

COMMON DISORDERS OF THE ACHILLES TENDON



American College of
Foot and Ankle Surgeons

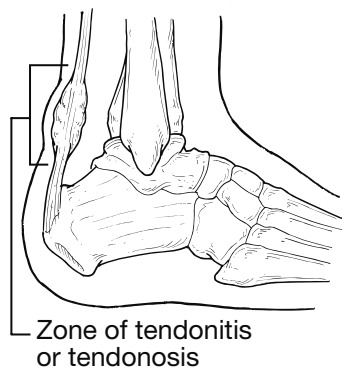
What Is the Achilles Tendon?

A tendon is a band of tissue that connects a muscle to a bone. The Achilles tendon—the longest tendon in the body—runs down the back of the lower leg and connects the calf muscle to the heel bone. Also called the “heel cord,” the Achilles tendon facilitates walking by helping to raise the heel off the ground.

Achilles Tendonitis and Achilles Tendonosis

Two common disorders that occur in the heel cord are Achilles tendonitis and Achilles tendonosis.

Achilles tendonitis is an inflammation of the Achilles tendon. This inflammation is typically short-lived. Over time the condition usually progresses to a degeneration of the tendon (Achilles tendonosis), in which the tendon loses its organized structure and is likely to develop microscopic tears. Sometimes the degeneration involves the site where the Achilles tendon attaches to the



heel bone. In rare cases, chronic degeneration with or without pain may result in rupture of the tendon.

Symptoms

The symptoms associated with Achilles tendonitis and tendonosis include:

- Pain—aching, stiffness, soreness, or tenderness—within the tendon. This may occur anywhere along the tendon’s path, beginning with the narrow area directly above the heel upward to the region just below the calf muscle. Often pain appears upon arising in the morning or after periods of rest, then improves somewhat with motion but later worsens with increased activity.
- Tenderness, or sometimes intense pain, when the sides of the tendon are squeezed. There is less tenderness, however, when pressing directly on the back of the tendon.
- When the disorder progresses to degeneration, the tendon may become enlarged and may develop nodules in the area where the tissue is damaged.

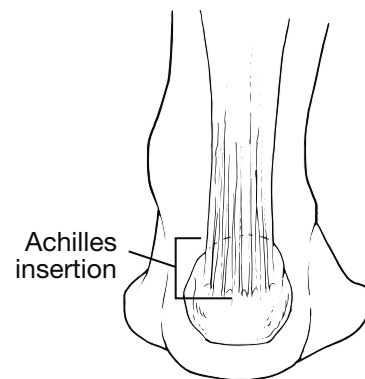
Causes

As “overuse” disorders, Achilles tendonitis and tendonosis are usually caused by a sudden increase of a repetitive activity involving the Achilles tendon. Such activity

puts too much stress on the tendon too quickly, leading to micro-injury of the tendon fibers. Due to this ongoing stress on the tendon, the body is unable to repair the injured tissue. The structure of the tendon is then altered, resulting in continued pain.

Athletes are at high risk for developing disorders of the Achilles tendon. Achilles tendonitis and tendonosis are also common in individuals whose work puts stress on their ankles and feet, such as laborers, as well as in “weekend warriors”—those who are less conditioned and participate in athletics only on weekends or infrequently.

In addition, people with excessive pronation (flattening of the arch) have a tendency to develop Achilles tendonitis and tendonosis due to the greater demands placed on the tendon when walking. If these individuals wear shoes without adequate stability, their over-pronation could further aggravate the Achilles tendon.



Diagnosis

In diagnosing Achilles tendonitis or tendonosis, the surgeon will examine the patient's foot and ankle and evaluate the range of motion and condition of the tendon. The extent of the condition can be further assessed with x-rays, ultrasound, or MRI.

Treatment

Treatment approaches for Achilles tendonitis or tendonosis are selected on the basis of how long the injury has been present and the degree of damage to the tendon.

In the early stage, when there is sudden (acute) inflammation, one or more of the following options may be recommended:

- **Immobilization.** Immobilization may involve the use of a cast or removable walking boot to reduce forces through the Achilles tendon and promote healing.
- **Ice.** To reduce swelling due to inflammation, apply a bag of ice over a thin towel to the affected area for 20 minutes of each waking hour. Do not put ice directly against the skin.
- **Oral medications.** Nonsteroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen, may be helpful in reducing the pain and inflammation in the early stage of the condition.
- **Physical therapy.** Physical therapy may include strengthening exercises, soft-tissue massage/mobilization,

gait and running re-education, stretching, and ultrasound therapy.

If non-surgical approaches fail to restore the tendon to its normal condition, surgery may be necessary. The foot and ankle surgeon will select the best procedure to repair the tendon.

Prevention

To prevent Achilles tendonitis or tendonosis from recurring after surgical or non-surgical treatment, the foot and ankle surgeon may recommend strengthening and stretching of the calf muscles through daily exercises. Wearing proper shoes for the foot type and activity is also important in preventing recurrence of the condition. ▲



Melissa J. Lockwood, D.P.M.

Melissa J. Lockwood, D.P.M. – As founder of Heartland Foot and Ankle Associates, P.C., Dr. Melissa J. Lockwood happily returns to central Illinois after seven years in Cleveland, Ohio. She is a graduate of Providence Catholic High School in New Lenox, Illinois. Dr. Lockwood completed her undergraduate degree from the University of Illinois (Urbana/Champaign) in 2001 with a Bachelor of Science in Biology and a minor degree in Chemistry. Dr. Lockwood has a great interest in archaeology and also received a minor degree in Anthropology from the U of I in 2001.

Dr. Lockwood went on to the Ohio College of Podiatric Medicine and matriculated with her Podiatric Medical Degree in 2005. While at OCPM, Dr.

Lockwood served as both a delegate to the student branch of the APMA as well as President of the Student Government organization (OPMSA). Dr. Lockwood was the recipient of several awards while attending OCPM, including the Ohio Podiatric Medical Association Dr. James Conforti Community Relations Award and the OCPM Mildred Kaufman Memorial Award for Proficiency in Orthopedics and Biomechanics.

Dr. Lockwood arrives in Bloomington following a three year residency in Cleveland, Ohio. Dr. Lockwood completed a 36 month Podiatric Medical and Surgical Residency Program based out of the University Hospital System/Richmond Heights Medical Center. Dr. Lockwood has extensive training in both forefoot (bunions, hammertoes, neuromas) elective surgical procedures as well as rearfoot reconstruction. She has a special interest in the treatment of chronic wounds as well as diabetic palliative care. Dr. Lockwood enjoys working with patients one on one in a clinical setting and chatting about her favorite sports teams!

Dr. Lockwood and her husband Scott are pleased to be back in their home state and rooting on the Illini, Redbirds, Chicago Bears, and White Sox! Scott is a 2000 Illinois State University Alumni with a BS degree in Accountancy. He is a CPA working in Bloomington.

EDUCATION

University of Illinois, Urbana-Champaign, BS Biology (01)
Professional: Ohio College of Podiatric Medicine, (05)
Residency: University Hospital Richmond Medical Center (05-June 08)

PROFESSIONAL ACCREDITATION

NBPME Part I (03) NBPME Boards Part II & Part III - PM Lexus (05)
State of Illinois Licensure (08)

HONORS AND AWARDS

Illinois State Scholar (1997)
OCPM Academic Scholarship (01) OCPM Dean's List (04)
OPMA Dr. James Conforti Community Relations Award (05)
OCPM Mildred Kaufman Memorial Award for Proficiency in Orthopedics and Biomechanics (05)
University Hospitals Richmond Medical Center Outstanding Podiatric Resident (08)

PROFESSIONAL ORGANIZATIONS

President, Ohio Podiatric Medical Student's Association (02-04)
Delegate, American Podiatric Medical Student's Association (02-04)
Chairman, President's Committee, American Podiatric Medical Student's Association Feb. 2004
Member - OCPM Board of Trustees (02-04)
APMA/IPMA, AAPP, AAAP member at large

RESEARCH/PUBLICATIONS

Sesamoid Pathology, coauthored with
Dr. Joseph Favazzo, D.P.M., December 2005. Compilation of forefoot pathology edited by Vincent J. Hetherington, D.P.M.



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This information has been prepared by the Consumer Education Committee of the American College of Foot and Ankle Surgeons, a professional society of 6,000 foot and ankle surgeons. Members of the College are Doctors of Podiatric Medicine who have received additional training through surgical residency programs.

The mission of the College is to promote superior care of foot and ankle surgical patients through education, research and the promotion of the highest professional standards.

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