



NEWSLETTER

ACL Tears:

Surgery vs No Surgery

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Problem:

"I tore my ACL, should I have surgery to have it repaired, or should I wait?" This is a common question that we are asked in physical therapy. Prior to 2010, high-level evidence was lacking to support that outcomes are better with routine early ACL reconstruction than with early rehabilitation and nonsurgical treatment.¹ In 2010, Frobell and colleagues performed a randomized control trial comparing rehabilitation and early ACL reconstruction to early rehabilitation and optional delayed ACL reconstruction. There were a total of 121 subjects with a mean age of 26 years old. Subjects were evaluated at three, six, twelve and twenty-four months with various outcome measures including pain, function, osteoarthritis measures and other special tests. The results demonstrated that both groups improved in all measures over the course of two years and there was not a significant difference between the two groups. In fact, surgical reconstruction was avoided in 61% of the subjects without compromising results. The authors concluded that for "young, active adults with acute ACL tears, a strategy of rehabilitation plus early ACL reconstruction was not superior to a strategy of rehabilitation plus optional delayed ACL reconstruction".¹

More recently these authors published a follow up study, in which they evaluated these groups again five years later and again they found no difference between the two groups. They

evaluated the radiographs to determine osteoarthritis between both groups and concluded that there was not a difference in both tibiofemoral and patellofemoral radiographic osteoarthritis. However, there was a statistically significant difference in those patients who received a patellar graft for ACL reconstruction, as they presented

with more patellofemoral osteoarthritis. It is important to note, that after the two year follow up there was greater frequency of meniscal surgery performed on those subjects who were in the rehabilitation group and optional reconstruction when compared to the early ACL reconstruction group, but at the five year follow up there was no difference for meniscal surgery between the two groups. At the end of five years, 50% of those in the early rehabilitation strategy and optional reconstruction group did not need reconstruction.²





Subgrouping:

Clearly this demonstrates the need to subgroup patients to determine the need for surgery and/or rehabilitation. To help us determine who fits within the subgroups, we will discuss the subgroups as copers, adapters, and non copers.³

- Copers:** resume activity without reconstruction
- Adapters:** manage life through activity reduction
- Non Copers:** require reconstruction secondary to instability.

In physical therapy, these patients are put through various tests including hopping tests.



Copers perform better on these four hop tests as they have better quadriceps control with both static and dynamic tasks and neuromuscular control of the hip and knee with functional tasks.⁴

However, multiple studies state that with a [standard physical therapy program](#) emphasizing

proprioception training, non copers may become copers.⁵

The following criteria was created to determine who may become a copers:

- a hop test index of 80% or more for the timed 6-meter hop test
- no more than one episode giving way since the injury
- [knee outcome survey activities of daily living scale](#) score of 80% and greater
- global rating of knee function of 60 or greater.⁶

After a six month follow up of copers participating in a formal physical therapy regimen, 72% successfully returned to preinjury sports activities without further episodes of instability or reduction in functional status.⁶

Conclusion:

Based on this new research patients we must now consider the costs and benefits of early rehabilitation versus ACL reconstruction. Considering the various factors in determining subgroups, we have a better picture as to who may benefit from this early rehabilitation approach. Once identified the clinician can develop a specific program designed to improve impairments and reduce an athlete's risk of injury. To learn more about these programs and how Physical Therapy can assist in the prevention of ACL injuries contact the experts at Waldron's Peak Physical Therapy.

	ACL Reconstruction	Rehabilitation
Price	\$17,000-25,000 ⁷	\$1,820-7,000 ¹
Rehabilitation Time	6-9 months ⁷	6 months ⁶
Risk	Infection, blood loss, post operative complications, loss of knee motion and function	No additional risk of knee arthritis or meniscal tears between groups ²
Benefits	Improved knee passive ligament stability, reduced need for further surgical procedures ⁸	60% of patient may avoid surgery with equal outcomes of surgically repaired knees ¹

[Click here](#) for a podcast for patients, with guest speaker Frobell.

**References:**

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