

SAMPLE WORK

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The Midfoot



As the name implies, the midfoot is the middle part of the foot. It is the part of the foot that forms the arch and has therefore a large part to play in shock absorption.

The plantar fascia, also known as the arch ligament, is the ligament that attaches the midfoot to the hindfoot, along with the muscles. The plantar fascia can cause serious pain when it becomes injured or inflamed, and this condition is known as plantar fasciitis. This ligament is highly important in supporting the arch, so damage to it causes serious damage to how easily one can walk.

The midfoot also importantly contains 5 irregularly shaped bones, as can be seen in the diagram above. These bones are known as the cuboid, the navicular and the cuneiform bones (of which there are three: medial, intermediate and lateral).

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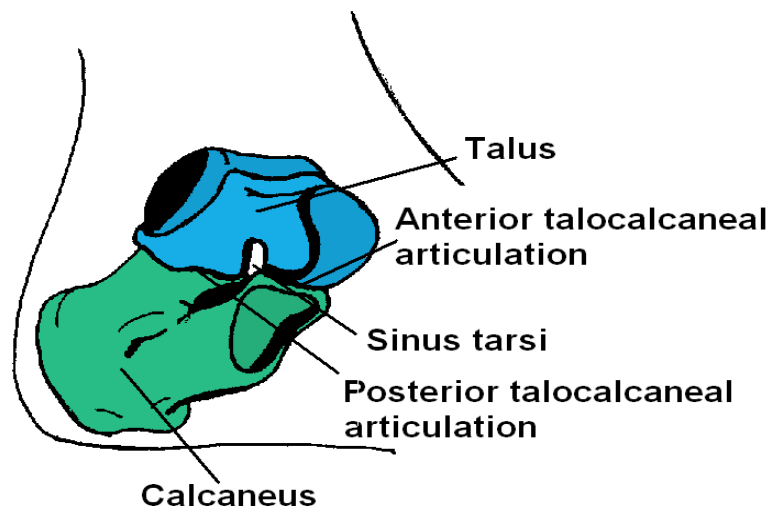
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These bones, together, form the structure that is the foot arch and provide a lot of support to the foot as a consequence.

The Hindfoot

The hindfoot is the back part of the foot and consists of the ankle and heel. It is important for providing stability and flexibility to the foot, allowing you to stay upright and walk properly.

The ankle bone is called the talus and the heel bone is called the calcaneus, and you can see how they articulate (via what is known as the subtalar joint) in the diagram below. The tibia and fibula, the two long bones in the leg, connect to the talus in order to form the structure that is the ankle.



The ankle bone additionally articulates with the navicular bone (which is one of the irregularly shaped bones in the midfoot). From its articulations with both the navicular and calcaneus, it is able to gain the strength to take on the entire weight of the body, which is no mean feat! The strength of the ankle comes from its interactions with the bones around it, and any disruption to these interactions

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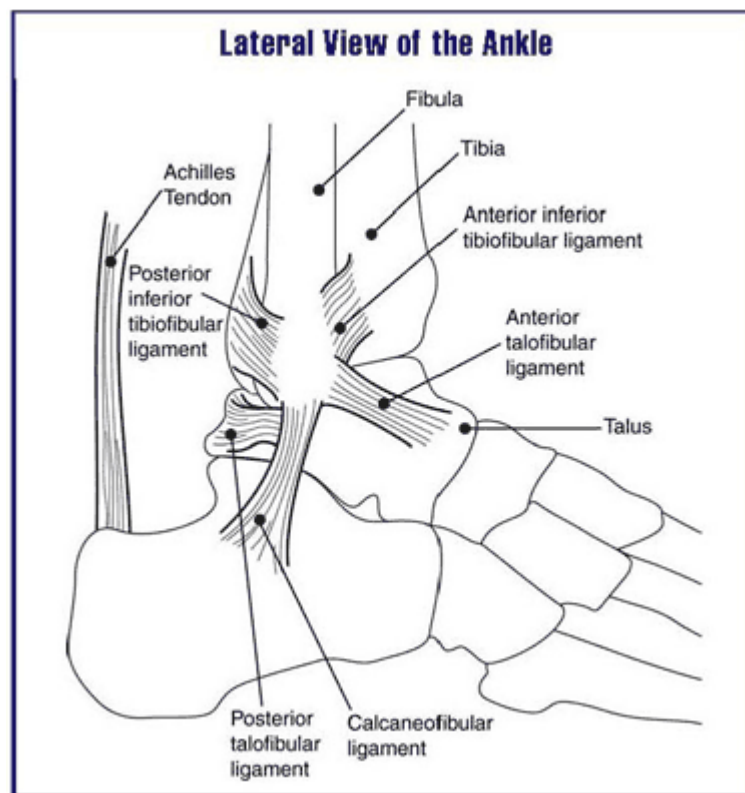
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– through injury or from something such as arthritis—means the hindfoot is no longer able to provide such strong support, therefore meaning walking becomes difficult.

As for the heel, it is cushioned by a layer of fat on the bottom of the foot. This allows for it to take on the weight of the body without becoming worn or damaged. Without this layer of fat, the bone would be digging into the ground as you walk, which would be nothing short of painful!

One of the main problems that can arise in the hindfoot is pain in the Achilles tendon, which is located at the back of the leg and attaches to the calcaneus, as shown in the following diagram:



The Achilles tendon can be severed, causing a great deal of pain as well as trouble walking. Cracked heels are also a common problem of the hindfoot, occurring due to excessive pressure being put onto the heel.

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Also in the hindfoot (as can be seen in the diagram) is a ligament that connects to the heel, the ankle and to the midfoot. This ligament has multiple connections and is known as the tibiofibular ligament and is often the cause of ankle sprains. This purpose of this ligament is to allow the foot to flex and move up and down properly. It is essential for the ankle-centered movement that allows us to walk, and if disrupted or injured, this movement will become impaired.

Jock Itch

Jock itch (or *Tinea cruris*) is a fungal infection very similar to athlete's foot. It affects the genitalia, but also the upper inner thighs and the pubic region. It can be very uncomfortable (not to mention embarrassing, especially when it gets itchy in public!) and can be a frustrating and distressing issue for many men and teenage boys. Jock itch and athlete's foot are intimately related, since they are caused by the same type of fungi and are a problem especially for athletes. If you are male and have suffered from athlete's foot, you may also have experienced jock itch before, so it is important you know how to treat it – especially because the infection can spread from one area of the body to the other.

Cause

Jock itch is a problem that adolescent and adult males are the main sufferers of. There are a number of reasons that it's almost always men who get jock itch. It is promoted by wearing occlusive clothing (which men tend to wear more of) and by sweating (which men tend to do more of, especially in the groin area). Both of these conditions give an ideal environment for the fungus to grow.

Additionally, because of the anatomy of the male genitalia, the area is much more crowded which promotes humidity and therefore increases the chance of the fungus growing.

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Men are also more likely to do a lot of sport, therefore meaning they are more likely to sweat more – although exercise also increases the heat produced in the genital area, which is another condition the fungus thrives in. There is also evidence to suggest that men are more likely to suffer from any type of fungal skin disease than women – including athlete's foot – and this may be due to some of the same issues (increased athletic activity, more sweating etc).

Lastly, males, particularly adolescents, are less likely to practice good personal hygiene than females. This means that they will allow more sweat to gather in the groin region and are more likely to not keep the area as clean as females do.

Some equipment used for athletic purposes can increase the risk of jock itch. Jock straps are a classic example. These make the groin sweat more and make it a more humid environment. If they are not washed regularly, the increased risk can become even greater. The same applies to athletic cups.

Symptoms

A rash normally appears on the upper inner thighs, at the area where the scrotum and the thigh are connected. The rash is generally dark in colour – sometimes it is even brownish – and it can be scaly. It is almost always in the shape of a half moon. Intense itchiness (and sometimes burning and tingling) is another classic symptom, and the skin may become softer in the area.

You may also feel chafing in the area too. Additionally, your skin can peel and become flaky.

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If there is pus along with the rash, this means an infection has occurred. Infections almost always happen when the individual has been scratching the area and has broken the skin, therefore making it vulnerable to bacterial invasion.

Jock itch can last for months if untreated. Sometimes it will go away on its own, although it can keep on getting worse in some cases too until you receive treatment.

Cracked Heels

The skin is the largest organ of the body and whilst we may spend a great deal of time applying beauty products to our faces to prevent wrinkles and dry skin we rarely consider the condition of the skin on our feet. Feet undergo a lot of wear and tear in our lifetime and while for most people the odd patch of hard skin is nothing more than a cosmetic nuisance, for others it can become a severe irritation and can become very uncomfortable. As the skin becomes increasingly dry, skin cracks and 'fissures' form, which can bleed and are prone to infection. Most people view cracked heels as simply a cosmetic concern, but for those who have suffered deep cracked and/or bleeding, they are certainly much more than that!

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Cause

The proper medical term for cracked heels is 'heel fissures'. As we put weight on our feet the pads of fat that act as our shock absorbers spread out under the pressure. Normally this is fine since the skin is supple enough to stretch to accommodate the change in shape, but if the skin becomes dry it loses its ability to change form and as the fat pads spread out, the skin cracks. People often first notice they have cracked heels when the skin catches on bed clothes, socks or tights. The fissure can become more apparent as you run your finger over the skin's surface. It can be very tempting at this point to try and pick the dry skin off but this should always be avoided as it only makes the crack worse.

Cracked heels usually occur because the sweat glands on the feet no longer produce enough moisture to keep the skin supple. It is not surprising that the majority of sufferers are women who like to wear open backed shoes and sandals (because by doing this, they are exposing their heels to the environment, which can seriously, dry them out – much like how your face and hands are more prone to becoming dry than the rest of your body).

However, other disorders such as flat feet or an abnormal stride can cause the skin to become dry and irritated. This is due to an uneven amount of weight being put onto the heels.

Another cause of cracked heels is being overweight since this increases pressure on the feet. Similarly, standing for long periods of time makes one prone to developing cracked heels. Anything that involves putting a constant pressure on the feet over a period of time can be a cause of cracked heels.

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With regard to medical causes, some people may naturally suffer from dry skin conditions such as eczema or psoriasis and this can increase the risk of cracked heels. Age is another common factor because as we get older our skin loses its elasticity and is prone to dryness and cracks. The incidence of cracked heels in older people is much higher than in the young. Very few young people suffer from cracked heels if they are healthy and of a normal weight.

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