



OrthoVirginia
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Ankle Sprains & Persistent Pains

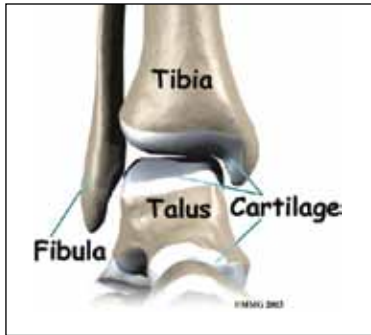
A Step Ahead

Anterior Hip Replacement

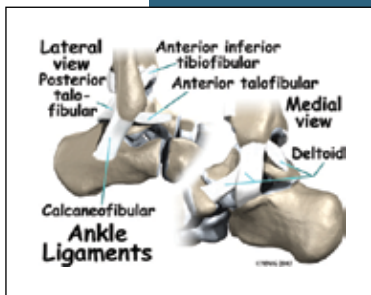
Reducing post-operative pain and improving recovery

Ankle Sprains and Persistent Pains: A Step Ahead

By Dr. Jan-Eric Esway and Rachael Ashworth, PA-C



▲ figure 1



▲ figure 2



▲ figure 3

More than 23,000 people in the United States, both athletes and non-athletes, sprain their ankle each day. While most of these injuries are mild and get better within 1-2 weeks, not all ankle sprains are the same, and more severe injuries may not heal without treatment. Patients who experience persistent symptoms of pain, swelling, and weakness should consider evaluation by an OrthoVirginia physician who specializes in ankle injuries. Most of the time, ankle injuries can be treated successfully with non-operative measures such as bracing and physical therapy; however, sometimes surgery is necessary. Fortunately, with recent advancements in technology, smaller incisions can now be used to obtain stronger repairs. This means that patients can recover and get back to the activities they enjoy much faster than in the past.

The ankle is made up of 3 bones: the tibia, fibula and talus (**figure 1**). These 3 bones are held together by ligaments, which are thick fibrous bands that connect

one bone to the other. Although the anatomy of the ankle is quite complex, it can be simplified by thinking of it as two columns that hold the middle talus bone in place. Any injury that disrupts the supporting columns can compromise stability of the middle talus bone. If the talus is not held in place, then the ankle becomes unstable and will not provide adequate support to hold the body upright when playing sports, running or even walking on uneven ground.

While there are several ligaments that support the ankle, the outer column ankle ligaments (**figure 2**) are the weakest and most commonly injured. When the foot rolls underneath the ankle, these ligaments are stretched and can even be completely torn in more severe ankle sprains. When the outer ligaments do not heal properly, the talus bone is not adequately stabilized. **Figure 3** shows the difference between a normal ankle with intact outer ligaments (right side) and an injured ankle with torn outer ligaments (left side).

Comparing the two, one can see how the talus becomes unstable with insufficient ligament support. In this case, patients experience recurrent ankle sprains, which may occur without significant cause. This condition is referred to as ankle instability.

There are many treatments for ankle instability, but surgery is sometimes necessary to treat severe cases. The conventional and most common surgery used to treat ankle instability requires a relatively large incision, and sutures are used to tighten the injured ligaments. Although this is usually successful, casting for 6-8 weeks after surgery is necessary, and sometimes the ligaments are so badly torn that a strong repair is not possible. To address these issues, there is a newer surgery available. Instead of tightening the damaged ligaments, surgeons can now use a cadaver tendon* to replace them (**figure 4**). This technique, which is similar to ACL reconstruction in the knee, offers several advantages. It can be performed through small incisions so recovery is faster and there is less risk for re-injury because the repair is much stronger.

Persistent pain after ankle sprains can also be caused by scar tissue that forms when the body tries to heal the injured ligaments. This scar tissue can flip into the joint resulting in a "pinching" type pain called impingement. This is very similar to meniscus tears in the knee joint. When non-operative treatments fail, ankle arthroscopy should be considered. Ankle arthroscopy is performed with 2 small inci-



▲ figure 4



◀ figure 5

* Cadaver tendons, also called allografts, have been used for many years in reconstructive surgery. Allografts are pre-screened for disease and are treated with radiation, which minimizes the risk of disease transfer or rejection.

sions made in the front of the ankle. A special camera (arthroscope) is inserted through one of the incisions and a shaver, which is used to remove the scar tissue (**figure 5**), is inserted through the other incision. Arthroscopic ankle procedures require only 2 sutures and therapy can be started as early as 10 days after surgery.

Although less common, high ankle sprains are notorious for causing persistent problems. This is because the high ankle ligaments, commonly referred to as the syndesmosis, are the strongest in the ankle and therefore require a large amount of force/torque to be injured. These ankle injuries are the most severe because they disrupt the connection between the tibia and fibula bones. In the past, tearing of the syndesmosis ligaments required placement of screws in order to hold the tibia and fibula bones together. The problem with using screws is that they often break when patients start walking again. In order to prevent this from happening, another surgery would be necessary to remove the screws. Fortunately, there is now an implant that provides the same purpose as screws without the risk of breaking. It is called a "tightrope," and does not require additional surgery for removal (**figure 6**), which means that patients can recover and get back to the activities they enjoy in a more timely fashion.

If you are experiencing persistent problems from an ankle injury, consider evaluation by an OrthoVirginia foot and ankle surgeon. Our surgeons are truly a step ahead and can get you back on your feet with the least invasive and most up to date treatments. ■



▲ figure 6



Dr. Esway is a Pittsburgh native and was chief resident during his orthopedic training. Dr. Esway treats all types of orthopedic issues but specializes in foot and ankle problems. He sees patients at the Chippenham location of OrthoVirginia.



Rachael Ashworth, PA-C works closely with Dr. Esway as his physician assistant. Ms. Ashworth received her medical training at the Medical University of South Carolina and the Montefiore Medical Center.

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