

Structural feature and biomechanical tibia of some terrestrial vertebrates

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Locomotor specialization affects the limbs morphological specificity tibia animals. Specifically, Index compact substance increases when compared to high mechanical loads in compression and bending in animals with large mass body, highly specialized species and mammals with primitive for the class orientation of the extremities (monotremes and marsupials). Comparison of frontal and sagittal diameter diaphysis gives able to think about the form of the cross section in a first approximation, but final and more reasonable conclusion can be made only after identify key moments of inertia and position of axles on the section.

Load distribution bend closely linked to the form section. Therefore, based on our data, we can state that in. Most studies of animals is mainly exposed tibia statodynamic bending loads in the same plane as a result of kinematics features related to mobility of joints, which it is connected with other parts of the pelvic limb. Analysis of correlative relationships morphometric and biomechanical parameters bones weighing and charting them in the studied species gives the ability to note the following:

- Small animals in a steady trend of relative weight and length of the tibia without reduction biomechanical parameters that may have a compensatory function and confirms the position of the functional adaptation of bone B. Roux whereby the latter has maximum strength with the minimal material costs; - Regardless of weight class animals relative growth principal moments of inertia observed at strengthening value pelvic limbs in locomotion (jumping in frogs and rabbits running in bipedal kangaroo).