

Explore The Ferret Skeletal System

This "road map" of the ferret's skeletal system helps explain some ferret abilities and ailments.

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The ferret body contains approximately 200 bones.

The ferret skeletal system is made up of roughly 200 bones. These bones are similar to most other mammals including humans, but there are some unique differences specific to ferrets.

The skeleton can be divided into three main parts. The axial skeleton is made up of the skull, vertebrae, ribs and sternum. The appendicular skeleton is made up of the bones of the front arms, rear legs, shoulders and pelvis. The heterotopic skeleton is made up of the kneecaps, the fabella in a tendon of the rear legs and, in males, the os penis.

The Uniqueness Of The Ferret Skeleton

In the adult ferret the individual bones of the skull are hard to tell apart because there are no fusion lines between the bones. The skull of the ferret is almost twice as long as it is wide, and the top of the skull is somewhat flat when compared to other mammals. The jaws are short and are almost impossible to dislocate. All of these adaptations make for a very strong bite, which is especially important for catching and eating prey animals. The brain case is rather large compared to the size of the skull.

The vertebral column of the ferret is also unique. The neck is quite long. The seven vertebrae in the neck are longer and bigger than the vertebrae of the chest. This gives the ferret a long neck when compared to its body size. The chest (thorax) usually has 15 vertebrae with paired ribs (30 total ribs); however, some ferrets only have 14 paired ribs. Some even have 14 ribs on one side and 15 on the other side. Normally the first 10 pairs of ribs attach to the sternum (chest bone), and the last five pairs join each other and form an arch. In some ferrets the last pair of ribs may be shorter than the rest and end in the muscles on the sides. This last rib is often palpable at the end of the rib cage. For comparison, humans have only 12 thoracic vertebrae with 12 pairs of ribs.

The lumbar area (lower back) usually has six vertebrae, but there can be as few as five or as many as seven in some ferrets. The lumbar vertebrae generally get bigger in size from the first to the last one. The sacrum has three fused vertebrae. The tail is composed of 18 vertebrae that get smaller in size as they go toward the tip of the tail.

The tail is roughly one third of the length of the ferret body. Overall the vertebral column is long and very flexible, which allows a ferret to go into a narrow tunnel, do a U-turn and come back out.

The bones of the front arms are light and short. They also have a small diameter. The radius and ulna (forearm) are slightly bowed. The front paws have five clawed digits.

The nails are not retractable like cat nails are, so these need to be trimmed occasionally. The ferret walks on all five digits, which is different than dogs and cats.

The short, bowed arms and five claws are very good for digging.

The bones of the rear legs are also very light, but they are longer than the bones of the front arm. The femur (thigh bone) is long and straight, but the tibia (shin bone) is the longest bone of the leg. The knee joint is between the femur and tibia and is complicated. The knee has two menisci, cranial and caudal cruciate ligaments, and two collateral ligaments, which is very similar to the human knee. The five digits of the foot have non-retractable nails also. The ferret walks on all five digits of the rear paws.

The heterotopic skeleton is composed of the kneecaps, the fabella on the back of the femurs, and the os penis. The os penis, which is sometimes called a baculum, is a bone within the penis. It is almost 2 inches in length and can be used to estimate the age of an intact male ferret.