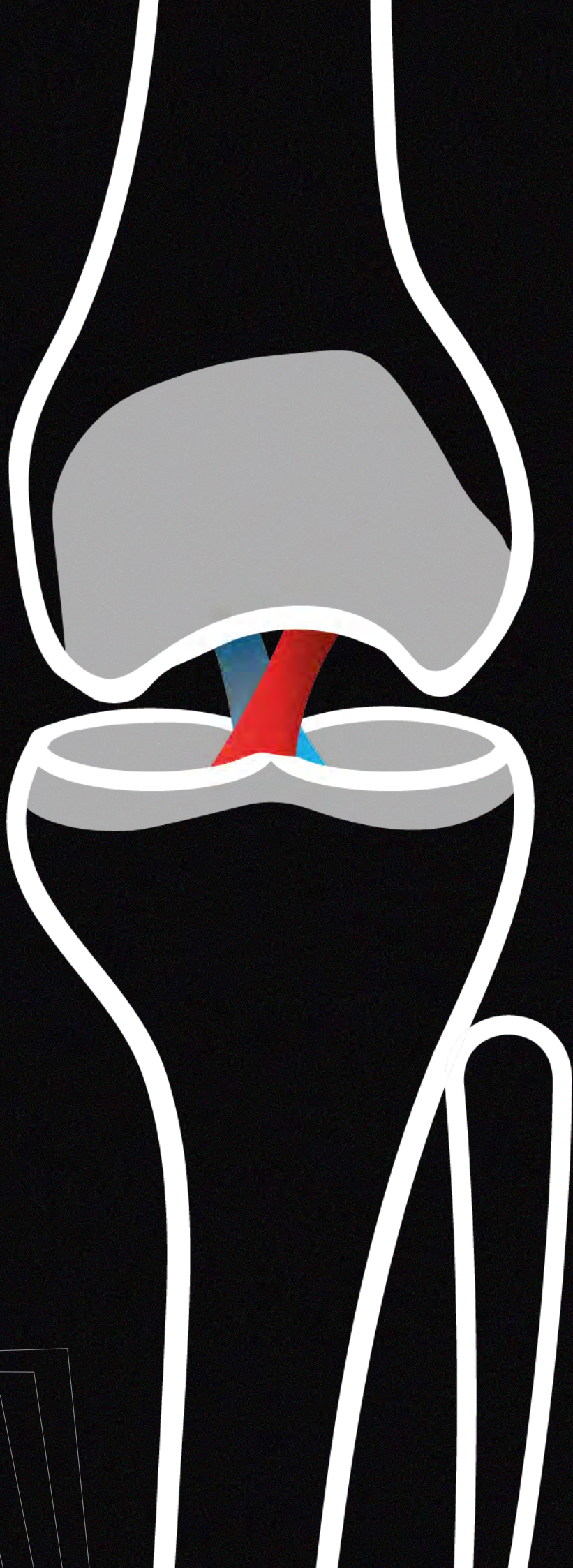


enovis™

KNEE LIGAMENT BRACING

CLINICAL EVIDENCE



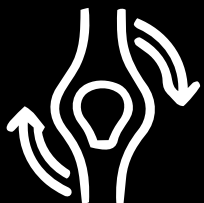
ACL INJURY MECHANISMS AND ROLE OF BRACING



±43% NON-CONTACT INJURIES

"The most common injury mechanism was **non-contact** in 42.9% (n = 230/536) of athletes, followed by indirect contact (32.6%, n = 175/536) and direct contact (22.4%, n = 120/536)."⁹

"The most common ACL injury mechanism across all sports was **non-contact** with 43.7%±12.0% of ACL injuries."¹²



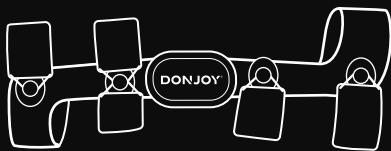
"Injuries commonly involved a deceleration/shift in momentum (50.4%, n = 123/244) or pivoting maneuver (36.1%, n = 77/213). At the time of injury, the knee commonly fell into **valgus** (76.8%, n = 225/293) with associated internal (53.5%, n = 46/86) or external **tibiofemoral rotation** (57.7%, n = 101/175)."⁹



"The most common position of injury was with a planted foot (91.7%, n = 110/120), **full or near-full knee extension** (84.4%, n = 49/58), and axial loading (81.3%, n = 87/107)."⁹



DonJoy® FourcePoint™ hinge - clinically proven **increased knee flexion angle during landing** in stop-jump task.^{14,15,24}



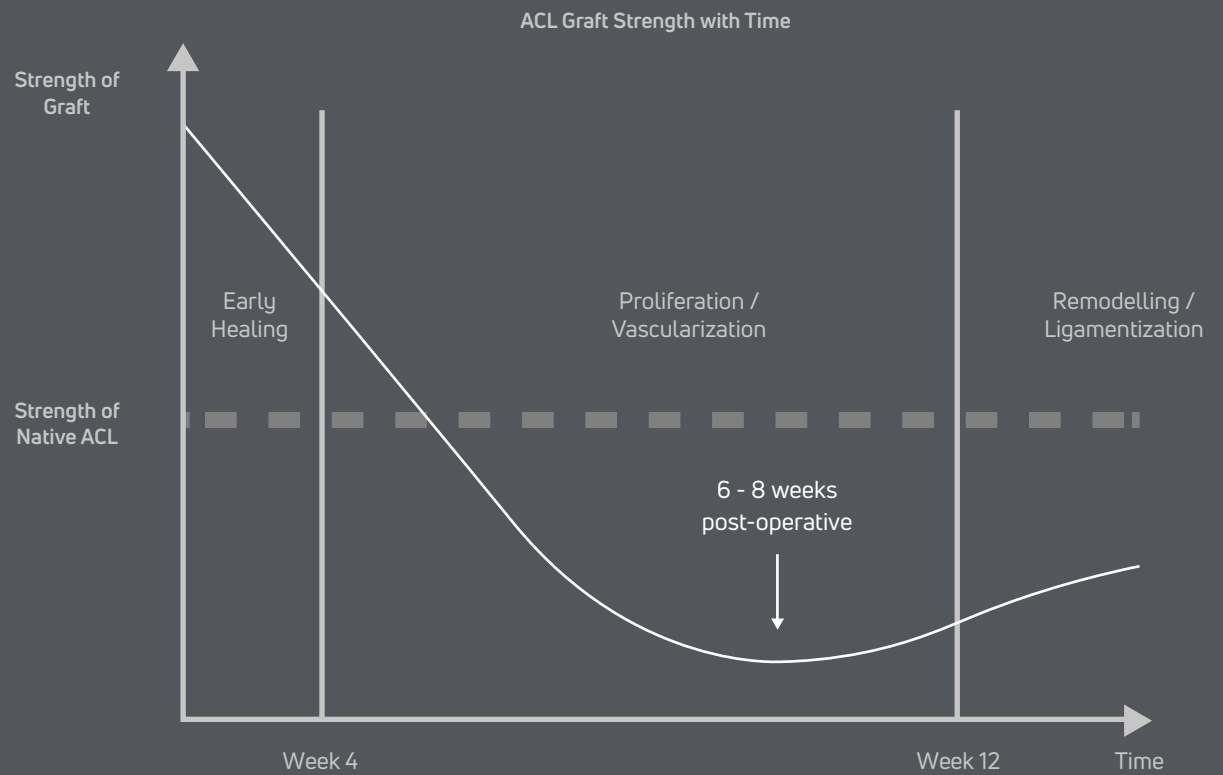
A lightweight yet durable and sturdy DonJoy knee brace frame protects against valgus collapse. By preventing anterior tibial translation, the DonJoy 4-Points-of-Leverage™ design may **reduce the subsequent rotation component**.^{2,7}

HEALING STAGES OF THE ACL GRAFT AND ROLE OF BRACING

Animal and human studies show ACL graft healing progresses through three phases: early necrosis and low cellularity without revascularization, followed by a proliferation phase with intense remodelling and revascularization, and finally ligamentization, where the graft partially resembles a native ACL.¹³

The ligamentization end point varies in the literature between 1 and 3 years post-op.⁴

However, full biological and mechanical restoration is not achieved. Mechanical strength improves over time, peaking around 1 year, but animal studies show graft properties reach only ~50–60% of a native ACL.¹³



The graft is at its **weakest at 6–8 weeks post-surgery**. During this period, loading must be sufficient to stimulate tissue adaptation while **avoiding overload that could cause graft elongation or failure**.¹³

Biomechanical studies^{2,7,14,15,24} have shown the DonJoy® design technologies (4-Points-of-Leverage™ and FourcePoint™ hinge) reduce strain on the ACL and therefore may help protect the healing graft.

For a **safe return to sport**, Moretti et al. (2022)¹⁷ recommend applying the Adams criteria for limb symmetry, requiring a **limb symmetry index of ≥90%** across all hop tests.

Lu et al. (2006)¹⁶ and Peebles et al. (2019)¹⁹ showed that wearing a DonJoy functional knee brace increased limb symmetry during respectively walking and hopping. The DonJoy A22® knee brace is clinically proven to achieve ≥94% limb symmetry.

DONJOY® BRACE TECHNOLOGIES

4-POINTS-OF-LEVERAGE™



Point of Leverage #1

- The rigid calf cuff is secured at the bottom of the calf providing the distal anchor point to the leverage system

Point of Leverage #2

- The rigid thigh cuff is secured at the top of the anterior thigh providing the proximal anchor point to the leverage system

Point of Leverage #3

- The strap across the back of the lower thigh pushes the femur anteriorly

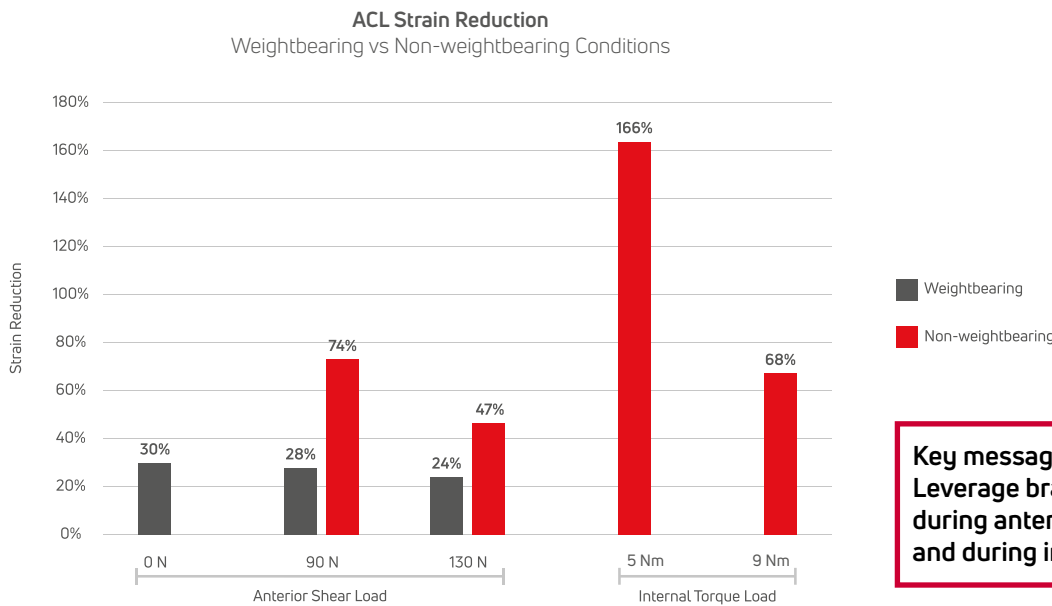
Point of Leverage #4

- The strap placed on the anterior tibia applies an active constant load to prevent anterior tibial translation

Clinical evidence:

The 4-Points-of-Leverage™ design prevents anterior translation of the tibia, reducing strain on the ACL.

Fleming et al. (2000)⁷ measured the ACL strain in braced versus non-braced subjects, during various loading conditions. Using a DonJoy® 4-Points-of-Leverage brace they were able to show that bracing the non-weightbearing knee **reduced ACL strain values** an average of 74% at 90N (P=0.02) and 47% at 130N (P=0.06) of anterior shear load. In weightbearing condition, bracing **decreased ACL strain values** by 39%, 28%, and 24% at respectively 0N, 90N, and 130N of anterior shear load (P=0.04). Mean strain reductions of 166% (P=0.01) and 68% (P=0.01) were observed for internal torques of 5 and 9 Nm, respectively, when comparing the braced, non-weightbearing knee to that of the unbraced, non-weightbearing knee. This study confirms earlier findings by Beynnon et al. (1997)² using a similar protocol.



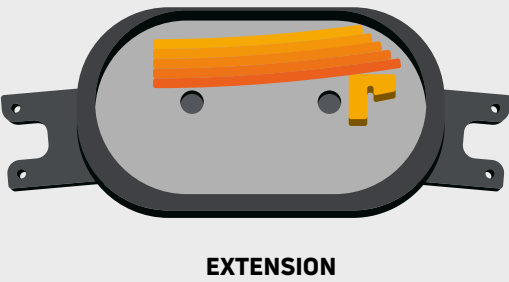
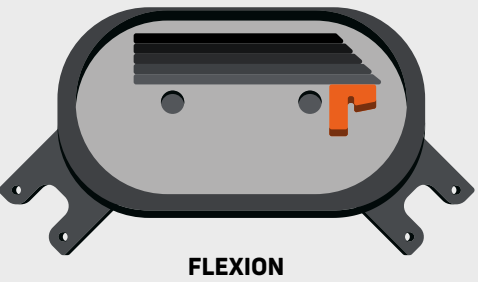
Key message: DonJoy 4-Points-of-Leverage brace can protect the ACL during anterior-posterior shear loading and during internal torques.⁷

FOURCEPOINT™ HINGE TECHNOLOGY

Low knee flexion angles, especially in combination with increased hip flexion and decreased ankle plantar flexion have appeared to predispose the athlete to injury.^{3,9}
The DonJoy® FourcePoint™ hinge offers gradually increasing resistance to knee extension.

The resistance serves three critical roles:

- First, it reduces the time spent near full extension or in the “at risk” position
- Second, it gradually adds posterior load to the tibia complementing the 4-Points-of-Leverage™ in preventing anterior tibial translation
- Third, it eliminates the extension shock felt when a patient extends into a 10 degree standard rigid stop



Clinical evidence:

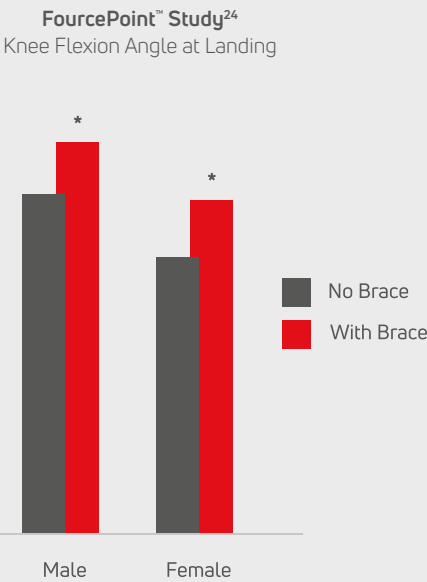
In a study by Yu et al. (2004)²⁴, subjects wearing a brace with FourcePoint hinge significantly increased their knee flexion angle during landing in a stop-jump task with 5°, resulting in an average reduction of the anterior shear force applied on the tibia through the patellar tendon of 9% for women and 13% for men.

This protective effect of the FourcePoint hinge was confirmed by later studies.

Lin et al. (2008)¹⁴ used a DonJoy FourcePoint brace and concluded “The knee extension constraint significantly increased knee flexion angle at peak posterior ground reaction force and significantly decreased peak posterior ground reaction force during landing of the stop-jump task”.

Liu et al. (2014)¹⁵ were able to demonstrate a training effect of the DonJoy FourcePoint brace and concluded “A knee extension constraint device may be a useful training tool in future ACL injury prevention programs to alter movement patterns without extra training time”.

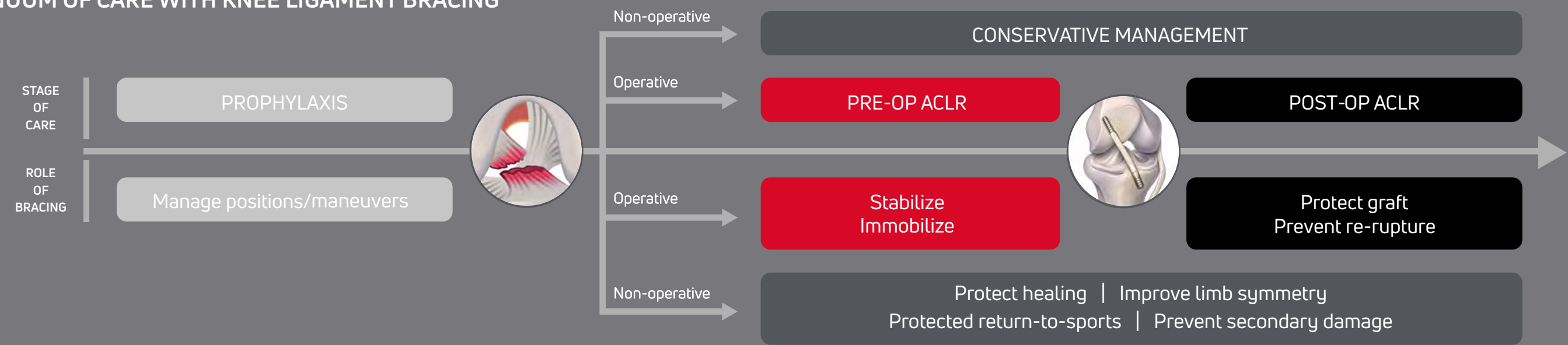
Key message: The DonJoy FourcePoint hinge helps guide the knee away from high-risk positions and may promote ACL-safer movement patterns.



Wearing a FourcePoint brace significantly increased knee flexion angle at landing in a stop-jump task with an average of 5.1° in males and 5.3° in females.
* Significant: p=0.001

CLINICAL EVIDENCE

CONTINUUM OF CARE WITH KNEE LIGAMENT BRACING



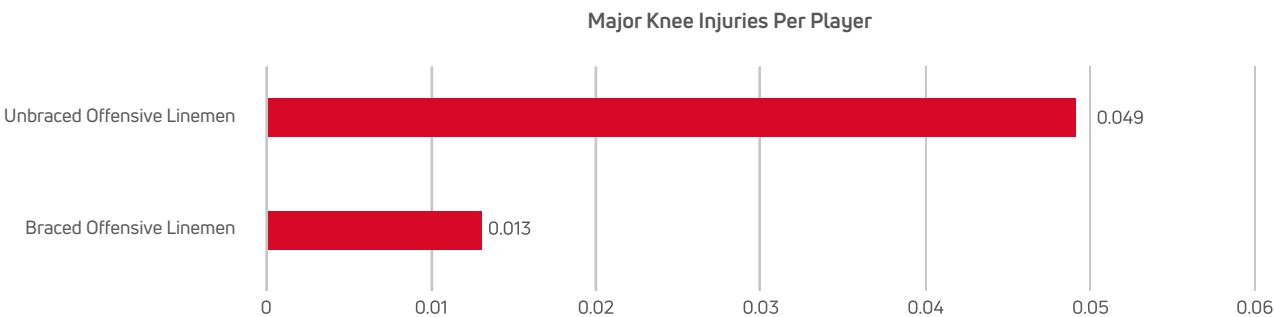
BRACING FOR PROPHYLAXIS

Retrospective cohort studies in American football players

Ackerman et al. (2023)¹

In a seven-season professional level (NFL) cohort (n=1561), offensive linemen who consistently wore bilateral prophylactic knee braces* experienced a **significantly lower rate of major knee injuries** requiring missed games compared with non-braced players (0.013 vs 0.049 injuries per player; p=.04). Isolated medial collateral ligament injuries were most common among non bracers, while only two major knee injuries occurred in the braced group, including one ACL tear. Standardized performance analysis showed **no significant differences in player performance** between braced and non-braced players. Despite these findings, the prevalence of knee brace use declined steadily over the study period.

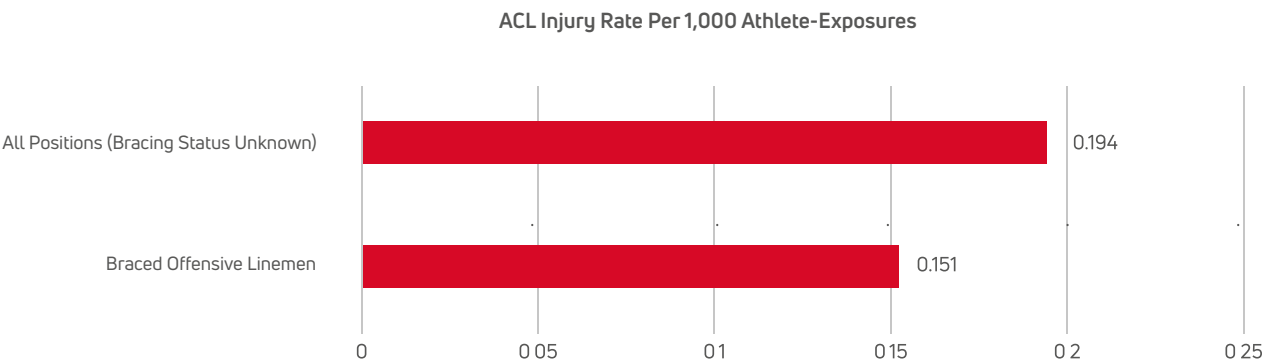
*DonJoy® Defiance®/A22®



Riopelle et al. (2025)²¹

In a collegiate level (NCAA) cohort followed over 22 seasons, offensive linemen who routinely wore bilateral prophylactic knee braces** sustained 8 ACL injuries across 52,844 athlete-exposures, compared with 58 ACL injuries across 298,320 athlete-exposures for all positions combined, corresponding to an ACL injury rate of 0.151 versus 0.194 per 1,000 athlete-exposures. This rate was also lower than the most recently reported NCAA football ACL injury rate from national surveillance data (0.17 per 1,000 athlete-exposures). The authors report that the lower observed injury rate among braced offensive linemen suggests a potential preventive benefit of prophylactic bracing. They also acknowledge several study limitations, including the possibility that the study was underpowered due to the low overall incidence of ACL injuries, the lack of information on whether players in other positions used prophylactic knee braces, and the reliance on estimated rather than exact exposure data.

** DonJoy® Defiance®/Defiance PRO

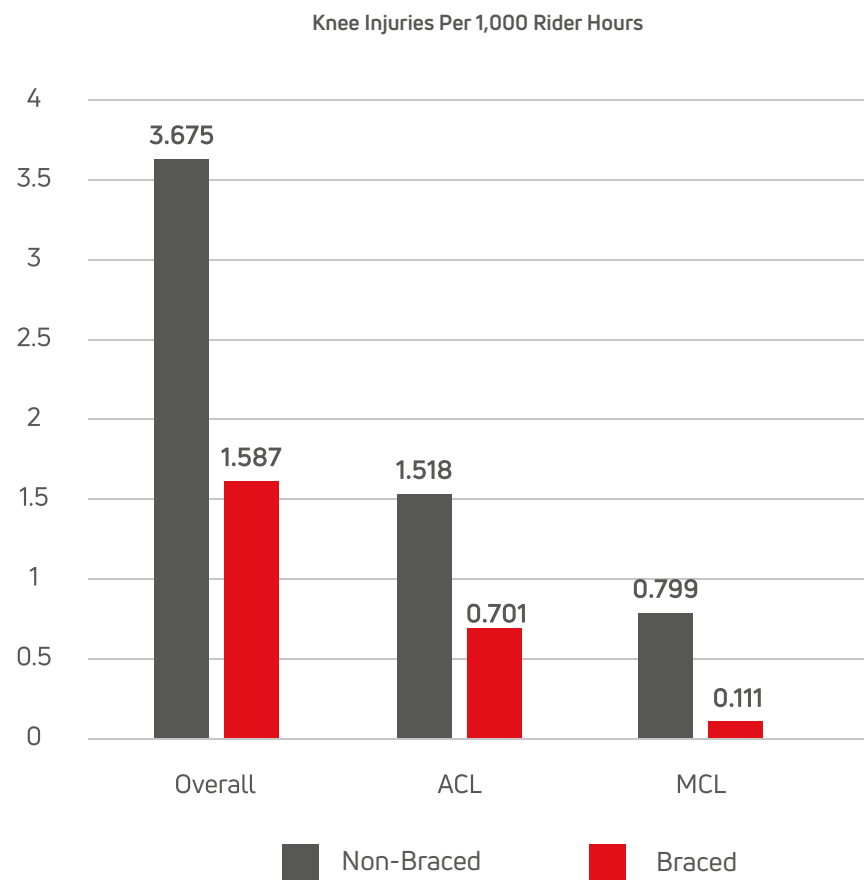


Key message: collegiate and professional football data show low ACL and major knee injury rates in braced offensive linemen, without evidence of reduced performance.

Epidemiologic study in off-road motor cycling

Sanders et al. (2011)²²

In a 1-year prospective epidemiological study of 2,115 off-road motorcycle riders (39,611 riding hours), prophylactic knee brace use was associated with significantly lower rates of knee injury compared with non-braced riders. Overall knee injury rates were higher in non-braced versus braced riders (3.675 vs 1.587 injuries per 1,000 rider hours; $P < .001$), with significantly higher incidence rates of anterior cruciate ligament rupture (1.518 vs 0.701 per 1,000 rider hours; $P = .027$) and medial collateral ligament injury (0.799 vs 0.111 per 1,000 rider hours; $P = .002$). Based on these data, the authors reported that prophylactic knee bracing was associated with an approximately 50% reduction in ACL injury rates and a seven-fold decrease in MCL injury rates, concluding that **bracing demonstrated a statistically significant protective effect against overall, ACL, and MCL injuries during off-road motorcycling.**



Key message: Across 39,000+ riding hours, prophylactic knee bracing in off-road motorcycling was associated with a ~50% reduction in ACL injuries and a 7-fold reduction in MCL injuries.



BRACING FOR PRE-OPERATIVE OR CONSERVATIVE MANAGEMENT

Cross-Bracing Protocol and ACL Healing

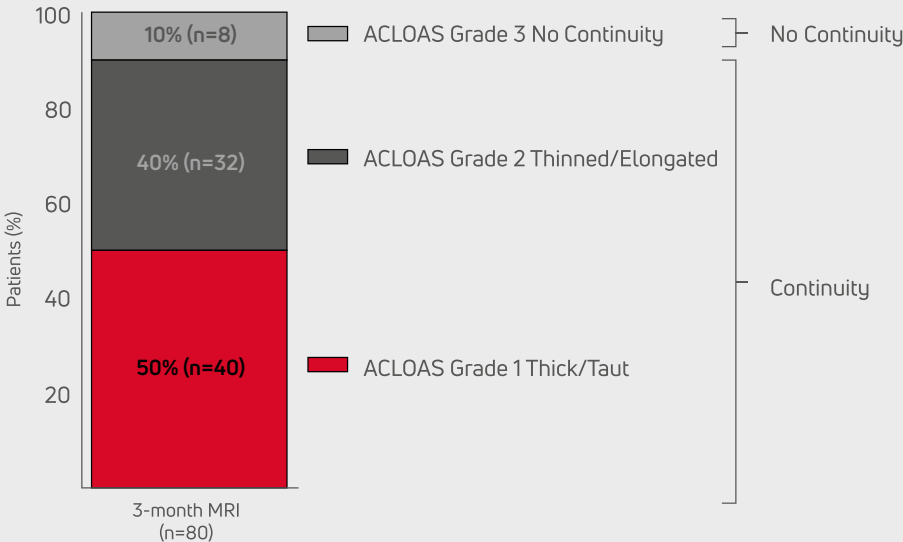


Brace-assisted approach for acute ACL injuries - non-surgical treatment timeline

**Simplified timeline created by Enovis™ based on appendix 1 of Filbay et al. (2023)⁵*

Filbay et al. (2023)⁵

In this prospective case series, 80 patients with acute ACL rupture were managed non-surgically using the Cross Bracing Protocol (CBP), which involved immobilization of the knee at 90° flexion in a 4-points brace with ROM control for 4 weeks, followed by progressive range-of-motion and structured rehabilitation with brace removal at 12 weeks. MRI at 3 months demonstrated **ACL continuity in 90% of participants**, with 50% achieving a thickened or near-normal ACL appearance (ACLOAS* grade 1). Participants with greater MRI-defined healing reported better knee function, higher ACL-related quality of life, lower passive knee laxity, and higher return-to-sport rates at 12 months compared with those with thinner or elongated healed ligaments. ACL re-injury occurred in 14% of participants during high speed and contact sports. The authors concluded that **acute ACL rupture can demonstrate substantial healing on MRI when managed with structured bracing and rehabilitation**, and that the **degree of early ACL healing is associated with clinical outcomes**.



Filbay et al. (2026)⁶

This viewpoint paper introduced the **ACL Acute Rupture Characteristics for Healing (ACL-ARCH)** MRI criteria, developed from clinical experience managing over 1,080 individuals with acute ACL rupture treated using the Cross Bracing Protocol. The authors describe **four key MRI features relevant to ACL healing potential**: integrity of femoral and tibial attachments, displacement of ACL tissue outside the intercondylar notch, gap distance between ruptured ligament ends, and involution of the ACL remnants. Drawing on prior CBP outcome data, the authors highlight that patients achieving a thick, continuous ACL on early MRI demonstrate better knee function, quality of life, knee stability, and return-to-sport outcomes. The paper concludes that acute **MRI assessment may help identify patients most likely to benefit from brace-assisted non-surgical management**, while acknowledging that further prospective validation is required.

Key message: Early brace-assisted conservative management may facilitate ACL healing and functional recovery in selected acute ACL injuries, with early MRI features informing patient suitability.

**The ACL Osteoarthritis Score (ACLOAS) score is an MRI-based grading system used to evaluate ACL healing after injury, especially during non-operative treatment or after ACL repair. It scores how continuous, thick, and well-integrated the ACL looks on MRI, helping clinicians judge ligament healing quality over time.*

Early Protective Motion (EPM) using a functional knee brace in acute ACL injury

Ueki et al. (2025)²³

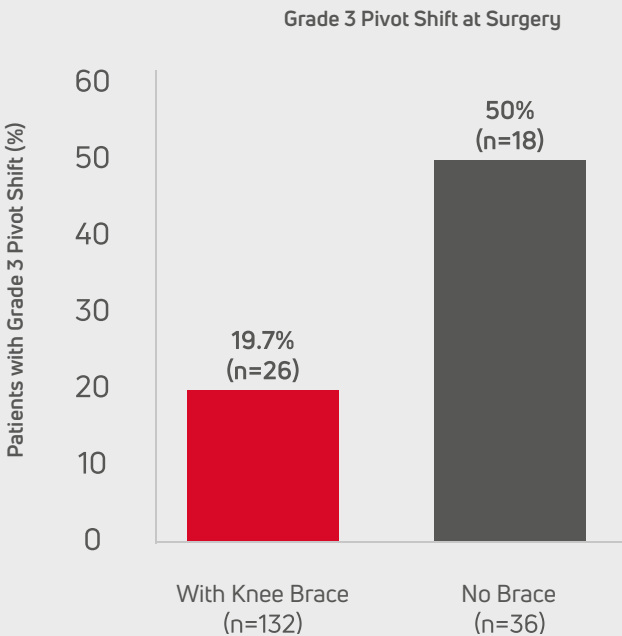
This single-group prospective cohort study evaluated conservative management of acute ACL rupture using **early protective motion (EPM) with a rigid functional knee brace** in 31 athletes with MRI-confirmed type I ACL injuries (straight-shaped tear with normal-volume band). All patients wore a rigid brace for 3 months, followed by structured rehabilitation, and were followed for a minimum of 2 years. Median side-to-side anterior laxity improved from 5.8 mm at injury to 0.0 mm at brace removal and final follow-up, with negative Pivot Shift tests throughout follow-up. At final assessment, **77.4% of patients returned to pre-injury sport without re-injury and demonstrated ACL repair on MRI**. Poorer MRI healing at 3 months may be associated with higher re-injury risk. The authors state the 22.6% re-injury rate should be interpreted with caution due to the small sample size and other limitations such as lack of randomized comparison. The authors concluded that, in carefully selected acute ACL injuries based on early MRI characteristics, conservative treatment using functional bracing can restore knee stability, demonstrate durable MRI evidence of ACL repair, and allow return to sport without reconstruction.

Key message: With an early protective motion approach using a functional knee brace, selected patients were able to return to sport with stable knees at follow-up.

Early post-traumatic knee bracing and rotational stability

Murgier et al. (2024)¹⁸

This multicentre retrospective comparative study evaluated whether early post-traumatic knee bracing after ACL injury influences the severity of rotational instability at the time of ACL reconstruction. A total of 168 patients who subsequently underwent ACL reconstruction were included, comparing those who received early knee immobilization with a brace in the days following injury versus those without immobilization. The presence and severity of rotational instability were assessed intra-operatively using the Pivot Shift test under general anesthesia. **A high-grade Pivot Shift (grade 3) was significantly more frequent in patients without early bracing** compared with those who wore a knee brace (50% versus 19.7%). Both hinged and non-hinged braces were associated with a lower risk of severe rotational instability, while the duration of immobilization greater than three weeks was associated with a further reduction in risk. The authors concluded that early post-injury knee bracing may reduce the development of significant rotational instability before ACL reconstruction, potentially decreasing the need for additional anterolateral stabilization procedures.



Key message: Early post-traumatic knee bracing after ACL injury was associated with less rotational instability.

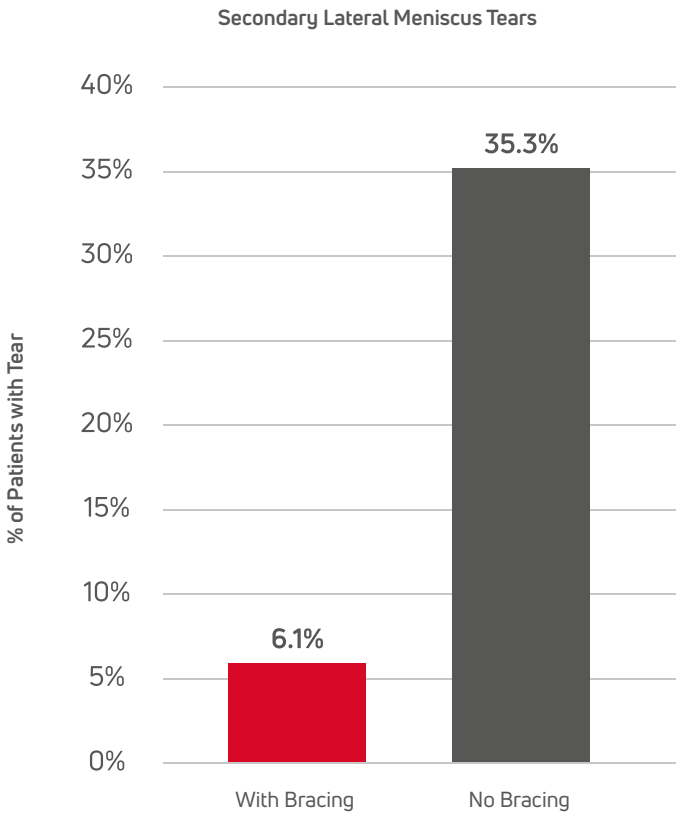
BRACING FOR REDUCING SECONDARY MENISCAL DAMAGE

Instability associated with ACL injury has been linked to the development of secondary meniscal tears (defined as tears that develop after the initial ACL injury)¹¹

Conservative Strategies to Reduce Secondary Meniscal Injury after ACL Rupture

Gupta et al. (2024)¹⁰

This retrospective cohort study evaluated whether pre-operative conservative interventions, including knee bracing and crutch use, were associated with a reduced risk of secondary meniscal tears in pediatric patients with ACL rupture. Seventy-one patients under 18 years of age undergoing primary ACL reconstruction were included, with secondary meniscal injuries defined as new major tears identified intraoperatively that were not present on initial post-injury MRI. Among patients undergoing early ACL reconstruction (≤ 8 weeks), **use of a knee brace was associated with a lower incidence of secondary lateral meniscal tears**. Among patients undergoing delayed reconstruction (> 8 weeks), use of crutches was associated with a lower incidence of secondary medial meniscal tears. The authors concluded that protective conservative strategies between injury and surgery may help preserve meniscal integrity in the pediatric ACL-deficient knee.

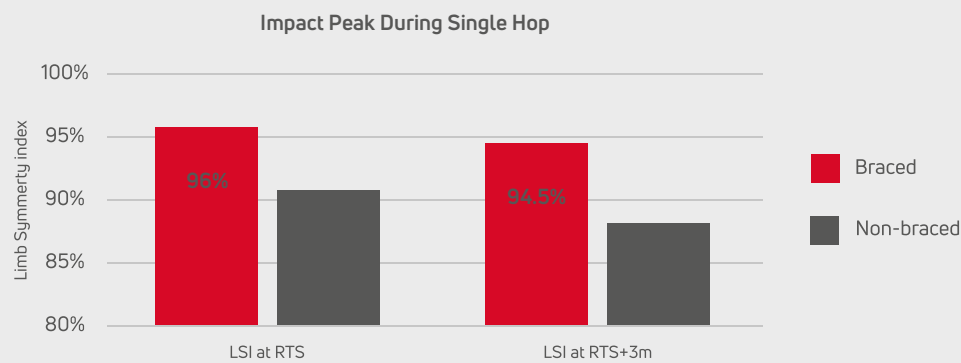


Key message: In pediatric ACL injuries, early knee bracing was associated with fewer secondary lateral meniscal tears while awaiting reconstruction.

BRACING POST ACL RECONSTRUCTION

Biomechanical study on limb symmetry in athletes returning to sports

Peebles et al. (2019)¹⁹ included 28 ACL-reconstructed patients in a biomechanical study with repeated measures design. Subjects completed hop testing after being released to return to sport and again 3 months later, both with and without wearing a DonJoy® A22® custom fit functional knee brace. Plantar loading during landings was measured using wireless in-shoe sensors, and limb symmetry indices (LSI) were calculated for hop distance, peak impact force, loading rate, and impulse. **Wearing a knee brace significantly increased hop distance symmetry during the single and crossover hop tests and peak impact force symmetry on each test** (all p < 0.05).

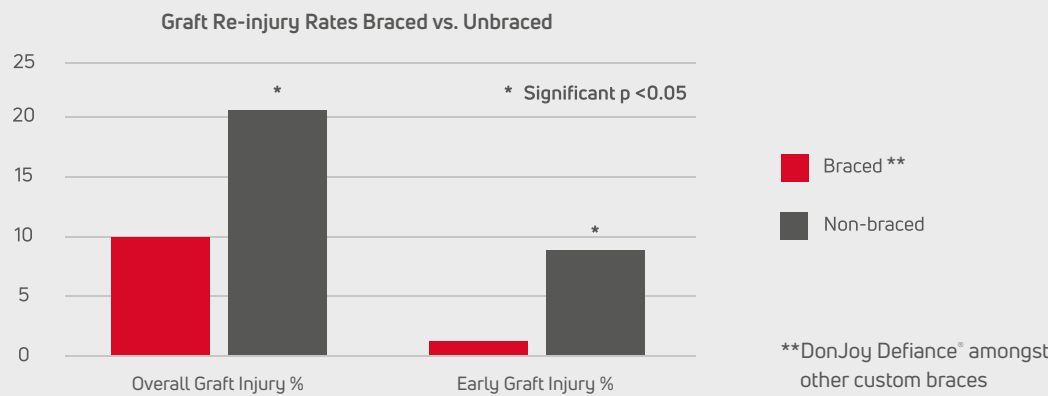


Limb symmetry index (LSI) for impact peak during a single hop, at return to sports (RTS) and 3 months later (RTS + 3m)

Key message: Wearing a functional knee brace during athletic activities improves limb symmetry for return-to-sports.

Retrospective cohort study on re-injury rates

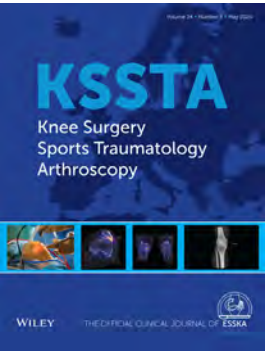
Perrone et al. (2019)²⁰ compared re-injury rates of 135 braced** ACL-reconstructed adolescent patients with a similar unbraced cohort (n=140) from another study. The braced cohort were prescribed post-operative functional bracing during cutting and pivoting sports for 2 years after surgery. Follow-up was at a mean of 5.6 years after surgery. The overall follow-up rate was 65% (142/219; study limitation to be considered when interpreting the results).



Post-operative use of functional bracing in adolescents was associated with a significantly lower risk of graft retear. Both overall and early retear rates were reduced in the braced cohort compared to the unbraced group, with overall retear rates of 10% versus 21%, and early retear rates of 1% versus 9%, respectively.

Key message: Functional bracing after ACL reconstruction in adolescents may significantly reduce graft retear rates.

HOW ABOUT GUIDELINES & RECOMMENDATIONS?



Functional anterior cruciate ligament braces may have a role in select patient groups although there is presently limited evidence supporting or refuting their routine use: A scoping review of clinical practice guidelines and an updated bracing classification

Andrew G. Geeslin¹ | Gilbert Moatshe² | Lars Engebretsen² | Martin Lind³
Frida Hansson⁴ | Anders Stalman⁴ | Bjorn Barenius⁴ | Robert F. LaPrade⁵

WHAT THE EVIDENCE REALLY TELLS US⁸

Recent clinical practice guidelines often conclude that functional bracing after ACL reconstruction does not improve outcomes. However, as highlighted in the scoping review by Geeslin et al. (2024)⁸, this conclusion is driven less by negative evidence than by **important limitations in the available studies**.

Limited evidence ≠ evidence of no role

The authors emphasize that **definitive guidance on functional ACL bracing is currently not possible**. Only three randomized trials underpin guideline recommendations, and all three suffer from substantial methodological constraints, most notably poor brace compliance, especially during the critical phase of return to sports.

Because **brace use dropped markedly during the very period when re-injury risk is highest**, the true effect of functional bracing on graft protection or re-injury risk cannot be reliably determined.

A role for bracing in selected patients

Importantly, the authors highlight that not all ACL reconstruction patients carry the same risk profile. Epidemiological data consistently identify groups at higher risk of graft failure and residual laxity - such as younger athletes, patients returning to pivoting sports, and those with biomechanical or anatomical risk factors.

In this context, **functional ACL bracing may be considered**, based on:

- Individual patient risk
- Clinical judgement
- Shared decision-making between clinician and patient

This **personalized approach** acknowledges both the biological vulnerability of the graft during return to sport and the current limitations of the evidence base.

Key message: Limited evidence restricts the ability to make clear recommendations, highlighting the need for a personalized approach with a potential role for bracing.

REFERENCES

1. Ackerman DR, Ptasinski AM, Edmond T, Dunleavy ML, Gallo RA. Prophylactic Knee Bracing in Offensive Linemen of the National Football League: A Retrospective Analysis of Usage Trends, Player Performance, and Major Knee Injury. Orthop J Sports Med. 2023 Aug 25;11(8):23259671231191767.
2. Beynnon BD, Johnson RJ, Fleming BC, Peura GD, Renstrom PA, Nichols CE, Pope MH. The Effect of Functional Knee Bracing on the Anterior Cruciate Ligament in the Weightbearing and Nonweightbearing knee. Am J Sports Med 1997;25(3):353-9.
3. Carlson VR, Sheehan FT, Boden BP. Video Analysis of Anterior Cruciate Ligament (ACL) Injuries: A Systematic Review. JBJS Rev. 2016;4(11):e5.
4. Claes S, Verdonk P, Forsyth R, Bellemans J. The "ligamentization" process in anterior cruciate ligament reconstruction: what happens to the human graft? A systematic review of the literature. Am J Sports Med. 2011 Nov;39(11):2476-83.
5. Filbay SR, Dowsett M, Chaker Jomaa M, Rooney J, Sabharwal R, Lucas P, Van Den Heever A, Kazaglis J, Mertino J, Moran M, Allwright M, Kuah DEK, Durie R, Roger G, Cross M, Cross T. Healing of acute anterior cruciate ligament rupture on MRI and outcomes following non-surgical management with the Cross Bracing Protocol. Br J Sports Med. 2023 Dec;57(23):1490-1497.
6. Filbay SR, Dowsett M, van Haeringen M, Palmer E, Roger G, Lucas P, van Den Heever A, Sabharwal R, Cross T. A new way of grading severity of ACL rupture on acute MRI to consider potential for non-surgical healing with the Cross Bracing Protocol: ACL Acute Rupture Characteristics for Healing (ACL-ARCH) MRI criteria. J Sci Med Sport. 2026 Feb;29(2):145-148.
7. Fleming BC, Renstrom PA, Beynnon BD, Engstrom B, Peura G. The influence of functional knee bracing on the anterior cruciate ligament strain biomechanics in weightbearing and nonweightbearing knees. Am J Sports Med 2000;28(6):815-24.
8. Geeslin AG, Moatshe G, Engebretsen L, Lind M, Hansson F, Stalman A, Barenius B, LaPrade RF. Functional anterior cruciate ligament braces may have a role in select patient groups although there is presently limited evidence supporting or refuting their routine use: A scoping review of clinical practice guidelines and an updated bracing classification. Knee Surg Sports Traumatol Arthrosc. 2024 Jul;32(7):1690-1699.
9. Gopinath V, Smith MV, Matava MJ, Brophy RH, Knapik DM. Most Anterior Cruciate Ligament Injuries in Professional Athletes Occur Without Contact to the Injured Knee: A Systematic Review of Video Analysis Studies. Arthroscopy. 2025;41(4):1155-1162.e1.
10. Gupta A, Badin D, Lee RJ. The Role of Crutches and Bracing in Preventing Secondary Meniscal Tears After Anterior Cruciate Ligament Injury in Pediatric Patients. Orthop J Sports Med. 2025 Feb 6;13(2):23259671241309862.
11. Hagmeijer MH, Hevesi M, Desai VS, Sanders TL, Camp CL, Hewett TE, Stuart MJ, Saris DBF, Krych AJ. Secondary Meniscal Tears in Patients With Anterior Cruciate Ligament Injury: Relationship Among Operative Management, Osteoarthritis, and Arthroplasty at 18-Year Mean Follow-up. Am J Sports Med. 2019 Jun;47(7):1583-1590.
12. Högberg J, Sundberg A, Villa FD, Senorski EH. Anterior cruciate ligament injury mechanism in athletes across various sports: a scoping review. Ann Jt. 2025;10:35.
13. Janssen RP, Scheffler SU. Intra-articular remodelling of hamstring tendon grafts after anterior cruciate ligament reconstruction. Knee Surg Sports Traumatol Arthrosc. 2014 Sep;22(9):2102-8.
14. Lin CF, Liu H, Garrett WE, Yu B. Effects of a knee extension constraint brace on selected lower extremity motion patterns during a stop-jump task. J Appl Biomech 2008;24(2):158-65.
15. Liu H, Wu W, Yao W, Spang JT, Creighton RA, Garrett WE, Yu B. Effects of knee extension constraint training on knee flexion angle and peak impact ground-reaction force. Am J Sports Med. 2014 Apr;42(4):979-86.
16. Lu TW, Lin HC, Hsu HC. Influence of functional bracing on the kinetics of anterior cruciate ligament-injured knees during level walking. Clin Biomech (Bristol, Avon). 2006 Jun;21(5):517-24.
17. Moretti L, Bizzoca D, Cassano GD, Caringella N, Delmedico M, Moretti B. Graft Intra-Articular Remodeling and Bone Incorporation in ACL Reconstruction: The State of the Art and Clinical Implications. J Clin Med. 2022 Nov 12;11(22):6704.
18. Murgier J, Duthon V, Deygas A, Ehkirch FP. Does an early post traumatic knee brace reduce the incidence of knee rotational instability? Arch Orthop Trauma Surg. 2024 Mar;144(3):1161-1169.
19. Peebles AT, Miller TK, Moskal JT, Queen RM. Hop testing symmetry improves with time and while wearing a functional knee brace in anterior cruciate ligament reconstructed athletes. Clin Biomech (Bristol). 2019 Dec;70:66-71.
20. Perrone GS, Webster KE, Imbriaco C, Portilla GM, Vairagade A, Murray MM, Kiapour AM. Risk of Secondary ACL Injury in Adolescents Prescribed Functional Bracing After ACL Reconstruction. Orthop J Sports Med. 2019 Nov 12;7(11):2325967119879880.
21. Riopelle D, Cruz C, Romano R, Weber A, Gamradt S. Prophylactic Knee Bracing in College Football Players Is Associated With a Low Rate of Anterior Cruciate Ligament Tears. Arthrosc Sports Med Rehabil. 2025 Sep 18;7(6):101263.
22. Sanders MS, Cates RA, Baker MD, Barber-Westin SD, Gladin WM, Levy MS. Knee injuries and the use of prophylactic knee bracing in off-road motorcycling: results of a large-scale epidemiological study. Am J Sports Med. 2011 Jul;39(7):1395-400.
23. Ueki H, Niga S, Tsukada S, Saito M, Mori H, Ikezawa Y, Yoshimura H, Koga H. Acute anterior cruciate ligament injuries can be repaired through conservative treatment with early protective motion: a single-group cohort study. BMJ Open Sport Exerc Med. 2025 Nov 21;11(4):e002802.
24. Yu B, Herman D, Preston J, Lu W, Kirkendall DT, Garrett WE. Immediate effects of a knee brace with a constraint to knee extension on knee kinematics and ground reaction forces in a stop-jump task. Am J Sports Med 2004;32(5):1136-43.

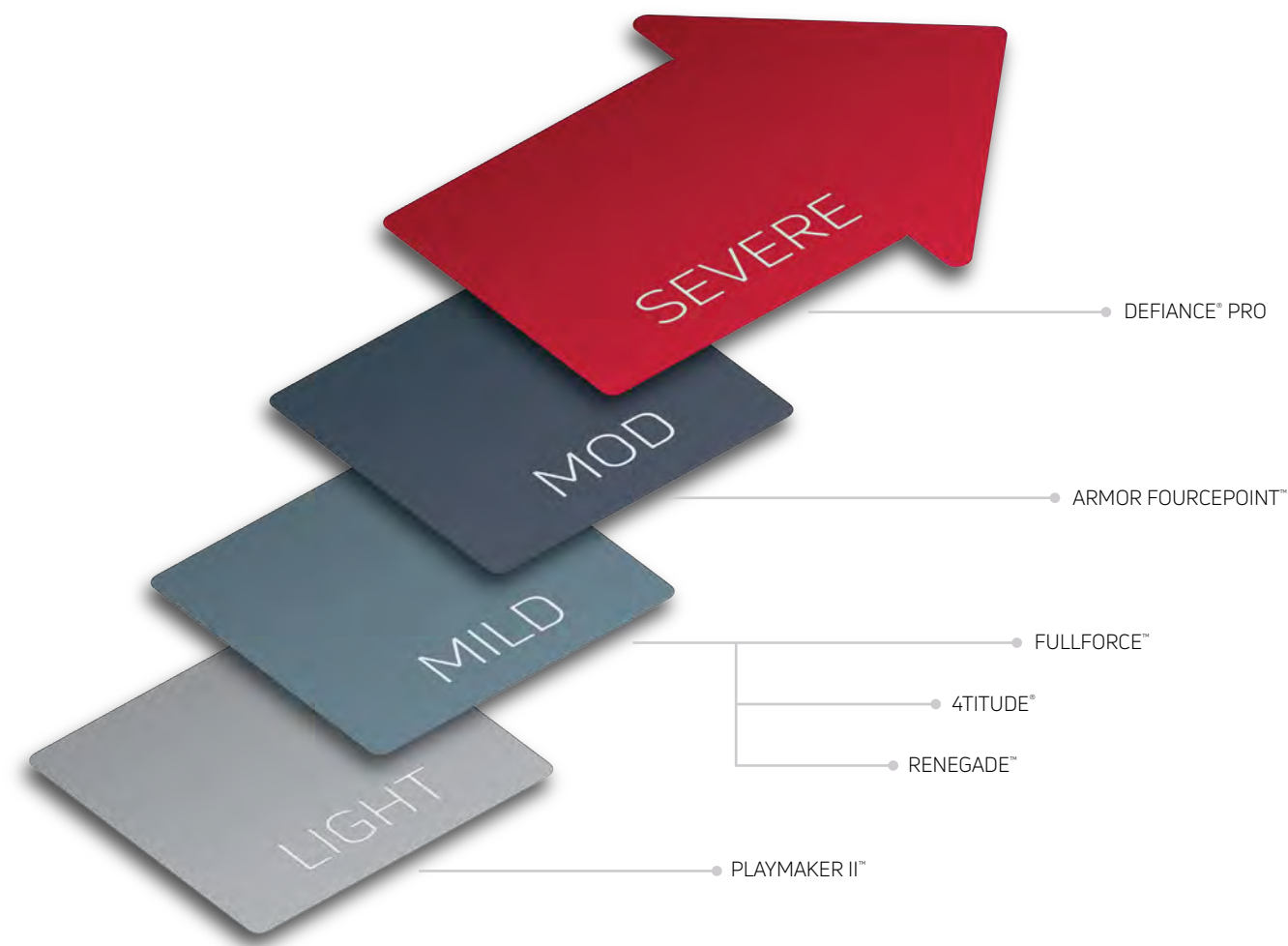


DONJOY® KNEE LIGAMENT BRACES

Finding the right ACL knee brace

Enovis™ offers a comprehensive portfolio of knee bracing solutions designed to support clinical decisions, from prophylaxis to conservative treatment to protection of the graft. Partner with Enovis to select the most appropriate brace tailored to your patients’ specific clinical needs and activity profiles.

ACL MCL LCL Bracing Ladder



Defiance® PRO

DonJoy's flagship custom knee ligament brace, offering a custom fit for extreme, water, contact, and non-contact sports. The brace features the clinically proven 4-Points-of-Leverage™ system and offers a custom-made fit for every patient, from weekend warriors to elite athletes.



Armor FourcePoint™

DonJoy's strongest prefabricated knee ligament brace. It is ideally suited to extreme and contact sports. The strong, aircraft-grade aluminum frame helps provide strength and confidence to aid for athletes who demand a knee brace that provides protection.



FullForce™

Combines DonJoy's proven 4-Points-of-Leverage system with its patented FourcePoint™ hinge technology, a clinically-proven solution to help protect the ACL. Sleek, low profile, and exceptionally lightweight, FullForce™ is a great go-to prefabricated brace for competitive and recreational athletes of all kinds.



4Titude®

A low-profile prefabricated ligament brace designed to deliver reliable, everyday knee stability. It adapts easily to a wide range of patient morphologies, ensuring comfort for both shorter and taller users. It provides solid protection for daily activities and non-contact sports.



Renegade™

Complements our expansive line of knee ligament braces, dispenses trusted technology and is clinically supported. Helps provide support to aid moderate to severe knee instability, hyperextension, ACL injuries and reconstruction, MCL/LCL instabilities or prophylactic use.



Playmaker II™

Engineered by DonJoy, increases flexion angles and helps to reduce the risk of ACL injury. Comfort delivered through a high-tenacity nylon/spandex fabric, for comfort and fit.



Creating Better Together™

enovis-medtech.eu

2000 Cathedral Square, Cathedral Hill, Guildford, Surrey, GU2 7YL, UNITED KINGDOM

Individual results may vary. Neither Enovis, DJO, LLC or any of their subsidiaries dispense medical advice. The contents of this document do not constitute medical, legal, or any other type of professional advice. Rather, please consult your healthcare professional for information on the courses of treatment, if any, which may be appropriate for you.

MKT-000-11867315136-EN - Rev A

Copyright © 2026 DJO, LLC, a subsidiary of Enovis Corporation