

Public Abstract

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Title:Femoral Angles and their Correlates

This research addresses a central theme in anthropological research focused on the reconstruction of activity patterns from skeletal remains in past populations. In general, my research focuses on the ontogeny and development of the angulation of the hip and knee, and specifically how variation in angulation relates to variation in body form, mobility patterns, postural behaviors, and gait-related disorders. The primary data for this study are femoral angles and cross-sectional geometric properties. Results indicate that regardless of variation in body form, individuals with similar levels of mobility have similar angulation of the femur; and the torque (or twist) of the femur is indicative of postural behaviors among populations. Together, these angles significantly influence the load distribution along the long axis of the bone, affecting our interpretations of mobility patterns among past populations. Certain gait-related disorders may leave osteological signatures in the angulation of the femur, which we can use to detect impaired or reduced mobility in past populations.