1, The adult human skull is comprised of twenty-two bones which are divided into two parts of differing embryological origin: the neurocranium and the viscerocranium.

In human anatomy, the neurocranium, also known as the braincase, brainpan, or brain-pan is the upper and back part of the [skull](https://en.wikipedia.org/wiki/Skull), which forms a protective case around the [brain](https://en.wikipedia.org/wiki/Brain). In the human skull, the neurocranium includes the [calvaria](https://en.wikipedia.org/wiki/Calvaria_%28skull%29) or skullcap. The remainder of the skull is the [facial skeleton](https://en.wikipedia.org/wiki/Facial_skeleton). The neurocranium is divided into two portions:

* The membranous part, consisting of flat bones, which surround the [brain](https://en.wikipedia.org/wiki/Brain); and
* The cartilaginous part, or [chondrocranium](https://en.wikipedia.org/wiki/Chondrocranium), which forms bones of the [base of the skull](https://en.wikipedia.org/wiki/Base_of_the_skull).

In humans, the neurocranium is usually considered to include the following eight bones:

* 1 [ethmoid bone](https://en.wikipedia.org/wiki/Ethmoid_bone)
* 1 [frontal bone](https://en.wikipedia.org/wiki/Frontal_bone)
* 1 [occipital bone](https://en.wikipedia.org/wiki/Occipital_bone)
* 2 [parietal bones](https://en.wikipedia.org/wiki/Parietal_bone)
* 1 [sphenoid bone](https://en.wikipedia.org/wiki/Sphenoid_bone)
* 2 [temporal bones](https://en.wikipedia.org/wiki/Temporal_bone)

The [ossicles](https://en.wikipedia.org/wiki/Ossicles) (three on each side) are usually not included as bones of the neurocranium. There may variably also be extra [sutural bones](https://en.wikipedia.org/wiki/Sutural_bones) present.

Below the neurocranium is a complex of openings ([foramina](https://en.wikipedia.org/wiki/Foramen)) and bones, including the [foramen magnum](https://en.wikipedia.org/wiki/Foramen_magnum) which houses the neural spine. The [auditory bullae](https://en.wikipedia.org/wiki/Auditory_bulla) which is located in the same region, aids in hearing.

The size of the neurocranium is variable among mammals. The roof may contain ridges such as the [temporal crests](https://en.wikipedia.org/w/index.php?title=Temporal_crest&action=edit&redlink=1).

While the viscerocranium bones form the anterior and lower regions of the skull and include the mandible, which attaches through the only truly motile joint found in the skull.

In human anatomy and development, viscerocranium usually refers to elements of the skull that are not part of the braincase, and which can be subdivided into:

* The *membranous viscerocranium*, comprising the [facial skeleton](https://en.wikipedia.org/wiki/Facial_skeleton)
* The *cartilaginous viscerocranium*, comprising the [splanchnocranium](https://en.wikipedia.org/wiki/Splanchnocranium%22%20%5Co%20%22Splanchnocranium)

The facial skeleton consists of the following fourteen bones:

* 1 Vomer
* 2 nasal conchae
* 2 nasal bones
* 2 maxilla bones
* 1 mandible bone
* 2 palatine bones
* 2 zygomatic bones
* 2 lacrimal bones.

However the hyoid bone, ethmoid bone and the sphenoid bone are sometimes included in the viscerocranium.

2, The **femoral triangle** is a hollow area in the anterior thigh. Many large neurovascular structures pass through this area, and can be accessed relatively easily. Thus, it is an area of both anatomical and clinical importance.

## ****Borders****

As this area is a triangle, it has three borders:

* **Superior border** – Formed by the inguinal ligament, a ligament that runs from the anterior superior iliac spine to the pubic tubercle.
* **Lateral border** – Formed by the medial border of the sartorius muscle.
* **Medial border** –  Formed by the medial border of the adductor longus muscle. The rest of this muscle forms part of the floor of the triangle.
	+ Note: Some sources consider the lateral border of the adductor longus to be the medial border of the femoral triangle. However, the majority state that it is the medial border of the adductor longus – and this is definition we have gone with.

It also has a floor and a roof:

* Anteriorly, the **roof** of the femoral triangle is formed by the fascia lata.
* Posteriorly, the **base** of the femoral triangle is formed by the pectineus, iliopsoas and adductor longus muscles.

The inguinal ligament acts as a **flexor retinaculum**, supporting the contents of the femoral triangle during flexion at the hip.

## ****Contents****

The femoral triangle contains some of the major neurovascular structures of the lower limb. Its contents (lateral to medial) are:

* **Femoral nerve**– Innervates the anterior compartment of the thigh, and provides sensory branches for the leg and foot.
* **Femoral artery** – Responsible for the majority of the arterial supply to the lower limb.
* **Femoral vein** – The great saphenous vein drains into the femoral vein within the triangle.
* **Femoral canal**– A structure which contains deep**lymph nodes** and vessels.

The femoral artery, vein and canal are contained within a fascial compartment – known as the **femoral sheath**.

## Clinical Relevance: The Femoral Triangle

### Femoral Pulse

Just inferior to where the **femoral artery** crosses the inguinal ligament, it can be palpated to measure the femoral pulse. The femoral artery crosses exactly midway between the pubic symphysis and anterior superior iliac spine (known as the mid-inguinal point).

### Access to the Femoral Artery

The femoral artery is located **superficially**within the femoral triangle, and is thus easy to access. This makes it suitable for a range of clinical procedures. One such procedure is **coronary angiography.** Here, the femoral artery is catheterised with a long, thin tube. This tube is navigated up the external iliac artery, common iliac artery, aorta, and into the coronary vessels. A radio-opaque dye is then injected into the coronary vessels, and any wall thickening or blockages can be visualised via x-ray.

### Femoral Hernia

A hernia is defined as “a condition in which part of an organ is displaced and protrudes through the wall of the cavity containing it“. In the case of **femoral hernia**, part of the bowel pushes into the**femoral canal**, underneath the inguinal ligament. This manifests clinically as a lump or bulge in the area of the femoral triangle. It usually requires surgical intervention to treat.

3, The muscles in the lower limb involved in the 1 metre social distancing at period of COVID 19 are follows; The quadriceps femoris ie, (rectus femoris, vastus medialis and vastus lateralis), sartorius, which runs from the hip to the inside of the knee, gracilis, inside the leg, hamstrings ie, the muscles at the back of the leg comprising biceps femoris, semimembranosus and semitendinosus, iliopsoas in the hips, shin muscles ie, tibialis, peroneus longus, and calves ie, gastrocnemius, and soleus, pectineus, gluteus medius and maximus. The glutes propel your leg forward. As you step forward, your tibialis and flexor digitorum longus flex your foot upwards. The back leg engages your gastrocnemius and soleus in the lower leg, and the biceps femoris, semitendinosus and semimembranosus muscles in the upper leg. The iliopsoas, rectus femoris and sartorius muscles are responsible for flexing the leg.
The gluteus maximus, semimembranous, semitendinosus and biceps femoris are responsible for extending the leg. The gluteus medius, gluteus minimus and the deep gluteals are responsible for abducting (moving towards the centre) the leg.
The adductors longus, brevis and magnus, pectineus and gracillis are responsible for adducting (moving away from the centre) the leg.
The biceps femoris, gluteus maximus, gluteus minimus, semitendinosus and semimembranosus and the deep gluteals are responsible for rotating the leg.

* 4, Viruses work by hijacking cells in the body. They enter host cells and reproduce. They can then spread to new cells around the body. Coronaviruses mostly affect the respiratory system, which is a group of organs and tissues that allow the body to breathe. Respiratory illnesses affect different parts of this respiratory system, such as the lungs. A coronavirus typically infects the lining of the throat, airways, and lungs. Early symptoms of coronavirus may include coughing or shortness of breath. In some cases, it can cause severe damage to the lungs. For example, some people might develop [acute respiratory distress syndrome](https://www.lung.org/lung-health-and-diseases/lung-disease-lookup/ards/), leading to severe breathing difficulties. Usually, the immune system will identify and respond to coronavirus early by sending special proteins, or antibodies, to fight the infection. The immune response to infection has side effects for the body, including fever. During an infection, white blood cells release pyrogens, a substance that causes fever. A temperature of greater than [100.4°F](https://www.clinicalcorrelations.org/2019/06/18/the-definition-of-a-fever/) from an oral thermometer indicates a fever. Sometimes other symptoms will occur alongside a fever, including:
* runny nose
* head and body aches
* difficulty sleeping
* sore throat
* sweats
* chills

These symptoms will usually last until the body fights off the coronavirus. Symptoms might not show up straightaway. For example, people with COVID-19 may get symptoms [2 to 14](https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200320-sitrep-60-covid-19.pdf?sfvrsn=d2bb4f1f_2) days after infection.