturer and author as well as a chiropractor, McMakin got involved with FSM technology after friend and fellow chiropractor, George Douglas, DC, inherited a two-channel current-producing machine built in 1922 and a 1920s-era frequency list when he bought an osteopathic practice from Harry Van Gelder in 1983. The machine and the list of frequencies languished in a drawer until Douglas stumbled upon them years later.

“At that point we had a two-channel analog microcurrent machine,” says McMakin. “He looked at the list and said, ‘You know, Harry’s old machine had two channels. I wonder if these frequencies would work on this microcurrent machine?’ I said, ‘I don’t know. Let’s

try it.' So, we started treating each other, and nothing bad happened."

By 1996, she says, she had gotten "a feel for the frequencies" and started treating patients. And by the end of that year, McMakin was doing "impossible" things with chronic pain patients, alleviating nerve and muscle pain, and treating patients with fibromyalgia, myofascial pain and chronic fatigue that nobody and nothing else could fix.

At that point, she needed to know if the effects were reproducible. So she began teaching other chiropractors and naturopathic doctors the frequencies and how to use them. Within a year, remarkable treatment results were pouring in from other practitioners.

#### From miracle to measurable

By the year 2000, McMakin was giving lectures about FSM treatments. Eventually she found herself at the National Institutes of Health speaking to 30 men in white lab coats about her 25 cases of eliminating fibromyalgia pain caused by spinal trauma.

"I was telling them that patients walk in with their pain levels at an average of seven and lasting for an average of 12 years, and walk out an hour later pain-free, and that it only takes two frequencies to accomplish this—40 Hz on channel A to reduce inflammation and 10 Hz on channel B to address the spinal cord.

"Furthermore, one treatment lasts anywhere from two hours to two weeks, and if spinal injury is how they got their fibromyalgia, this procedure works 100 percent of the time," she says.

Realizing that she needed hard data to substantiate her findings, she said to the NIH group, "Look, absolutely nobody is going to believe me unless we get some sort of objective data, and you are the only people in the country who know how to do that. Can somebody help me?"

At the end of her talk, Terry Phillips, PhD, chief immunochemist at the NIH, came up to her and said, "If you can get me spots of a patient's blood on pieces of blotter paper taken at different times during a treatment, I can tell you what is changing." McMakin agreed to take blood samples, and he sent her the blotter paper in the mail.

Meanwhile, McMakin met a young woman who had been treated for widespread myofascial pain and neck and arm pain. After undergoing surgery in 1999

for two herniated discs, her pain worsened, spreading body-wide. "Her pain was a seven to eight on a 10-point scale, and she had stopped taking narcotics because they didn't help," says McMakin.

A few minutes after beginning her first FSM treatment, her neck muscles started to relax and soften, and the pain started decreasing in her feet and legs. After 30 minutes of treatment, the patient opened her eyes and, in a state of euphoria McMakin says is common in initial treatments, asked incredulously, "Is this legal?"

When her pain was down to zero, McMakin changed the frequencies to a combination the 1920s list said would reduce "nervous tension" and "emotional tension and concussion" for 20 minutes. Blood samples were taken at intervals throughout the treatment, and the woman went home pain-free for the first time in four years.

#### In the blood

McMakin mailed Phillips these and many other blood samples and anxiously awaited the results. Just before she was due to give a lecture at an international functional medicine symposium, he sent back columns of data.

The samples showed major changes in levels of cytokines, small proteins produced by white blood cells that drive inflammation, including interleukin (IL)-1, IL-6, IL-8 and tumor necrosis factor-alpha (which is produced during acute inflammation); CGRP, a molecule involved in pain transmission and the dilation of blood vessels; the neurotransmitters serotonin and substance P, which is involved in inflammation and pain sensation; and the anti-inflammatory hormone cortisol.

"Every pain specialist knows that substance P is produced in the spinal cord and that huge changes in substance P could only mean that the treatment did indeed affect spinal cord function," says McMakin. "The dramatic reductions in inflammatory cytokines mean that the treatment reduced inflammation, and the huge increases in serotonin and cortisol had to be the explanation for the induced euphoria."

Her consistent treatment success with FSM was no longer based on the subjective changes in the pain scores of her patients. Objective data now showed that something very real was happening in the body as a result of the treatments.

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FSM practitioner  
Carolyn McMakin, DC

Armed with her new data, she marched into a packed lecture hall at the symposium. "The room was totally silent as the bar graphs showed inflammation markers and substance P plummeting and serotonin and cortisol rising by factors of 10 to 20 times," she says.

"The physicians in the audience knew that these rates of change had never been seen before and were not possible to create by any other known method of treatment." At the end of her lecture, the audience burst into applause.

### Reprogramming the cells

Most pulsed electromagnetic field (PEMF) systems use low frequencies and long wavelengths—from 1 Hz (one cycle per second) up to 10,000 Hz—to surround an area of the body with a magnetic field. Since its introduction, PEMF therapy has shown effectiveness for treating everything from fractures and tendon repair to chronic pain and depression.<sup>1</sup>

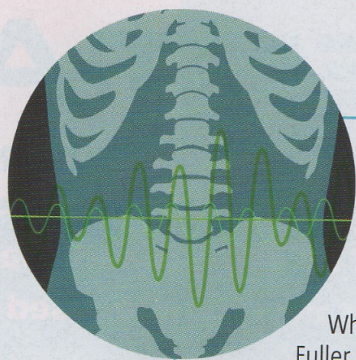
Another electrical healing approach that has become popular worldwide is TENS (transcutaneous electrical nerve stimulation) therapy, which uses low-voltage electrical current (usually no higher than 700 mA) from electrodes placed near an injury site for temporary pain relief.

Frequency-specific microcurrents utilize exceedingly mild electrical currents (around one millionth of an ampere or 0.001 mA), far less than TENS. What differentiates FSM is the use of two different channels and two different frequency strengths to simultaneously address the condition (such as inflammation) on channel A, and the specific tissue involved (such as the spinal

cord) on channel B. Unlike TENS, McMakin claims, FMS changes the state of the tissue itself.

Scientists are not exactly sure how FSM promotes healing. It can increase the production of energy in the form of ATP in injured tissues by as much as 500 percent, which may help with the recovery process.<sup>2</sup> (The molecule adenosine triphosphate, or ATP, is produced in mitochondria and serves as the major source of energy for all chemical reactions in the body.)

Getting deeper into the cellular mechanisms, McMakin says the current model for how FSM works "has to do with the way the frequencies change cell signaling." She explains, "Your cells all have receptors on their outer surface that are like little antennae embedded in the cell membrane. Those cell receptors respond to the external environment, when they encounter certain external factors, by changing a type of protein called kinases inside the cell.



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INJURED TISSUES  
BY AS MUCH AS 500  
PERCENT**

**FSM TESTIMONIALS**  
"With microcurrent, I have relief, improved quality of life and a rich life full of hope"

When Tracy Fuller, 47, went to see Dr Carolyn McMakin in 1998, she was under a doctor's care recovering from a serious automobile accident. She had broken her neck and undergone cervical fusion of two vertebrae in her neck.

"I lived in a halo for six months to keep my cervical spine immobilized while my neck fused," she says. "Eventually, I healed. But the trauma to my whole body was severe and left residual chronic pain and mobility issues on many levels."

She went to physical therapy and used biofeedback, heat, ice and massage—all of which helped significantly. But she had reached a plateau. After three years of pain medications, steroids and several surgeries, she started experiencing gastrointestinal issues as well. At this, her doctor referred her to McMakin to "see what she could do."

Initially, Tracy simply wanted help with her GI problems. "Microcurrent, combined with some supplements Carolyn recommended, diminished my gut pain, improved my digestion and allowed me to diversify my diet beyond just the chicken and rice I was limited to for a long time," she says. "A huge victory!"

When McMakin asked permission to treat her neck and low back pain, she enthusiastically agreed. "My chronic myofascial issues responded immediately to treatment," she says.

"My neck pain and range of motion were significantly improved with just a few sessions, and much of that improvement lasted. I had also

developed fibromyalgia as a result of the accident, which I received great relief from via microcurrent.

"And then there was my low back. The halo that I had lived in for six months did not allow me to lie flat, and I had not been able to ever since. After Carolyn treated my low back, I was able to lie flat in just one session. It took two to five treatments for it to hold, but in my book, it was simply miraculous."

While using microcurrent has drastically increased her rate of healing, cut down on nerve pain and minimized her need for pain meds, her symptoms are ongoing. After her car accident in 1995, the rheumatoid arthritis that was once isolated to a few joints spread throughout her body, and Tracy became disabled. The long-term use of immunosuppressants to treat it have also taken a toll.

"In the midst of my chronic health issues, I believe microcurrent has been the most effective tool in my toolbox to manage pain and symptoms. I own a microcurrent device, which I use daily.

"With it, I am able to reduce arthritis pain and inflammation, fibromyalgia flares, gut issues, headaches, PMS, nerve pain, brain fog, shingles, and even pain from gallstones and kidney stones. I am able to take fewer medications. I experience improved mobility, more restorative sleep, improved circulation, detoxification, mental clarity, GI function, emotional balance and more.

"I don't have a pain-free journey. I have my struggles. But with microcurrent, I have some relief, improved quality of life and a rich life full of hope."

“These kinases then change the transcription factors that interact with DNA to determine what proteins, hormones and other substances the cell produces.” The effect on the cells is immediate, which is why, as McMakin puts it, FSM is “so freaking fast.”

“When you give somebody a drug to reduce TNF-alpha, an antibody that chemically binds it in the blood, it takes one to three months to work. In comparison, the frequencies reduce it very quickly, taking it from 10 or 20 times normal down to the normal range, and then stop, never taking it below the normal range.

“So, the model we have at this point is that the frequencies affect the outside cell membrane receptors like your key fob opens your car door, and they change the receptor, which changes what the cell does.”

### Healing within minutes

So far, studies have shown that FSM therapy can soften hard, tough, scarred muscle tissue, connective tissue and fascia within minutes.<sup>1</sup> It can also reduce or relieve myofascial pain in the head, neck and face<sup>2</sup> and assist in burn healing.<sup>3</sup>

It can alleviate symptoms of fibromyalgia associated with spinal trauma<sup>4</sup> and delay the onset of muscle soreness.<sup>4</sup> Microcurrent therapy even produces significant vision improvement in dry age-related macular degeneration.<sup>5</sup>

“With neurological trauma it sometimes produces miraculous results,” says Dr Shirley Hartman, a family and holistic medicine practitioner in Jacksonville, Florida.

“I had a patient who was so spastic walking into my office that it took her about five minutes to walk down the hallway. I did acupuncture and ran microcurrent. Before the treatment, she had abnormal cerebellar signs. She couldn’t do a finger-to-nose or heel-to-shin movement with any fluidity. After the treatment, she could do them, and she was able to walk normally. It was nothing short of astounding.”

Hartman also uses FSM for shock trauma, for healing old scar tissue, and to treat neurological pain caused by calcium and iron deposits left over from bleeding and bruising. The iron in the blood from a dried bruise remains in the tissues long after the trauma is healed, she explains. “Trauma is sometimes like pouring a bunch of iron filings into nerve tissue.”

She recalls a patient who’d been hit with a blunt object and sustained a hematoma—localized bleeding—on the surface of his brain, resulting in seizures. “I ran microcurrent for old iron in the cerebrum, and he stopped having seizures.”

FSM THERAPY CAN SOFTEN SCARRED MUSCLE TISSUE, CONNECTIVE TISSUE AND FASCIA WITHIN MINUTES



## The body electric

The cells of the human body (and all other animals) conduct electrical currents, and electricity enables the nervous system to send signals throughout the body and brain.

“All chemical reactions are also electrical,” says Dr. Steve Haltiwanger, an independent researcher and former practitioner of orthomolecular neurology, environmental medicine and a specialist in pathology and biological psychiatry in El Paso, Texas.

“Cells in the body are basically crystal radio sets. Cell membranes possess electrical potential and transport energy. You have proteins that are

semiconductors. The body is electronic in nature down to the smallest level—like a series of nested energy fields.”

Resting cells are negatively charged on the inside, and almost all cells allow charged elements, like ions of sodium, potassium, magnesium and calcium, to flow in and out through the cell membrane, thereby generating electrical currents. Any sort of disruption in the body’s electrical currents can lead to problems.

For example, electrical currents are what trigger the heart muscle to contract and pump blood. Disrupting this flow of electrical energy can trigger arrhythmia and other heart problems.

## A centuries-old discovery

Historically, people have been treated with electricity since at least as early as 2750 BC—although back then the treatments involved receiving shocks from electric eels. In 1812, Dr John Birch of London healed a fractured tibia that had refused to mend by surgically implanting needles in the region of the fracture and passing electric currents through the needles.

By the mid-nineteenth century this became a standard method for treating slow-healing bone fractures,<sup>6</sup> and by 1884, it is estimated that some 10,000

health practitioners in the United States were using some sort of electrical therapy in their practices.

However, the Pure Food and Drug Act of 1906 and the 1910 Flexner Report, which redefined the parameters of medical education in the US, eventually led to a complete prohibition of the use of electricity for healing purposes.

For over 50 years the practice was labeled as “quackery” until discoveries in the 1980s led to the development of pulsed electromagnetic field (PEMF) therapy for bone healing.

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MaryAnne Tack, DC, of Newberg, Oregon, says she uses FSM to treat people with headaches, fibromyalgia, disc and nerve problems, muscle spasms and cramps, shingles and old injuries that are not healing properly. She also uses microcurrents to treat accompanying emotional issues.

“When you’re dealing with organs and tissues, you’re not just dealing with the physical,” she says. “You’re dealing with the emotional as well. If you go back to acupuncture and other cultures, all our organs are understood to have an emotional component to them.

“Like when somebody has kidney stones—the kidneys have to do with fear. If you’re dealing with the lungs, you’re dealing with grief and loss, things like that. So I incorporate the frequency codes that not only treat the conditions but also treat the accompanying emotions. It’s incorporating the whole body-mind to treat the patient.”

### A world of possibilities

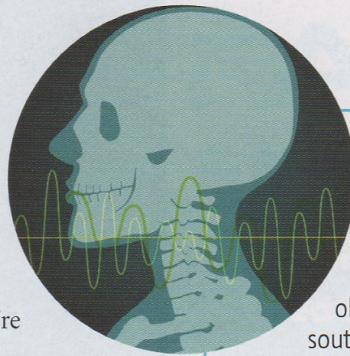
McMakin says that treating a patient with microcurrents is actually the easy part of her work. Knowing what she needs to treat is the trick. She can’t always go by the medical diagnosis that a patient walks in with, because diagnoses are often incorrect.

By way of example she describes a 70-year-old woman who claimed she had chronic fatigue syndrome—specifically a diagnosis of myalgic encephalomyelitis (ME), given at age 40 after the birth of her seventh child.

“She experienced right arm pain such that she couldn’t lift the child, along with horrible body pain and weakness in her arms—a painful condition that continued, unrelenting, for 30 years,” says McMakin.

“I asked her, ‘Do you get sore throats, fevers or swollen glands?’ She said no to all three. So I said, ‘Then why did they diagnose you with ME?’ And she said, ‘I don’t know.’” McMakin suspected she had fibromyalgia, not ME, and treated her accordingly. An hour later the woman was pain-free.

“We did one more treatment on her and that was it,” says McMakin. “It wasn’t hard. But the diagnosis was wrong. Nobody treated her correctly because ME is considered incurable. Which means nobody stopped to consider other possibilities. And that’s the wonderful thing about FSM. Once you have a tool that lets you do this stuff, a whole world of possibilities opens up.”



IT'S ABOUT TREATING THE PATIENT BY INCORPORATING THE WHOLE BODY-MIND

### FSM TESTIMONIALS

“I wanted to see if it might be effective for me”

MD is a 68-year-old doctor living in southern California.

Over the course of 30 years, she sustained multiple injuries from five motor vehicle accidents and one biking accident. All involved head trauma. There was also cervical facet joint damage, thoracic spine misalignment and damage to the sacral vertebrae and the right sacroiliac joint.

In chronic pain for most of the past three decades, the arthritic changes in her cervical spine caused nerve compression, which led to frequent and painful flare-ups. She saw surgeons, energy healers, pain management specialists, neurologists, physical therapists, rheumatologists, osteopaths, anesthesiologists—all with varied diagnoses.

She heard about frequency-specific microcurrent in early 2019 from a colleague who researches new modalities for pain management. “I wanted to see if it might be effective for me,” she says.

The physical responses from FSM treatment, she says, have been “rather remarkable.”

“I had alleviation of symptoms for two hours after the first treatment, four hours following the second

treatment. Because I have so many areas of disease, the frequency specificity for multiple conditions and locations allowed me to be treated in numerous areas simultaneously.”

She purchased a custom care home unit preprogrammed by McMakin and finds it to be very helpful. “I have had consistent periods of diminished pain following using the unit set to a specific area of injury, pain or significant discomfort. Recently, I fell on the street and strained my neck, right upper and lower back and sacroiliac joint. As these are vulnerable areas, I would normally be in acute pain for five to 10 days following such a direct blow.”

This time, she began using the FSM programs right away, and the severity of the painful sequelae was lessened in two to three days—a dramatic difference from any recuperation previously.

She continues to use the device and thinks that her whole neurological system has calmed down. “I am not as hyper-reactive to injuries,” she says. “Yes, I am being more cautious and slowing down, in general. However, it is living with less pain that has made the value of ‘doing less’ more rewarding.”

### RESOURCES

Dr Carolyn McMakin, DC:  
[www.frequency-specific.com](http://www.frequency-specific.com)

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