

Normal finger proximal interphalangeal (P.I.P.-) joint surfaces show asymmetries and incongruences in the coronal (frontal) plane.

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SUMMARY

In the proximal interphalangeal (or P.I.P.-) joint of the third finger, asymmetries of its condyles imply that the ulnar condyles are $\approx \frac{1}{4}$ larger than the radial ones. The articular surface of the **ulnar** condyle at the head of the first phalanx is more convex, compared to its mating articular surface at the base of the second phalanx. Ulnar condyles thus show an incongruence of their articular surfaces: a greater convexity of the “ball” and a lesser concavity of its “socket”, thus allowing (small) additional translations to occur, apart from normal P.I.P.- flexion and - extension. The convex articular surface of the **radial** condyle of the first phalanx nicely fits in with its mating concave articular surface of the radial condyle of the second phalanx. So, radial articular surfaces of both condyles of the P.I.P.- joint are fairly congruent, approaching a ball-and-socket - like situation. Thus, P.I.P. axial rotational motions can occur. Now each individual P.I.P.- joint of the fingers 2 - 5 of the hand exhibits its own corresponding range of such a *pronation* and *supination*. In the living this can be easily demonstrated, especially at full P.I.P.- flexion, in which these rotations together result in directions of all fingers 2 - 5 converging towards one point.