ANATOMY OF THE BONES & JOINTS OF THE FEET

Your feet are the grounding point and connection to the earth.

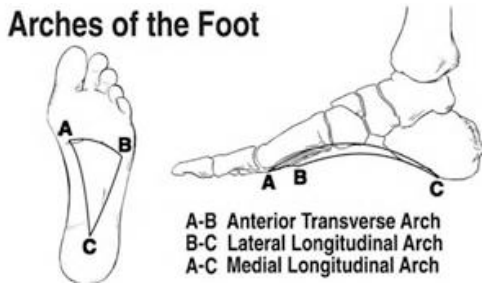
Most of us walk around with very little awareness or connection to what is happening in our feet. They are sooo far away. This is ancestral energy and the ancestors seem to have lived so long ago. We only pay attention to our feet when something gives us pain or discomfort. Being removed from our feet allows us to be ungrounded, disregarding where we came from and how it relates to us. Grounding into our feet allows us to connect with our ancestral energy and become fully present.

The feet anatomically are an amazing masterpiece of design. A foot contains some 26 bones. Including both feet, that's a quarter of all the bones in the entire body. Each foot contains 33 joints, 107 ligaments, 19 muscles and many tendons, blood vessels and nerves.

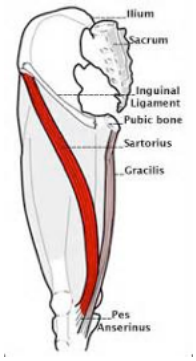
The feet are the shock absorbers of the entire body handling jolts and blows from several hundred tons of pressure a day. Feet experience more wear and tear over a lifetime than any other part of the body.

Review this PDF, paying special attention to the bolded references. Refer to the Anatomy Coloring Book page 40: Ankle, Joint and Bones of the Foot, and color in the bolded bones. If you have an older or revised edition the page numbers may be different.

The Arches of The Foot



The foot contains three arches: The **lateral longitudinal arch,** the **transverse arch,** and the **medial longitudinal arch.** The medial longitudinal arch (called the medial arch) transmits the force of the body weight to the earth when standing and to the



great toe when walking. The longitudinal arches are shock absorbers and balancers.

Normal feet have no extremes. They don't over pronate (roll inward) or supinate (roll outward). They don't have arch problems. As you walk, your weight falls on the outer side of your heel, rolls a bit onto the outside of your foot, mildly pronates then pushes off the ball of your foot and big toe.

A flat foot is one where your body weight is falling toward the inside of your foot flattening the arch, resulting in a weak foot that can't properly absorb the impact of the body's weight. This can lead to knee, shin, hip and lower back problems. In fact, your entire body can be pulled out of alignment. The real issue is in the inner leg; the gracilis muscle is weak and stuck. Activating and strengthening the inner leg is the answer to solving flat feet.

The high arched foot is referred to as a supinated or under-pronated foot. In this case, your foot doesn't pronate enough and much of your body weight rolls to the outer sides of your foot, putting too much pressure on the bones, tendons and ligaments in that area, which can result in lower leg and knee issues.

Bones and joints of the feet

Definition: Adduction*:* bringing the body part in toward the body. Abduction*:* taking the body part away from the body.

The two bones of the hind foot are the **talus** and **calcaneus.** The talus is connected to the calcaneus at the **subtalar joint** which allows the foot to rock side to side in **inversion** and **eversion.**

The ankles are the point of conception, the moment you decided to come into this world. They are often a weak area of the body that injures easily.

If you have ankle injuries you are struggling with the desire to be here fully living the life you live.

The **ankle joint** is a hinged joint located between the **fibula** and the **tibia** (leg bones) and the **talus** which allow the foot to bend up and down in **plantar** and **dorsal flexion.** The **deltoid ligament, anterior and posterior inferior talofibular ligaments** and the **calcaneofibular ligament** hold this joint stable.

The **subtalar joint** is formed where the talus sits on the calcaneus. The two bones have a groove between them called the **tarsal sinus** which contains the **posterior talocalcaneal ligament.** This joint has limited range of motion in plantar and dorsiflexion (heel moving toward and away from the toes).

The bones of the foot are the **tarsal bones** which work together as a group and are interlocked protecting the foot in a variety of movements. When the foot is twisted in one direction by the muscles of the foot and leg, these bones lock together and form a very rigid structure. When they're twisted in the opposite direction, they become unlocked and allow the foot to conform to whatever surface the foot is contacting.

The **metatarsals** are five longer bones connected to the **cuboid** and the **cuneiforms.** There is a fairly rigid connection between the two groups without much movement at the joints.

The bones of toes are called the **phalanges.** The joints form the ball of the foot and movement in these joints is very important for a normal walking pattern. The big toe is the most important toe for walking and the **first metatarsal phalangeal joint** contains the **sesamoid bones** and is a common area for foot problems. The other major ligament to remember is

the **plantar ligament** located at the bottom of the foot; it is the spring ligament of the foot.