

## **“Functional” Knee Braces & What We Have Learned**

Anterior cruciate ligament (ACL) is the most commonly injured ligament. Rigorous rehabilitation after ACL reconstruction is necessary for the surgery performed to produce a successful outcome. Numerous questions arise about functional knee braces in this process for a post-op ACL patient. In addition, despite having no significant injury, functional knee braces have taken the interests of persons concerning general knee pain. The use of such knee braces has been suggested to provide protection and to improve kinetic performance of the knee's ACL. However, aside from the general population, athletes may refrain away from wearing the knee brace in fear of it creating a hindrance in performance on the playing field. This article will address whether we are for or against the use of functional knee braces and why.

Functional knee braces range from just under \$100 to over \$1,000; therefore, if an individual is going to pay for such it would be of their best interest to make sure that it is worth it. The purpose of these braces is twofold, either to shield the reconstructed ligament from increased stress or to stabilize the ACL-deficient knee (Marshall, 2016). A study conducted in 2013 sought out to provide answers concerning the use of a functional knee brace and if wearing one post-op was more beneficial than not. Before the results of the experiment were revealed, results of the subjective evaluations revealed that patients responded positively to wearing the braces indicating better knee stability, performance and pain alleviation. So, what were the actual objective results of the study? The study showed that the functional knee brace did not have any negative or positive effect on knee performance. However, one positive effect of the brace indicated that it can reduce the bilateral asymmetry in post-op patients (Mortaza, 2013). This fact in itself is huge. Perhaps all patients faced with an injury concerning a single side of their body,

and not the other, worry about the creation of a contralateral muscle imbalance. Judging from our last two blog posts, we know that such imbalances lead to an exponential number of negative happenings. By wearing a functional knee brace one can ensure that the strength of the opposing knee does not override the deficient knee, therefore continuing to allow symmetry throughout the body's structure.

Another study conducted attempted to find answers of WHEN to use a brace following ACL reconstruction. Its findings showed that evidence appears to support immediate postoperative bracing with the goals of maintaining full extension and decreasing effusion. When combined with a focused rehabilitation / focused physical therapy program, these concerns can be addressed to an even greater extent. At the very least, the importance of bracing may be psychological – and as we all know – if it helps you mentally, it helps you physically. If a patient requires the psychological support of a functional brace as they return to their sport, the use of such becomes even more important (Masini, 2013). Overall, it can be concluded that the brace serves a significant importance in providing range of motion as the ligament repairs itself!

### **What We Have Learned**

Throughout the last six blog posts, including this one, in this order: The Sensorimotor System, Unstable Surface Training Following Injury, Abdominal Hollowing vs. Bracing, The Power in Understanding the Body, Chronic Musculoskeletal Pain Cycle, Chronic Musculoskeletal Interventions, and Functional Knee Braces – we have examined, diagnosed, and evaluated an array of topics. However, such a knowledge base is worth nothing if we do not put it into action. The great philosopher, Stoic, and Roman Emperor - Marcus Aurelius once said, “Waste no more time arguing what a good man should be. Be one.” This is directly analogous to our recent topics concerning movement. We must waste no more time arguing about movement,

but choose to put an effort forth in pursuing such better movement. Practical application is everything; for us as trainers and athletes.

Moving forward, perhaps the most beneficial thing we have learned relates back to our first post in this series: The Sensorimotor System. This diagnoses just how critical the mind is in constructing movement patterns. At Reignited Fitness we believe that this, mindset, is the first step to facilitating positive change. As coaches, how do we THINK about constructing a class and implementing proper movement sequences, progressions, and modifications? As trainers, figuring out the mental state of our clients as this is the direct source of all of their goals we are striving to help them reach, and then manipulating such mentalities to enhance the process of change. And finally, as athletes, the opposite side of the trainer-client relationship; what are my goals and how does my current mental state help me attack such? At Reignited Fitness, we want to be a community of action with the mind at the forefront. Our diligent mentalities will overflow directly into proper physiological movement. This win-win state of wellness results in the increased quality of life that we all strive for!

## References

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