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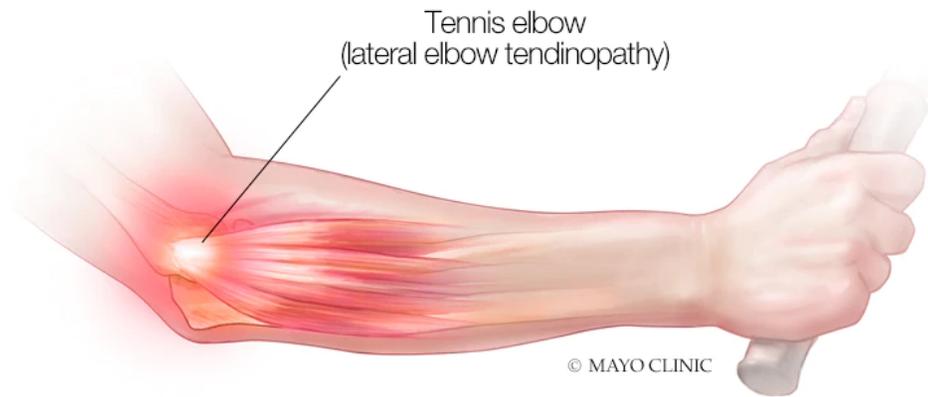
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Medical Professionals

Physical Medicine and Rehabilitation

Sports medicine practitioners embrace benefits of extracorporeal shock wave therapy

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Extracorporeal shock wave therapy (ESWT) is a noninvasive treatment that involves delivery of shock waves to injured soft tissue to reduce pain and promote healing. According to Jonathan T. Finnoff, D.O., medical director for Mayo Clinic Sports Medicine at Mayo Clinic Square in Minneapolis, ESWT is a viable option to consider for many patients who present with chronic tendinopathy that hasn't responded to more-conservative treatments. Often difficult to treat, chronic tendinopathy is characterized by localized pain and pathological changes to a tendon. The condition affects athletes and nonathletes alike.

Who is a candidate for ESWT?

The Food and Drug Administration has approved the use of ESWT for the treatment of plantar fasciopathy. However, Dr. Finnoff notes that multiple high-quality randomized clinical trials have provided substantial evidence that ESWT is a safe and effective noninvasive option for treating tendinopathy throughout the musculoskeletal system.

Dr. Finnoff and his Mayo Clinic colleagues are currently using ESWT to treat chronic, recalcitrant tendinopathy throughout the body. Mayo sports medicine specialists have found this therapy beneficial for treating the following areas of tendinopathy:

- Rotator cuff

- Lateral epicondyle
- Medial epicondyle
- Greater trochanter (gluteus medius and minimus)
- Proximal hamstring origin
- Rectus femoris
- Distal quadricep
- Patellar tendon
- Posterior tibial
- Peroneal
- Achilles
- Plantar fascia

Benefits

Dr. Finnoff notes that this approach fills a need for athletes whose injuries are not responding to first line treatments, such as rest, ice, therapeutic exercise, bracing and orthotics, but who are not yet ready to consider more-invasive or surgical options.

"Say we are treating a basketball player in the middle of the season who is experiencing jumper's knee that is inhibiting his or her ability to practice or play," explains Dr. Finnoff. "ESWT might be the next option for that athlete after we have tried all of the standard nonoperative treatments. Normally, when athletes have failed treatment, we have to tell them that they can't play or that they need to consider more-invasive treatments such as a needle tenotomy, experimental regenerative medicine treatment or surgical debridement, all of which are associated with higher costs, increased risk and longer recovery periods. While often successful, all of those more-invasive therapies require time off and can effectively end an athlete's season. ESWT thus provides athletes with a really nice intermediate option that, if successful, isn't season ending."

Treatment progression and return-to-play guideline

Dr. Finnoff notes that most patients require a series of treatments, each of which lasts less than 30 minutes. "A typical course of treatment is one treatment weekly for three weeks. If someone doesn't respond to the first two sessions, we usually stop. If they have improvement with

three sessions but haven't achieved the desired level of symptom relief, we can continue as needed," says Dr. Finnoff. Athletes undergoing ESWT are typically told to gradually increase their activity level based on symptom intensity.

Side effects from ESWT are limited to mild bruising, swelling, pain, numbness or tingling in the treated area, and the recovery is minimal compared with that of surgical intervention.

"Most patients take a day or two off after treatment but don't require a prolonged recovery period," says Dr. Finnoff. "Our clinical experience and patient outcomes to date indicate that when performed by experienced practitioners, ESWT is a solid addition to the array of tools we have to offer athletes, and it provides another pathway to optimal recovery that is appealing to athletes and others who wish to remain active," concludes Dr. Finnoff.

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