

Shockwave Therapy for Osteoarthritis of the Knee

Shockwave Therapy for Knee Pain: A Non-Surgical Solution

What is shockwave therapy?

Knee pain affects millions of people around the world. Surgery and repeated injections are not the only ways to treat it. Extracorporeal shockwave therapy (ESWT) is a non-surgical treatment that uses sound waves to help damaged tissue heal.

This article explains what ESWT is, the knee problems it can help, the research supporting it, what to expect during treatment, common questions, and who may benefit most.

In 2019, about 528 million people were living with osteoarthritis, which is more than double the number in 1990. The knee is the most common joint affected, with about 365 million cases, followed by the hip and hand. About 73% of patients are over 55 years old, and 60% are women. Around 344 million people have moderate to severe disease that requires rehabilitation. With aging populations, rising obesity, and sports injuries, the number of people with knee osteoarthritis is expected to keep increasing. This makes it one of the leading causes of disability worldwide.

Knee Conditions Shockwave Therapy Can Treat

Osteoarthritis

Shockwave therapy is well studied for knee osteoarthritis. Research shows it can reduce pain, improve movement, and make daily life easier for people with mild to moderate disease. Reviews report even better outcomes when therapy is combined with exercise programs. However, the results are less consistent for advanced arthritis where the joint is severely damaged (World Health Organization; Zhao et al.; Zhong et al.).

Patellar Tendinopathy (Jumper's Knee)

Patellar tendinopathy is common in athletes and active adults. Shockwave therapy can help tendons heal, ease pain, and restore function. Both radial and focused shockwave devices have been used successfully, although results can vary depending on training demands and timing. Some trials

found added benefit when therapy was combined with eccentric exercise, while others showed mixed results (Wang et al.; Zwerver et al.; Persson Krogh et al.; van der Worp et al.).

Bursitis and Overuse Inflammation

Knee bursitis and irritation of the IT band also respond well to shockwave therapy. Research suggests the benefits last longer than those from steroid injections, without the risks linked to repeated medications (Gouda et al.).

Post-Surgical and Chronic Knee Pain

Shockwave therapy is sometimes used after surgery to reduce scar tissue, improve blood flow, and manage ongoing pain. Studies consistently show it to be safe, with very few complications reported.

Benefits vs Standard Care

Unlike treatments that mainly mask symptoms, ESWT helps promote real healing. Compared with corticosteroid injections, ESWT often provides longer-lasting pain relief and better function, without the risks of steroids such as tissue thinning or body-wide side effects (Gouda et al.). When compared with anti-inflammatory drugs or single injections, ESWT helps trigger repair and may reduce the need for medication. Results compared with hyaluronic acid or platelet-rich plasma (PRP) vary depending on the condition and study, though some trials show similar benefits in the medium term.

For osteoarthritis, reviews of multiple studies show meaningful improvements in pain and function scores, especially when medium energy levels are used. Downsides include uneven insurance coverage and less predictable results in severe “bone-on-bone” arthritis. ESWT is not a cure for advanced joint collapse, but it is a safe option to try before moving on to surgery.

What to Expect

A typical session lasts 15 to 20 minutes. Most programs use 5 to 10 sessions spread over 3 to 8 weeks. During treatment, patients feel tapping or pulsing sensations. No anesthesia is usually needed, and patients can walk out and return to most activities right away. Some may feel mild soreness or notice temporary redness at the site. Medium energy settings often produce

stronger results, though they may also feel slightly more uncomfortable during treatment.

Why Patients Are Choosing Shockwave Therapy

Many patients are looking for options beyond surgery and drugs. Shockwave therapy is attractive because it helps tissues heal instead of just covering up symptoms. It does not require anesthesia, has little to no downtime, and lets patients resume normal activities immediately. Unlike repeated injections, which can have risks over time, ESWT stimulates the body's own repair systems. This mix of safety, convenience, and proven benefits is why more patients and doctors are turning to shockwave therapy as a middle option between basic care and surgery.

Shockwave Therapy Compared with Injections and Surgery

Steroid or hyaluronic acid injections can provide short-term relief but do not change the disease process, and repeated use may cause side effects. Surgery remains the best choice for advanced joint collapse, but it carries higher risks and longer recovery times. Shockwave therapy offers improvements in pain and function for early to moderate disease, with fewer complications and lower long-term costs. Clinical trials show lasting benefits in both osteoarthritis and tendon problems, making ESWT a strong option before more invasive steps.

Frequently Asked Questions

Is shockwave therapy effective for knee osteoarthritis?

Yes. Research shows it reduces pain and stiffness while improving function, especially in mild to moderate cases. Many patients notice results within three months, and benefits can last longer.

How many sessions are needed?

Most treatment plans include 4 to 10 sessions over 3 to 8 weeks. The number of pulses and energy levels can also affect results.

Can shockwave therapy help with “bone-on-bone” arthritis?

Results are less predictable in severe osteoarthritis with major joint damage. It works best in earlier stages.

Is shockwave therapy better than injections or surgery?

For bursitis and tendon problems, research suggests shockwave therapy can provide longer relief than steroid injections without the risks. It is not a replacement for knee replacement surgery but can be an important option before considering surgery.

Does shockwave therapy work for athletes with tendon problems?

Yes. It is especially helpful for jumper’s knee (patellar tendinopathy). Results tend to be better during the off-season, and combining therapy with exercise may improve outcomes, though results vary.

Are there any risks or side effects?

Side effects are usually mild and temporary, such as soreness, bruising, or numbness in the treated area. Serious problems are very rare.

Will insurance cover it?

Coverage depends on the provider, however insurance coverage is very rare. Many clinics providing this service also offer self-pay options.

Who Should Consider It?

Shockwave therapy is a good option for people with chronic knee pain from mild to moderate osteoarthritis, chronic patellar tendinopathy, or ongoing bursitis, especially if exercise, bracing, or medication have not worked. It is also useful for those wanting to avoid surgery or repeated injections. It is not recommended for pregnant patients, people with bleeding disorders that are not controlled, or those with cancer at the treatment site.

Conclusion

Extracorporeal shockwave therapy is a safe, research-supported, non-surgical treatment for certain knee problems. Studies show it can reduce pain and improve function in the short and medium term, especially in patients with mild to moderate osteoarthritis and tendon problems. Results depend on factors like energy level, number of sessions, and timing with activity levels.

If you are living with persistent knee pain despite standard care, consider asking a specialist about ESWT. A professional can review your medical history and imaging to determine if you are a candidate.

LOCATIONS

Call **Spine & Injury Center 420 Marathon Drive, Campbell, CA 95008** at **(408) 379-8888** or email **Info@spineinjurysj.com** or you can visit www.spineinjurysj.com to schedule your assessment.

Dr. Bradley Mouroux 401 Sycamore Valley Road, Danville, CA 94526 at **(925) 837-5595** or you can visit DrBradMouroux.com to schedule your assessment.