

Doctor Capoeira - Ankle Injuries (Part 1)

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Every Capoeirista will have an ankle injury at some point in his or her career. Maybe the result of a poorly timed meia lua, an awkwardly landed au, or just wear-and-tear from training. As the resident physician in my group, I've been asked many questions about ankle injuries, so I thought I would share the answers to some of the most common questions here.*

There is no real way to prevent ankle injuries, as accidents will happen. That said, for those with pre-existing ankle problems or previous injuries trying to prevent recurrence, it is helpful to understand the mechanism of injury and at-risk movements in the game of Capoeira. Most ankle sprains and fractures are the result of a forced inversion or eversion of the ankle, meaning when you "roll" your ankle inwards or outwards to an extreme degree. When the ankle is plantar-flexed, meaning the ball of the foot and toes are pointed away from the body (like stepping on a gas pedal), the ankle joint has a larger degree of inversion-eversion mobility. This means that you are at higher risk of injuries to the ankle during movements where the toes are pointed, such as martelo. Kicks where the ankle is dorsi-flexed (toes and ball of the foot curled up towards the head) are much less likely to allow ankle injuries, as this is a protected position-thus, meia lua de compasso and pisao are protected kicks for the ankle joint.



Acute Ankle Injuries

Immediately after twisting, hitting, or otherwise injuring the ankle, "What should I do now?" and "Is it broken?" are the questions most Capoeiristas want answered. The immediate treatment of any acute muscular, joint, or skeletal injury is the same in essentially all cases. We are so used to giving out this advice in the Emergency Department, that we have adopted the mnemonic "RICE" therapy.

- *Rest*: Do whatever you can to keep pressure off the injury. For lower extremity injuries, you can use crutches, which can be purchased or rented at local pharmacies or medical supply stores. This will prevent continued, recurrent trauma to the injured joint.
- *Ice*: Get an ice pack, and apply it to the injured area for 20 minutes every 1-2 hours for the first day. Continue using ice packs 3-4 times per day for the next two days. This will cause local blood vessels to constrict, thus decreasing swelling.
- *Compression*: Get an ACE wrap or other elastic bandage, and wrap the injured area. This will prevent movement of the area, which will decrease pain. This also decreases swelling.
- *Elevation*: Keep your leg elevated, with the ankle above the level of your heart when sitting or lying down. This will decrease blood flow to the area and thus decrease swelling from any bleeding that may be occurring in the joint or muscle tissue.

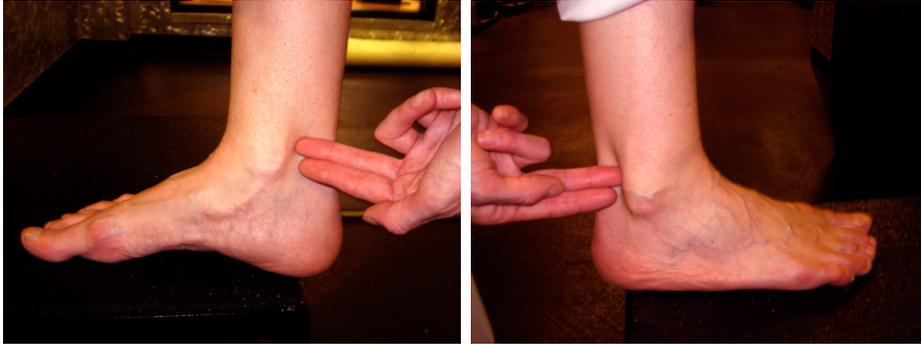
Meanwhile, using a non-steroidal anti-inflammatory medication, such as ibuprofen or naproxen, will decrease pain and also promote healing. Note that these medications are different than acetaminophen (Tylenol) and aspirin, which are also over-the-counter pain killers, but lack the anti-inflammatory effect. I usually recommend ibuprofen at a dose of 600 mg (3 over-the-counter 200 mg tablets) for the average female (50-60 kg) or 800 mg (4 over-the-counter 200 mg tablets) for the average male (60-80 kg) every 8 hours around the clock for the first 2-3 days after an injury occurs. After this, they can be taken on an "as needed" basis. These medications can be hard on the stomach, causing stomach inflammation and less commonly stomach ulcers. Don't take these medicines until you've spoken to your doctor if you have a history of stomach problems.

All of the above measures serve to decrease immediate swelling and inflammation, which will limit pain and help you get back in action sooner.

Most of the time, the velocity, impact, and mechanism of injury in Capoeira will cause no more than a sprain of the ankle, which is a tearing of the ligaments that hold the ankle joint together. Time will heal these injuries. You'll have to be patient as it may take anywhere from 3-6 weeks before you are back to training.

Occasionally, a more serious injury to the ankle can occur. I often have Capoeiristas ask me if they may have broken their ankle after an injury. While the only way to know for sure is to obtain an X ray, there are some physical findings that nurses and doctors use to reliably predict the chance of a fracture being present in the ankle or foot (referred to as the Ottawa Ankle Rules). When I evaluate patients in the ER, I usually don't even get an X-ray in patients who meet these criteria, as the chance of fracture is so small:

1. You are able to bear weight on the ankle right after the injury, or you can demonstrate that you are able to take 4 steps with weight on the ankle after the injury.



2. Lack of bone tenderness when you press along the posterior edges of the medial or lateral malleoli, which are the knobby portions of your ankle (pictured above).



3. Lack of bone tenderness when you press along the base of the 5th metatarsal bone (above left) or over the navicular bone (above right). Tenderness in these areas predicts whether a foot fracture is present.

If you cannot bear weight, or tenderness is present in the areas mentioned above, you are at much higher risk for having a fracture and should see a doctor for further evaluation. If these findings are absent, it is more likely to be a sprain. Of course, if you have any question or if the pain is not controlled by non-steroidal anti-inflammatory medications and RICE therapy as above, you should see a doctor as soon as possible. Only an in-person evaluation by a qualified medical professional can reliably rule out a serious injury.

Stay tuned! On Thursday we will cover ankle injury rehabilitation and sub-acute ankle injuries (why your ankle has been hurting for a while).

** Disclaimer: Without a hands-on exam of your injury by a qualified professional, such as a physician or nurse with orthopedics training, you won't know exactly what's wrong, and the advice above may not apply to you. If you have any questions, make an appointment to see your doctor.*

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Ankle diagnostic photos by Dr. Brian Lin
