## ~20 year old male H&P: Football injury. Evaluate flexion PIP.







































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## Oblique Retinacular Ligament of Landsmeer

- Origin volar lateral crest of proximal phalanx
- Course volar to axis of PIP joint
- Insertion lateral terminal extensor tendon


Oblique Retinacular Ligament (of Landsmeer)

- Function links motion of DIP and PIP\*
  - With PIP flexion, ligament relaxes to allow DIP flexion
  - With PIP extension, ligament tights to facilitate DIP extension
- Contracture causes volar displacement of lateral bands and a resulting Boutonniere Deformity

## **Boutonniere Deformity**

- rupture of central slip
  - causes the extrinsic extension mechanism from the EDC to be lost
  - prevents extension at the PIP joint
- attenuation of triangular ligament
  - causes intrinsic muscles of the hand (lumbricals) to act as flexors at the PIP joint
  - lumbricals also extend the DIP joint without an opposing or balancing force
- palmar migration of collateral bands and lateral bands
  - the lumbricals' pull becomes unopposed, pulling through the base of the distal phalanx and volar to the PIP
  - causes PIP flexion and DIP extension

## References

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- Ulrich F, Schmidt HM. Deep ligaments of the interphalangeal joint of the thumb. Advances in the Biomechanics of the Hand and Wrist. Nato Adv Sci Inst Se. 1994;256:69e84.