A Methodology for Evaluating the Sensitivity of Wrist Ligament Strain to Fracture Reduction Tolerances
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Introduction
Fracture reduction treatment
- Distal radius fractures, common across all ages

Problems
- Malunion of bones can lead to decreased joint motion, grip strength, increased stiffness and pain [2].
- Healthcare professional training of fracture reductions is limited without live practice and minimal understanding of the related mechanics.

Methods
1. Model

2. Fixture

3. Experimental Setup

Results
- High sensitivity for position on radioscapophoid (RS) ligament strain in flexion
- High sensitivity for position on radiotriquetral (RT) ligament strain in ulnar deviation
- Low sensitivity for position on radioscaphocapitate (RSC) ligament strain in both flexion and deviation
- Overall, greater sensitivity in all ligaments during flexion and extension

Conclusions

References

Acknowledgments
Hajar Sharif, Tissue Biomechanics Laboratory