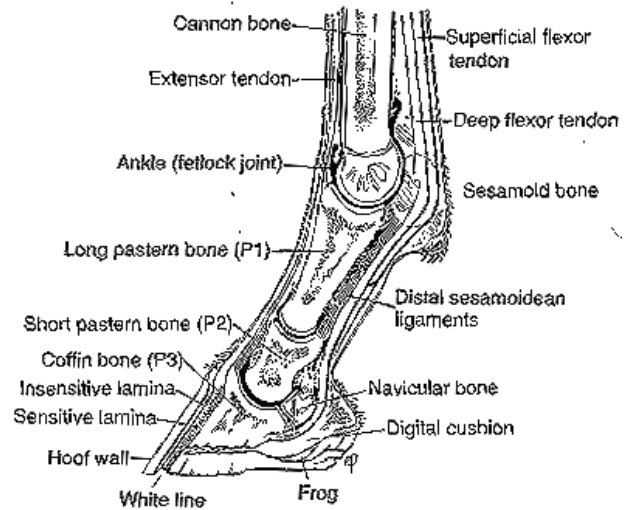


Sensitive Structures of the Hoof

The sensitive structures are so called because they contain many nerves and blood vessels. Injury to them will cause pain and bleeding. Sensitive structures are located under every part of the horny hoof. Each hoof structure has a corresponding sensitive structure.

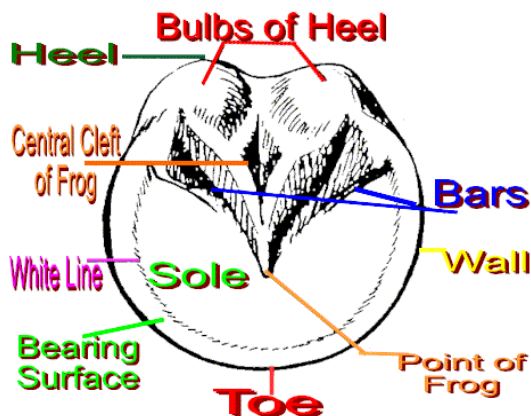
Sensitive coronary band. The sensitive coronary band is located around the upper border of the hoof under its junction with the skin. The function of the sensitive coronary band is to provide hoof growth. It is also the primary nutritional source for the bulk of the hoof wall. The hoof wall grows downward at the rate of about 1/4 to 3/8 inch per month. Since the average hoof is 3 to 4 inches in length at the toe, the horse can grow a new hoof every year.

Periopic ring. The periopic ring is located just above the coronary band and next to the hairline of the coronet. The periople protects the sensitive coronary band at the junction of the skin and hoof.



LONGITUDINAL SECTION OF FETLOCK & FOOT

Sensitive laminae. The sensitive laminae is engorged with blood vessels and is the largest area of sensitive structure. It is located between the hoof wall and the coffin bone. The sensitive laminae interlocks with the horny laminae of the hoof wall. The entire inner surface of the hoof wall is lined with horny laminae. The union of the two is so strong that it can be separated only with difficulty. The combination of the horn-producing cells of the stratum germinativum (horn-producing layer of cells) and the horny laminae of the wall make up the white line.



Sensitive sole. The sensitive sole covers the bottom of the coffin bone. The sensitive sole nourishes the horn-producing layer of cells that produce the horny sole. The sole is unique in that it scales, or sloughs off, and does not normally grow thicker than 1/4 to 3/8 inch. The sole is easily bruised, especially when trimmed thinly. Sole bruising appears as red spots, or "strawberries," on the sole.