

preventing

arthritis

A HOLISTIC APPROACH  
TO LIFE WITHOUT PAIN

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TO OUR BELOVED GRANDCHILDREN:

ALLISON AND JEREMY LYONS

JOSHUA, MAX, NOAH, NATHAN, AARON, AND RACHEL GOTTLIEB

## RESOURCES

For more information, read *Magnet Therapy—The Pain Cure Alternative* (Rocklin, CA: Prima Health, 1998), by Paul J. Rosch, Ronald M. Lawrence, and Judith Plowden.

## pulsed signal therapy (PST)

In the late 1950s, researchers discovered that bones emit an electrical signal when they are squeezed or compressed. It's a kind of SOS calling for the body to repair, nourish, or otherwise replace damaged tissue. The discovery led to the development of the bone growth simulator, a device that generates pulsed electromagnetic fields to unite fractures that fail to heal within nine months.

Thirty years later, researchers demonstrated in a series of experiments that cartilage tissue also emits a restorative signal when under pressure. They also learned that the signal is impaired in osteoarthritis. These scientific advances inspired biophysicist Richard Markoll, M.D., Ph.D., to develop a device similar to the bone growth simulator that could rescue and restore damaged cartilage. His concept was to reproduce the physiologic signal in the absence of pressure.

Markoll's pioneering work yielded a promising, noninvasive electromagnetic technology that was first tested in laboratory and clinical experiments at Cornell and Yale. The results were consistently and extremely positive: At Yale, for instance, patients suffering from osteoarthritis of the knee, neck, and lumbar spine, received treatments with pulsed electromagnetic signals. They reported major improvements in pain level, range of motion, tenderness of the affected joint, and ability to perform daily tasks. Studies in Canada, France, Italy, and Germany have now produced similar results for more than 100,000 patients.

The patented PST technology is now administered throughout the world for arthritis and sports-type injuries, and, most recently, for temporomandibular joint disorder (TMJ) and tinnitus, not responsive to

other therapies. It has even been found effective for periodontal disease. There are more than four hundred clinics in sixteen countries using PST technology. The method is currently approved only for veterinary use in the United States, but approval for application with humans may be granted in the near future. Many Americans have been treated at PST facilities in Mexico, Canada, the Bahamas, and Europe.

I have referred many interested patients to the Vancouver, Canada, clinic where PST is administered. In many cases, the improvement has been remarkable. In the rest, the improvement has been significant enough to allow reduction of medications.

What's more, I have found that patients actually feel better with time: Six to twelve months later they report greater improvement than they did right after treatment.

Here is how PST works: Nine treatments, each lasting an hour, are given daily for nine days. During treatment, patients sit comfortably reading, listening to music, or dozing off, while a pulsed electromagnetic signal is directed to the affected area. The signal mimics the natural emissions of the damaged tissue, activating the healing process and stimulating growth and repair. Studies in Europe have demonstrated that the electromagnetic stimulus significantly enhances chondrocyte and proteoglycan formation in the cartilage, a process impaired in osteoarthritis. The result is enhanced repair of cartilage tissue and restoration of damaged cartilage structures to normal.

Based on the results to date, Markoll strongly believes that PST creates an enduring healing and repair mode in cartilage that has been disrupted by disease, aging, or injury. Moreover, he regards the technology as not just for treatment but "clearly for prevention" as well.

A standard PST series costs about \$600, including medical evaluation—a very cost-effective package, in my opinion. There are a variety of other electromagnetic devices frequently referred to as pulsed electromagnetic field therapy, but as far as I know, none of them have the proven research and clinical record of PST.

Physicians who administer this technique are usually orthopedists, orthopedic surgeons, neurologists, or pain specialists.

#### RESOURCES

For more information on PST or the location of a PST facility, call 888-459-2100, or visit the Internet at [www.pstworld.com](http://www.pstworld.com) or [www.certifiedpst.com](http://www.certifiedpst.com).

#### Water/heat therapy

I have been a longtime advocate of wet heat to help relieve the symptoms of osteoarthritis and many forms of chronic pain.

Today there are many reusable moist heat packs available on the market that operate either through microwave heating or can be plugged into an electrical outlet. Moist heat is commonly prescribed by physicians for arthritis and other painful conditions. It is preferable to the dry heat generated by heating pads. Dry heat causes a gathering of blood in the capillaries of the skin, whereas moist heat penetrates to a great depth and breadth. This increases circulation throughout the tissue, bringing nutrition and oxygen to joint components and helping to remove waste products in the area. I do not recommend heating pads unless they have a moist heat feature.

Hot tubs (Jacuzzis) also provide relief. If you have access to one, regular soaking helps relax tight muscles and enhance systemic circulation.

And, of course, for a therapeutic getaway, there are always mineral hot springs, prescribed by physicians throughout the ages to help ease painful joints. Today, in Europe, some insurance companies actually reimburse patients who "take the waters." Hot springs and mud packs have a soothing and pain-relieving effect on arthritis. The benefits were recently documented by Israeli researchers. They found that two weeks