

A Litigation Primer On The Ankle

Samuel D. Hodge, Jr.

The ankle is a bone—fact or fiction?

THE TOE BONE is connected to the foot bone, but the foot bone is not connected to the ankle bone. Rather, the foot is connected to the malleolus. Confused? This article will discuss the bones and soft tissues that make up the ankle and will examine the anatomy of an ankle injury.

THE ANATOMY OF THE ANKLE • Contrary to popular belief, the ankle is not the knuckle on both sides of the leg a few inches above the foot. The ankle is a hinged joint consisting of the top bone of the foot and the lower bones of the fore-leg. Its proper name is the talocrural joint, and the ankle is one of the most complicated ana-

Samuel D. Hodge, Jr. is Chair of the Department of Legal Studies at Temple University, in Philadelphia. This article is based on chapter from the author's upcoming book, *Anatomy For Attorneys*, to be published by ALI-ABA.

tomical structures in the body. When the ankle is working properly, it allows the foot to move, helps stabilize the lower extremities and distributes the weight of the body over a very small area. In fact, when a person runs, walks, or climbs stairs, the weight of the body courses through one foot at a time.

According to the American Academy of Orthopedic Surgeons, more than 12 million people sought medical care in 2002 for foot and ankle problems. Thirty percent of these visits were for sprains and fractures of the ankle. As "baby boomers" age, these numbers will increase. These statistics are not surprising when one considers:

- The body's weight on the foot and ankle is increased 1.5 times by the simple act of walking;
- Feet act as shock absorbers, cushioning up to one million pounds of pressure during 60 minutes of strenuous activity;
- Feet log about 1,000 miles a year;
- Running increases the stress on the ankle up to eight times a person's body weight;
- One-fourth of the bones in the body are contained in the foot and ankle.

http://orthoinfo.aaos.org/fact/thr_report.cfm?Thread_ID=100&topcategory=Foot. It is no wonder that the ankle is frequently injured and minor irritations can cause difficulty with ambulation.

The Ankle Is A Mortise-and-Tenon Joint

Ankle movement is accomplished by a combination of three bones and soft tissue structures that work together to produce a very stable joint. This stability is created by the anatomical arrangement of these bones that form a carpenter's mortise-and-tenon joint. A mortise is created when the end of a piece of wood is pared down to form a groove that fits securely into the hole or opening of another piece of lumber. See Figure 1.

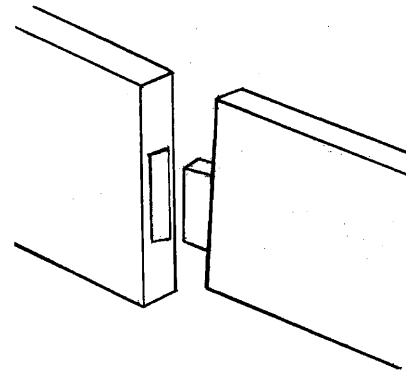


Figure 1

The ankle joint works in a similar fashion. The bottom part of the foreleg forms the top aspect of the ankle and consists of two bones that make up the mortise, or deep socket. The tibia, or shin bone, is the larger of the bones and is located on the inside, or medial side, of the limb. The fibula is the smaller bone on the outside, or lateral, part of the leg. The tenon part of the joint consists of the wedge-shaped talus, which is located at the top of the foot and forms the bottom part of the ankle. The talus sits on top of the heel bone and rests in the deep socket created by the fibula and tibia forming the stable ankle joint. See Figure 2. When the joint is working properly, the foot is able to move up and down. This is called dorsiflexion and plantar-flexion.

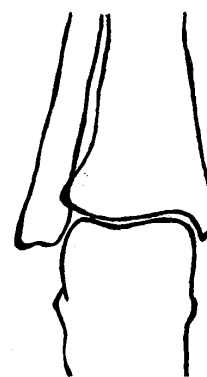


Figure 2

The Malleolus

Some anatomy books refer to the talus as the ankle bone. What then, are the two knuckles on the side of the lower leg that most people assume are the ankle bones? These are the malleoli, which means hammer in Latin. The protrusion on the outside of the lower leg is the lateral malleolus and constitutes the termination point of the fibula. The bump on the inside of the shinbone is the medial malleolus and forms the ending point of the tibia. It is these two protrusions that hold the talus in place and form the ankle mortise. (Again, see Figure 2.)

Surprisingly, the ankle is actually made up of two joints. Immediately below the ankle joint is the subtalar joint, which is formed by the talus and calcaneus, or heel bone. The subtalar joint allows the foot to move from side to side. Elizabeth Quinn, *Ankle Anatomy and Physiology*, <http://sportsmedicine.about.com/cs/ankle/a/ankle1.htm>. See Figure 3.

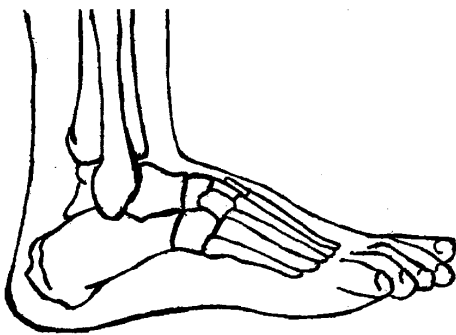


Figure 3

The Ligaments That Secure The Ankle Joint

The stability of the joint is further enhanced by several ligaments. A ligament is a strong, soft tissue structure that attaches bone to bone. Three ligaments stabilize the outside of the ankle by securing the lateral malleolus to the bones below the ankle joint. These ligaments include:

- The anterior talo-fibular ligament (attaches the front of the talus to the fibula and is the most commonly injured ligament in the ankle);
- The posterior talo-fibular ligament (attaches the rear of the talus to the fibula); and
- The calcaneo-fibular ligament (attaches the calcaneus to the fibula).

See Figure 4.

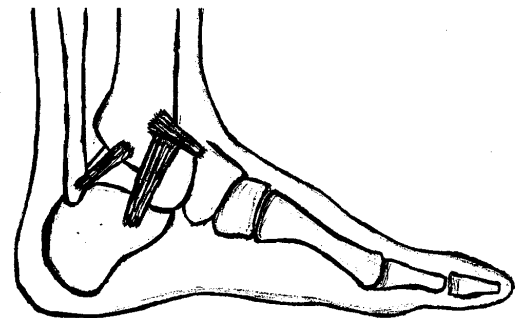


Figure 4 (Lateral View)

The Deltoid Ligament

The medial side of the ankle is stabilized by the deltoid ligament, which is a wide, triangular structure that forms the strongest ligament in the ankle. This fibrous tissue, which is also known as the medial collateral ligament, obtains its name from the fact that it resembles the Greek letter delta (Δ). The job of the deltoid ligament is to anchor the medial malleolus to the talus. *Ankle Sprains-Anatomy and Function*, www.arthroscopy.com/sp09005.htm. See Figure 5.

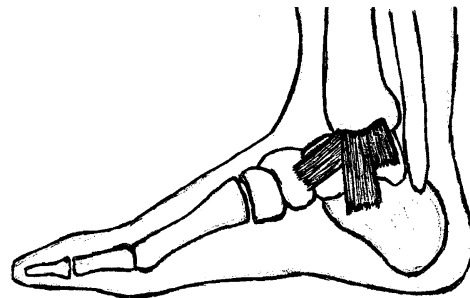


Figure 5 (Medial View)

The Ankle Tendons

A tendon is a fibrous band of connective tissue that attaches muscle to bone so that a body part may achieve movement. The major tendon of the ankle, the Achilles tendon, needs no introduction. This tissue is the strongest tendon in the body and attaches the calf muscle or gastrocnemius to the heel.

Its anatomical location is easy to find. The Achilles tendon is the long, vertical cord that can be felt at the back of the foot. When the gastrocnemius muscle contracts, it pulls the Achilles tendon, which is firmly attached to the bottom of the foot. In turn, this causes the foot to point downward. This dynamic allows a person to stand on the toes, walk, run, and climb stairs. *Achilles Tendon Injuries-Anatomy*, www.athroscopy.com/sp09009.htm. See Figure 6.

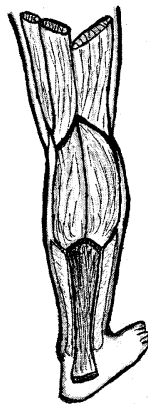


Figure 6

Posterior Tibial Tendon

The posterior tibial tendon attaches one of the smaller muscles of the calf to the undersurface of the foot. More specifically, this tendon originates in the calf, travels behind the inside of the ankle and attaches to the foot's navicular bone. The posterior tibial tendon helps support the arch of the foot and is responsible for inward movement. *Posterior Tibial Tendon Dysfunction*, American Academy of Orthopaedic Surgeons,

http://orthoinfo.aaos.org/fact/thr_report.cfm?Thread_ID=336&topcategory=Foot.

Anterior Tibial Tendon

The anterior tibial tendon works in the opposite direction of the Achilles tendon and allows the foot to move upward. This tendon originates in the muscles at the front of the leg and travels down the anterior part of the ankle.

The task of a muscle is to provide movement. The majority of foot motion is attributed to the stronger of the muscles in the foreleg, whose tendons attach to the foot. Contractions of these muscles allow a person to move the foot in many directions. *A Patient's Guide to Foot Anatomy*, Medical Multimedia Group, www.medicalmultimedialogroup.com.

ANKLE TRAUMA • An injured ankle is the most common medical problem incurred during recreational pursuits. In fact, ankle injuries are common in football, basketball, soccer, and volleyball. Christopher F. Richards, *Ankle Injury—Soft Tissue*, E-Medicine, www.emedicine.com/EMERG/topic30.htm. The list of professional athletes who have sustained serious ankle injuries reads like a “Who’s Who in Sports” and includes Curt Schilling, Terrell Owens, Anna Kournikova, J. J. Daigneault, Karl Malone, and Donovan McNabb. Common problems include sprains, fractures, and tendonitis.

The Ankle Sprain

According to the National Institute of Arthritis and Musculoskeletal and Skin Diseases (“NIAMS”), about one million ankle injuries occur each year and ankle sprains account for 85 percent of this statistic. The American Academy of Orthopedic Surgeons estimates that 25,000 people a day suffer ankle sprains in activities ranging from physical fitness endeavors to walking on an uneven surface or stepping down at an angle.

A sprain is the stretching or tearing of a ligament that occurs when this elastic structure is forced beyond its normal anatomical position. The vast majority of ankle sprains occur when the ankle rolls outward while the foot turns inward, such as that which might occur when a person falls, turns, runs, or lands on the ankle after a jump. Even the simple act of stepping on another's foot is a frequent culprit in causing a significant sprain. This type of trauma is labeled an inversion injury and harms the ligaments on the lateral part of the ankle. *Questions and Answers about Sprains and Strains*, NIAMS, www.niams.nih.gov/hi/topics/strain_sprain/strain_sprain.htm. On the other hand, an eversion sprain occurs when the ankle rolls inward while the foot turns outward. This movement injures the ligaments on the inside, or medial part, of the ankle. *Ankle Sprain*, WebMD, http://webcenter.health.webmd.netscape.com/hw/health_guide_atoz/te7558.asp. Ankle sprains are common, but their severity may range from slight swelling to a complete tear of the ligament. In fact, 25 percent of ankle sprains cause long-term joint pain and weakness. Robert E. Rakel, ed. *“Orthopedics,” Textbook of Family Practice*, (W.B. Saunders, 6th ed. 2002), pp. 891–950.

The Grading System For Ankle Sprains

A grading system has been developed to classify the severity of sprains. A Grade I sprain is the mildest form and represents a slight stretching of the ligament. Pain is minimal and there is little bruising or swelling. A Grade II sprain is classified as a partial tearing of the ligament with some demonstrable laxity in the joint. See Figure 7. The affected area will be painful with minor bruising and swelling, and there will be some difficulty with walking.

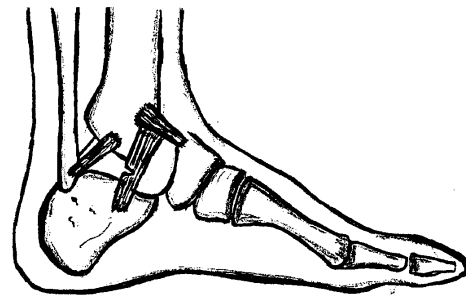


Figure 7

A Grade III sprain is the most severe and reflects a complete tear of the ligament. See Figure 8. Significant pain, swelling, discoloration, and bruising will be present, and the person may not be able to walk.

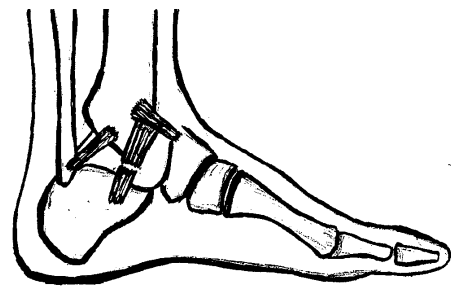


Figure 8

Treatment For An Ankle Sprain

Initial treatment is “RICE,” which is an acronym for rest, ice, compression, and elevation. In more severe cases, the patient may have to wear a brace or cast. At times, surgery may be necessary to reattach the ligament. Recovery time varies depending upon the complexity of the injury and overall health of the person. According to NIAMS, a mild ankle sprain can take three to six weeks to rehabilitate whereas a moderate sprain may require two to three months of recuperation. A Grade III sprain, however, can last eight to 12 months before a person is able to return to full activities. In fact, the American College of Emergency Physicians

reports that sprains generally take longer to heal than broken bones.

The High Ankle Sprain

Much of the suspense leading up to the 2005 Super Bowl between the Philadelphia Eagles and the New England Patriots dealt with whether Terrell Owens would play because of prior surgery to repair a high ankle sprain. What is this injury and why is it talked about in such pessimistic terms?

The medical name for a high ankle sprain is a syndesmotic injury, which indicates trauma to the ligaments between the fibula and tibia near the ankle joint. A high ankle sprain is much more severe than a regular ankle sprain and takes longer to heal. It may even have to be repaired through surgical intervention.

This eversion-type injury causes one or more of the three ligaments attaching the lower ends of the tibia and fibula to tear. These structures are:

- The interosseous ligament, which runs the length of the two bones and holds them together;
- The anterior tibiofibular ligament, which attaches the tibia and fibula in the front; and
- The posterior tibiofibular ligament that secures these two bones posteriorly.

The ligaments are injured when a person twists the ankle on a planted foot, such as that which occurs in football or when a hockey player pushes off the ice while the ankle is turned outward. Andrew H. Smith and Bernard R. Bach, *High Ankle Sprains*, *The Physician and Sportsmedicine*, Vol. 32, No. 12, December 2004, p. 39, available at www.physsportsmed.com/issues/2004/1204/bach.htm.

A high ankle sprain is suspected when the person provides a history of an outward twisting motion of the ankle that causes pain just above the ankle joint. The individual is fre-

quently unable to walk, and squeezing the leg at the midpoint of the calf or gently moving the foot reproduces the discomfort. *High (Syndesmotic) Ankle Sprain*, www.emedx.com/emedx/diagnosis_information/foot-nkle_disorders/high_ankle_sprain_outline.htm.

The Fractured Ankle

A fractured ankle refers to a break in one or more of the bones that form the ankle joint—the tibia, fibula, and talus. It is also common for a break in the bone to be accompanied by an injury to the surrounding soft tissues, nerves, and blood vessels. The most common fracture is to the fibula, but a substantial force applied to the ankle can force the tibia and fibula to break. *Foot and Ankle Anatomy: Part One—Ankle Anatomy*, www.jointhealing.com/pages/foot/foot-anatomy.html. The mechanism of trauma is either a direct blow to the area or the bone being forced beyond its normal anatomical limitation such as that which might occur in a fall, automobile accident, or by a twisting force. Symptoms include the inability to bear weight on the joint and pain that is more severe than a simple sprain. Frequently, a deformity may be visible on inspection. Michael E. Mulligan, *Ankle Fractures*, *E-Medicine*, www.emedicine.com/radio/topic829.htm.

An ankle fracture is confirmed by x-rays performed in accordance with the Ottawa Ankle Rules, which consist of three true-or-false questions dealing with the location of the pain. Additionally, most fractures follow a predictable pattern. Because a fracture may not be visible on initial diagnostic testing, a repeat study must be performed if the pain does not subside. *Id.*

Names Of Ankle Fractures

Special names have been coined to identify fractures of the ankle:

- A Pott's fracture refers to corresponding breaks in the lower end of the fibula and the medial malleolus of the tibia;
- A Lisfranc fracture is named after the physician who first identified the pathology and it describes a broken bone in the top of the arch of the mid-foot;
- A Bosworth fracture identifies backward displacement of a piece of the fibula causing the bone to become lodged under the tibia;
- A Maisonneuve fracture involves multiple abnormalities including a fracture of the medial malleolus, a rupture of the deltoid ligament, and a fracture of the upper part of the fibula;
- Finally, a Cotton fracture deals with the breaking of the medial malleolus, the lateral malleolus, and the posterior surface of the tibia.

Treatment

The healing time for a fracture depends upon the severity of the injury. A simple fracture is casted or braced and takes about six weeks to heal. If the fracture is accompanied by a torn ligament or a loose bone fragment, surgery may be required to secure the area with screws, staples or a plate. *Broken Ankle*, American Academy of Orthopaedic Surgeons, http://orthoinfo.aaos.org/fact/thr_report.cfm?Thread_ID=169&topcategory=Foot.

Achilles Tendon Injuries

The Achilles tendon may be the largest tendon in the body, but it is a frequent source of injury. In the United States, there are more than 225,000 Achilles tendon injuries per year, the majority of which are attributable to sports activities involving older athletes. This soft tissue structure is susceptible to trauma because of its limited blood supply and the forces to which it is subjected during movement of the foot. As people age, the already limited blood supply to the tendon diminishes, predisposing the tendon to inflammation and rupture. An injury can develop gradually or abruptly, and the rehabilitation process is lengthy. Michael Mazzone and Timothy McCue, *Common Conditions of the*

Achilles Tendon, American Family Physician, Vol. 65, No. 9, May 1, 2002, p. 1805, available at www.aafp.org/afp/20020501/1805.htm.

Achilles Tendonitis And Achilles Tendonosis

Achilles tendonitis is an inflammation of the tendon usually caused by overuse, but it may also be related to trauma or arthritis. Statistically, Achilles tendonitis occurs in approximately 10 percent of runners, but dancers, tennis players, and gymnasts are also susceptible to this problem. The primary complaint is pain centered over the tendon's insertion at the heel.

A related condition is Achilles tendonosis whose symptoms include soreness and stiffness. Tendonosis starts gradually but worsens with time. The primary difference between the two conditions is that Achilles tendonosis does not involve an inflammation of the tendon. Rather, the tendon becomes thickened, degenerated, and scarred. *Everything About Achilles Tendons*, www.achillestendon.com/Injuries.html.

Achilles Tendon Rupture

An Achilles tendon rupture involves a full or partial tearing of the structure. Many times, a palpable gap can be seen or felt in the back of the leg since the calf muscle is no longer attached to the heel. Most ruptures occur in men between 30 and 50 years of age and happen during strenuous activities. Sufferers frequently report hearing or feeling a "pop" in the back of the ankle during exertion. See Figure 9.



Figure 9

Examination for a ruptured Achilles tendon includes the Thompson test. The patient will be asked to lie prone on a table while the physician flexes the knee on the injured side. The calf is then squeezed to ascertain if the foot moves away from the body in a downward movement, or in plantar flexion. If the foot does not move, a rupture is suspected. If the foot moves, the tendon is believed to be intact to some extent. When the diagnosis is equivocal, an ultrasound or MRI may be performed. Michael F. Mazzone and Timothy McCue, *Common Conditions of the Achilles Tendon*, supra.

Injuries To The Posterior Tibial Tendon

As mentioned previously, the posterior tibial tendon attaches one of the smaller calf muscles to the undersurface of the foot at the navicular bone. This tendon is important because it helps support the arch of the foot by holding the navicular bone in place. An injury to this tendon allows the navicular bone to move out of position, causing the arch to deflate. This results in an acquired flatfoot deformity with pain on the inside arch, especially with weight bearing.

Posterior tibial tendon dysfunction occurs most often in women over 50 and may result from an inherent defect in the tendon itself. Predisposing factors include obesity, hypertension, diabetes, previous surgery or trauma to the medial side of the foot, steroid use, and inflammatory diseases such as rheumatoid arthritis or psoriasis. The injury may also be trauma related, be caused by the tearing of the tendon during sports, or by the tendon becoming inflamed over time with activities of daily living. *Posterior Tibial Tendon Dysfunction*, American Academy of Orthopaedic Surgeons, http://orthoinfo.aaos.org/fact/thr_report.cfm?Thread_ID=336&topcategory=Foot.

Peroneal Tendonitis

Peroneal tendonitis is an inflammatory process affecting the tendons that run behind

the lateral malleolus. The peroneal tendons originate on the outside surface of the lower leg and form the termination point for the two muscles responsible for eversion or outward movement of the foot—the peroneus longus and the peroneus brevis. As the tendons pass behind the ankle on their journey to the foot, they are kept in place by a fibrous band called the retinaculum. See Figures 10 and 11. Contraction of the peroneal muscles and tendons causes the foot to point downward and outward. *A Patient's Guide to Peroneal Tendon Problems*, Medical Multimedia Group, www.medicalmultimedialogroup.com.

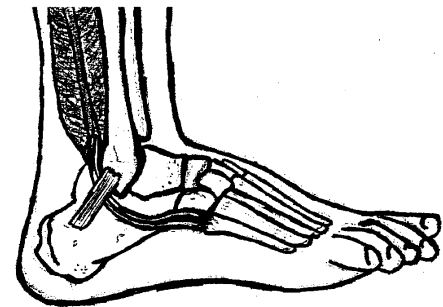


Figure 10

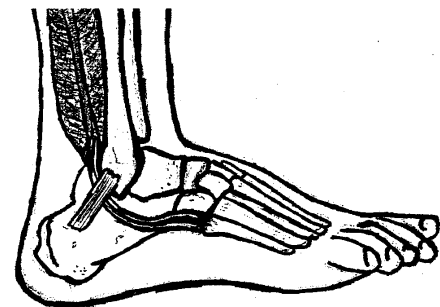


Figure 11

Trauma to the retinaculum can cause it to tear, resulting in a displacement of the peroneal tendons from their correct anatomical position. This displacement or subluxation can damage

the tendons and cause them to function improperly. This injury occurs most frequently in sports, but it can also be the result of a severe ankle sprain. Brian DeYoe, *Peroneal Tendon Dysfunction*, www.podiatrynetwork.com/document_disorders.cfm?id=218. Degenerative changes in the actual tendon, or a condition known as tendonosis, is another problem source. Degeneration causes the tendons to weaken and lose their strength. Eventually, scar tissue forms and the degenerative tendon may tear. *A Patient's Guide to Peroneal Tendon Problems*, *supra*.

Peroneal Subluxation

Symptoms of a peroneal injury include pain around the lateral malleolus, especially with activity as well as swelling and tenderness. In the event of a subluxation, a painful snapping of the tendon is reported with movement. Steven Karageanes and Kathleen Sharp, *Peroneal Tendon Syndromes*, *E Medicine*, www.emedicine.com/sports/topic98.htm.

LEGAL CONSIDERATIONS • Many people do not view ankle injuries as troubling as those to the knee or hip. There is a perception that ankle problems are limited to athletes and occasional sports enthusiasts who seem to recover within a few weeks. This perception, however, is incorrect. A serious ankle injury can have devastating consequences, and there has been much litigation involving trauma to this joint. Million-dollar verdicts have been reported and ankle problems have resulted in awards of total disability by Social Security and the granting of workers' compensation benefits. Claims have even been advanced under the Americans with Disabilities Act and in the malpractice context.

The most dramatic verdict involving the ankle dealt with an injury sustained by Linda Ripa, the sister of actress Kelly Ripa, and her award of 15 million dollars. This individual suf-

fered a broken ankle in a motor vehicle accident, which necessitated an ankle fusion a few days later. Subsequent x-rays revealed that Ripa's ankle had not fused properly, and a malpractice claim was successfully advanced against the orthopedic surgeon who performed that ankle surgery. *Ripa v. Meller*, No. 010702977, Philadelphia Court of Common Pleas (January 2004). *See also* Asher Hawkins, *Ankle-Injury Patient Awarded \$15 Million*, *The Legal Intelligencer*, Vol. 230, No. 21, at 1 (February 2, 2004).

On the other hand, merely sustaining an ankle injury does not guarantee an award of money. In *Jones v. Commissioner of Social Security*, 48 Fed. Appx. 369 (3d Cir. 2002), the claimant fractured her left ankle in 1987 and fractured her right ankle in 1994. Two years later, she applied for Social Security Disability benefits contending that she had not been able to work since her left ankle fracture because it became swollen after several minutes of standing. This problem also caused intolerable back pain. The Social Security Act requires a claimant to show a severe "physical or mental impairment" to obtain an award of benefits. In finding against Ms. Jones, the court noted that the claimant failed to produce a single medical record from the relevant time period, and her treatment notes demonstrated that her left ankle had a good range of motion and acceptable motor strength. For a further discussion of damages stemming from injuries to the ankle, see Carl T. Dreschler, Annotation, *Excessiveness or Adequacy of Damages for Injuries to the Legs and Feet*, 13 ALR 4th 212 (1982 & Supp. 2005).

Average Award For Ankle Injury

According to a 2004 survey by the Jury Verdict Research Group, the average award for an ankle injury is \$84,777. This national study reviewed verdicts between 1996 and 2004 involving ankle fractures and soft tissue injuries to this joint. Achilles tendon injuries, however,

were not included in the survey. These statistics were further subdivided by type of injury and reflected that the average award for ankle fractures was \$100,000, and injuries to the ligaments, tendons, and muscles averaged \$80,600. *Basic Injury Values for Ankle Injuries*, Personal Injury Evaluation Handbooks, Jury Verdict Research, September 27, 2004.

Disability Claims

Ankle injuries have been a source of disability claims in a variety of contexts. For purposes of Social Security, the ankle has been classified as a major weight-bearing joint, resulting in an award of disability when there is an inability to ambulate effectively on a sustained basis. "Inability to ambulate" is defined as an extreme limitation in the ability to walk independently for at least 12 months without the use of a hand-held assistance device. Examples include the incapacity to walk without a walker or two crutches, or to walk a block at a reasonable pace on rough or uneven surfaces. *Section 1.00, Musculoskeletal System-Adult*, Disability Evaluation Under Social Security, Blue Book-January 2005, www.ssa.gov/disability/professionals/bluebook/1.00-Musculoskeletal-Adult.htm.

State Claims

States have also considered ankle injuries as the basis for a disability impairment rating. For example, Minnesota provides that a rupture of the medial or lateral ligament in the ankle with mild laxity results in a two percent impairment, and a Grade II sprain is considered a four percent impairment. An Achilles tendon rupture with the ability to stand on one's toes constitutes a two percent impairment, while the inability to sustain body weight on the toes is a four percent impairment. Avascular necrosis of the talis results in a 10 percent impairment and a ankle fracture of the malleolus is a two percent

disability. A calcaneus fracture provides a three percent disability. Minnesota Rule 5223.0520, *Musculoskeletal Schedule-Ankle*, www.revisor.leg.state.mn.us/arule/5223/0520.html.

North Carolina has issued the *Industrial Commission Rating Guide for the Evaluation of Permanent Physical Impairments*. The *Guide* is available to physicians in rating industrial accidents but provides only a reference point which does not take into consideration intangible factors such as pain, weakness, and dexterity. According to the *Guide*, the ankle and foot are considered together in deciding the physical limitations of this anatomical area. Cases involving reconstructive surgery with resultant osteoarthritis are considered a minimum impairment of 10 percent of the joint. A limitation of motion of the ankle between 90 degrees and 120 degrees is considered a 10 percent impairment. A limitation of ankle motion between 100 degrees and 115 degrees provides a 25 percent limitation and restriction of motion between 105 degrees and 110 degrees constitutes a 50 percent rating. Displaced tarsal fractures with optimal reductions are considered as having a minimum impairment rating of five percent. *North Carolina Industrial Commission Rating Guide*, June 23, 2004, www.comp.state.nc.us/ncic/pages/ratinggd.htm.

Similarly, Wisconsin's Department of Worker Force Development has issued guidelines on how to evaluate disability under that jurisdiction's workers' compensation laws. Total ankylosis or fusion of the ankle bones in optimum position with a total loss of motion is considered a 40 percent disability. Ankylosis of the ankle joint resulting in a loss of dorsi and plantar flexion results in a 30 percent rating. *How to Evaluate Disability under Wisconsin's Worker's Compensation Law*, www.dwd.state.wi.us/dwd/publications/wc/WKC-7761-P.htm.

CONCLUSION • The ankle is an amazing but complicated structure that serves a variety of functions from ambulation to helping stabilize the lower extremities. Despite its mortise-and-tenon design, it has an inherent problem. The activities of daily life make the ankle susceptible to injury, with the most common problem being a sprained ankle resulting from an inversion of the foot. Fibula fractures are also common since this bone is on the outside of the leg and absorbs the impact of any trauma to that area.

From a litigation point of view, ankle injuries can have a significant effect on a person's life, and counsel for the claimant needs to overcome the perception that trauma to this joint is not as

serious as an injury to the knee or hip. This may be accomplished by focusing on how the injury has affected the claimant's quality of life. Detailing what activities can no longer be performed and movements that cause discomfort are helpful. On the other hand, an ankle injury is not an entitlement to money. Defense counsel should carefully examine the medical records for consistency of complaints over time. Physician notes that the injury has healed nicely or that symptoms have abated will assist in mitigating an award.

Even though the design of the ankle is complicated, it is hoped that this overview will prove helpful in handling an ankle injury claim.

PRACTICE CHECKLIST FOR

A Litigation Primer On The Ankle

An injured ankle is the most common medical problem incurred during recreational pursuits, and one of the most common of all orthopedic injuries. But an ankle injury can arise from a variety of causes, and the injuries themselves are not typically disabling.

- Sprains are the most common kind of ankle injury:
 - ___ A sprain is the stretching or tearing of a ligament that occurs when this elastic structure is forced beyond its normal anatomical position;
 - ___ The vast majority of ankle sprains occur when the ankle rolls outward while the foot turns inward. This is an "inversion" injury and harms the ligaments on the lateral part of the ankle;
 - ___ An eversion sprain occurs when the ankle rolls inward while the foot turns outward. This movement injures the ligaments on the inside, or medial part, of the ankle;
 - ___ A Grade I sprain is the mildest form and represents a slight stretching of the ligament;
 - ___ A Grade II sprain is classified as a partial tearing of the ligament with some demonstrable laxity in the joint;
 - ___ A Grade III sprain is the most severe and reflects a complete tear of the ligament, and may render the sufferer unable to walk; and
 - ___ A high ankle sprain is injury to the ligaments between the fibula and tibia near the ankle joint. A high ankle sprain is much more severe than a regular ankle sprain and takes longer to heal.
- A fractured ankle refers to a break in one or more of the bones that form the ankle joint—the tibia, fibula, and talus. Special names have been coined to identify fractures of the ankle:

- __ A Pott's fracture refers to corresponding breaks in the lower end of the fibula and the medial malleolus of the tibia;
- __ A Lisfranc fracture is named after the physician who first identified the pathology and it describes a broken bone in the top of the arch of the mid-foot;
- __ A Bosworth fracture identifies a backwards displacement of a piece of the fibula causing the bone to become lodged under the tibia;
- __ A Maisonneuve fracture involves multiple abnormalities including a fracture of the medial malleolus, a rupture of the deltoid ligament, and a fracture of the upper part of the fibula;
- __ Finally, a Cotton fracture indicates the breaking of the medial malleolus, the lateral malleolus, and the posterior surface of the tibia.
- In the United States, there are more than 225,000 Achilles tendon injuries per year, the majority of which are attributable to a combination of degeneration and trauma:
 - __ Achilles tendonitis is an inflammation of the tendon usually caused by overuse, but it may also be related to trauma or arthritis.
 - __ A related condition is Achilles tendonosis. Achilles tendonosis does not involve an inflammation of the tendon, but occurs when the tendon becomes thickened, degenerated, and scarred;
 - __ An Achilles tendon rupture involves a full or partial tearing of the structure. Many times, a palpable gap can be seen or felt in the back of the leg since the calf muscle is no longer attached to the heel.
- According to a 2004 survey by the Jury Verdict Research Group, the average award for an ankle injury is \$84,777. The average award for ankle fractures was \$100,000 and injuries to the ligaments, tendons, and muscles averaged \$80,600.
- States have also considered ankle injuries as the basis for a disability impairment rating. A typical example (Minnesota) provides the following (always check the ratings for the relevant jurisdiction):
 - __ Rupture of the medial or lateral ligament in the ankle—two percent impairment;
 - __ Grade II sprain—four percent impairment;
 - __ Achilles tendon rupture with the ability to stand on one's toes—two percent impairment;
 - __ Achilles tendon rupture with the inability to sustain body weight—four percent impairment;
 - __ Avascular necrosis of the talis—10 percent impairment;
 - __ Ankle fracture of the malleolus—two percent disability.

To purchase the online version of this article, go to www.ali-aba.org and click on "online".