When is Bracing Indicated for the Sports Knee?

Rachel M. Frank, MD
Assistant Professor, Department of Orthopaedic Surgery
Sports Medicine, Cartilage Restoration, and Shoulder Surgery
University of Colorado School of Medicine

When is Bracing Indicated for the Sports Knee?

• Prophylactic/Protective → often used for MCL injury prevention or protection
• Functional → often used upon return to play after ACL surgery
• Rehabilitative
• Patellofemoral
Critical Considerations for Bracing

- Medical need
- Cost
- Compliance
- Fit

Bracing after ACLR

- RCT of functional brace (N=76) versus neoprene sleeve (N=74) given 6 weeks after ACLR w HS auto
- Patients instructed to wear brace for all physical activities, including rehabilitation
- Self-compliance assessed at 6m, 12m

No differences in any outcome between the groups, including ACL-QOL questionnaire, KT-1000, hop limb symmetry index, Tegner Activity Scale

Subjective ratings of "knee confidence" higher in the brace group

Conclusions ➔ functional knee bracing does not result in superior outcomes compared with a neoprene sleeve after ACLR
• Systematic Review of 15 studies, including 3 RCTs
• Most studies analyzed impact of functional bracing vs non-bracing after primary ACLR
• In some studies, bracing improved kinematics of joint as well as gait kinetics; but was also shown to decreased quadriceps activation
• 4 studies with no differences in subjective outcomes
• 1 study with “increased patient confidence” with brace use
• 1 study with decreased pain and quicker return to work with brace use
• Conclusions ➔ evidence is too mixed to recommend routine use of functional bracing to decrease rate of re-injury after ACLR

• Systematic Review of 5 studies
• Functional bracing of ACL injuries: current state and future directions
• No available braces are able to replicate the force-flexion behavior of the native ACL, and thus are not routinely recommended.

• Systematic Review of 6 studies
• Inconsistent results:
  • 1 study ➔ prophylactic knee bracing significantly reduced MCL injuries
  • 2 studies ➔ knee bracing associated w increased rate of knee injuries
Prospective RCT of 156 patients with PFPS randomized to:
- 6 weeks of supervised PT with patellar realignment brace
- 6 weeks of supervised PT only

- Both groups → significant improvements in all outcomes
- At 6 and 12 weeks → brace group w better KOOS subscales and Kujala score, and less pain with sports and stairs
- At 54 weeks → no differences

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AAOS Guidelines 2014

**ACL POST-OP FUNCTIONAL BRACING**
Moderate evidence does not support the routine use of functional knee bracing after isolated ACL reconstruction, because there is no demonstrated efficacy.

**Strength of Recommendation: Moderate.**

**Description:** Evidence from two or more “Moderate” strength studies with consistent findings, or evidence from a single “High” quality study for recommending for or against the intervention.

**ACL PROPHYLACTIC BRACES**
Limited evidence supports that the practitioner might not prescribe prophylactic knee braces to prevent ACL injury, because they do not reduce the risk for ACL injury.

**Strength of Recommendation: Limited.**

**Description:** Evidence from two or more “Low” strength studies with consistent findings or evidence from a single study for recommending for or against the intervention or diagnostic test or the evidence is insufficient or conflicting and does not allow a recommendation for or against the intervention.

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**Take Home Points**

- No true indications for bracing after ACLR or to prevent ACL injuries
- Possible indications for short-term PFPS relief
Thank You