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## Medical Policy

# Extracorporeal Shock Wave Treatment for Plantar Fasciitis and Other Musculoskeletal Conditions

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### Policy Number: 081

BCBSA Reference Number: 2.01.40

### Related Policies

- Ultrasound Accelerated Fracture Healing Device, #[497](#)
- Electrical Bone Growth Stimulation of the Appendicular Skeleton, #[499](#)
- Bone Morphogenetic Protein, #[097](#)

### Policy

#### **Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity Medicare HMO Blue<sup>SM</sup> and Medicare PPO Blue<sup>SM</sup> Members**

Extracorporeal shock wave therapy(ESWT), using either a high or low-dose protocol or radial ESWT, is **INVESTIGATIONAL** for the following conditions:

- Musculoskeletal conditions, including but not limited to plantar fasciitis
- Tendinopathies, including
  - tendinitis of the shoulder,
  - tendinitis of the elbow (epicondylitis, tennis elbow)
- Stress fractures, delayed union and non-union of fractures, and
- Avascular necrosis of the femoral head.

### Prior Authorization Information

#### **Commercial Members: Managed Care (HMO and POS)**

This is **NOT** a covered service.

#### **Commercial Members: PPO, and Indemnity**

This is **NOT** a covered service.

#### **Medicare Members: HMO Blue<sup>SM</sup>**

This is **NOT** a covered service.

## Medicare Members: PPO Blue<sup>SM</sup>

This is **NOT** a covered service.

### CPT Codes / HCPCS Codes / ICD-9 Codes

The following codes are included below for informational purposes. Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

### CPT Codes

CPT codes:	Code Description
28890	Extracorporeal shock wave, high energy, performed by a physician, requiring anesthesia other than local, including ultrasound guidance, involving the plantar fascia
0019T	Extracorporeal shock wave therapy; involving musculoskeletal system, not otherwise specified; low energy
0101T	Extracorporeal shock wave involving musculoskeletal system, not otherwise specified, high energy
0102T	Extracorporeal shock wave therapy; high energy, performed by a physician, requiring anesthesia other than local, involving lateral humeral epicondyle

### ICD-9 Diagnosis Codes

Investigational for all diagnoses.

### Description

Extracorporeal shockwave treatment (ESWT), also known as orthotripsy, has been available since the early 1980s. Its use has been used primarily for renal stones, but has also been investigated as a treatment methodology for orthopedic conditions such as plantar fasciitis, shoulder tendonitis, and lateral epicondylitis. For renal stones, it is theorized that the small solid masses are broken up enough by the vibration of the sound waves that the body can then breakdown, liquefy, and absorb or resorb the fragments.

The mechanism by which ESWT might have an effect on musculoskeletal conditions is not well defined. The following hypotheses are suggested:

- Disruption by shock waves of calcific deposits present in chronic conditions may loosen adjacent structures and promote resorption of calcium, thereby decreasing pain and improving function
- Activation of endogenous pain control systems by shock waves may "reset" the endogenous pain receptors thus lessening pain and improving function
- Damage to endothelial tissue may result in increased vessel wall permeability, causing increased diffusion of cytokines, which may in turn promote healing
- Microtrauma may promote angiogenesis and thus aid in healing, or
- Stimulation of osteogenesis and promotion callous formation in animals, which is the rationale for trials of ESWT in delayed union or non-union of bone fractures.

Two specific musculoskeletal conditions that may be considered for this type treatment are:

- Plantar fasciitis, which is an inflammation of the thick tissue known as the plantar fascia on the bottom of the foot. It connects the heel bone to the toes and creates the arch of the foot. Plantar Fasciitis is characterized by deep pain in the plantar aspect of the heel, particularly on arising from bed. The exact etiology of plantar fasciitis is unclear, although repetitive injury is suspected. Conservative

therapy such as aspirin, rest, and wearing good support shoes is successful in the vast majority of cases, and

- Lateral epicondylitis, which is the most common form of tendinitis of the elbow and results in lateral elbow pain and functional limitations. The disorder is caused by overuse or injury of the tendons that attach the arm muscles to the elbow, usually from activities that involve repetitive extension of the wrist. Overuse of the extensor muscles leads to microtears at their insertion point, which incites an inflammatory response. Repetitive cycles of injury and inflammation lead to tendinosis, degeneration of the tendon structures, and disorganized healing.

Examples of ESWT devices for orthopedic conditions are the OssaTron® device from HealthTronics, the Epos™ Ultra from Dornier, and the Orbasone™ Pain Relief System from Orthometrix. All ESWT devices for the treatment of orthopedic conditions are considered investigational regardless of the commercial name, the manufacturer or FDA approval status.

## Summary

Extracorporeal shock wave therapy (ESWT) has been investigated for use in a variety of musculoskeletal conditions. Data as to the effectiveness (impact on net health outcome) of ESWT in the treatment of musculoskeletal conditions remains inconclusive, including in the FDA-approved indications for plantar fasciitis and lateral epicondylitis. Therefore, the use of this technology in the treatment of musculoskeletal condition, including plantar fasciitis, lateral epicondylitis, patellar tendonitis, and tendonitis of the shoulder remains investigational. The use of ESWT is also investigational for the treatment or prevention of fracture nonunion or in the treatment of osteonecrosis of the femoral head.

## Policy History

Date	Action
5/2014	New references added from BCBSA National medical policy.
4/2013	New references from BCBSA National medical policy.
11/2011-4/2012	Medical policy ICD 10 remediation: Formatting, editing and coding updates. No changes to policy statements.
6/2011	Reviewed - Medical Policy Group - Orthopedics, Rehabilitation and Rheumatology. No changes to policy statements.
7/2010	Reviewed - Medical Policy Group - Orthopedics, Rehabilitation and Rheumatology. No changes to policy statements.
7/2009	Reviewed - Medical Policy Group - Orthopedics, Rehabilitation and Rheumatology. No changes to policy statements.
3/2009	BCBS Association National Policy Review Radial ESWT added to non- coverage statement.
11/2008	Medical Policy 081 effective 11/2008 describing ongoing non-coverage.

## Information Pertaining to All Blue Cross Blue Shield Medical Policies

Click on any of the following terms to access the relevant information:

[Medical Policy Terms of Use](#)

[Managed Care Guidelines](#)

[Indemnity/PPO Guidelines](#)

[Clinical Exception Process](#)

[Medical Technology Assessment Guidelines](#)

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