



@physicaltherapyresearch

# RAPID RESEARCH

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April 2022

## Inside This Week: ACL Surgery: Not Always the Best Option

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- ✓ ACL Surgery v. Rehab:  
5 year Outcomes

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  - ✓ ACL Rupture:  
Early Surgery v. Conservative  
Rehab

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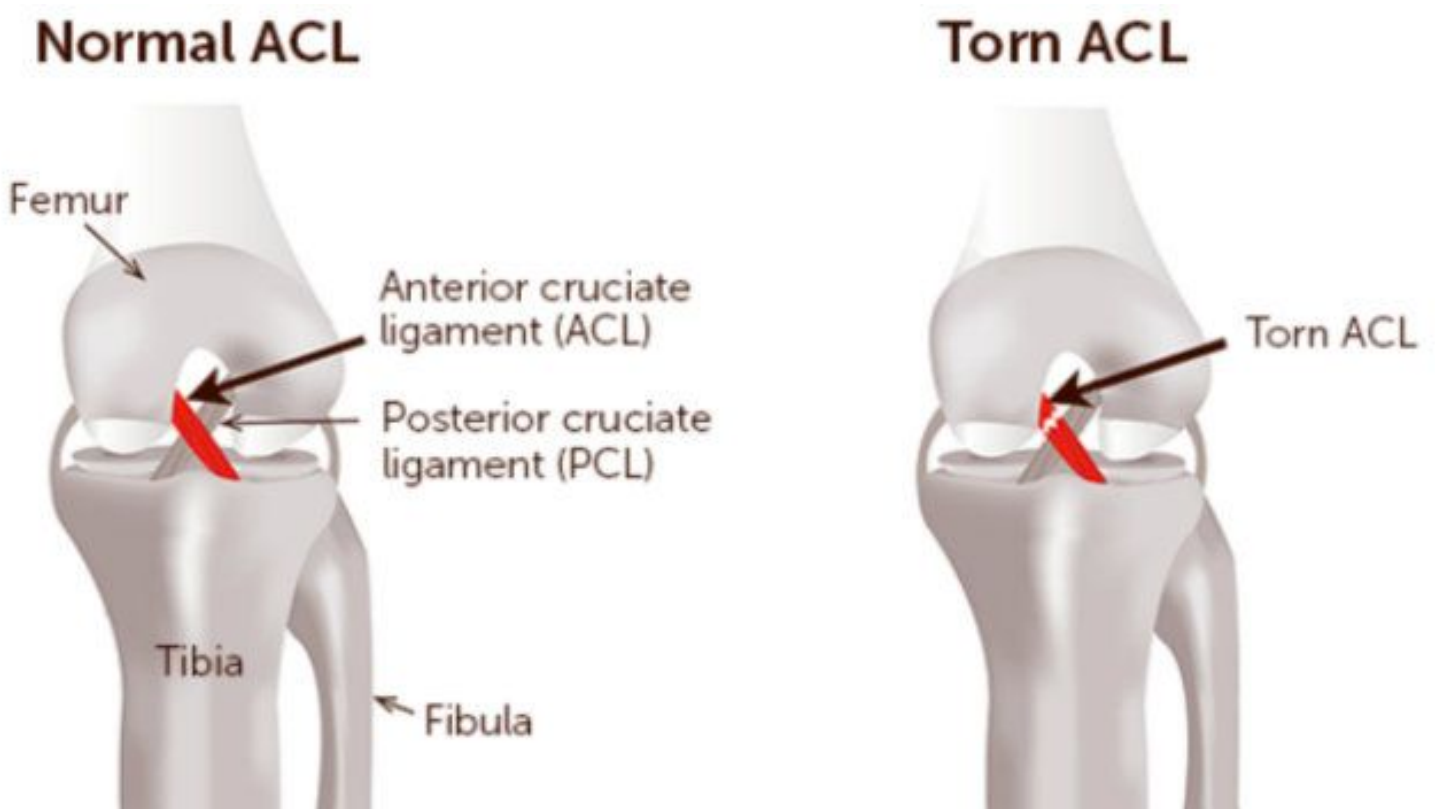
  - ✓ ACL Surgery For All Ruptures is  
Not Cost-Effective



# ACL SURGERY V. REHAB: 5 YEAR OUTCOMES

[Click for Full Text  
\(Welsandt et al 2018\)](#)

This study determined if differences exist in 5-year functional & radiographic outcomes between operative and nonoperative treatment of ACL injuries.



# KEY FINDINGS

105 acute ACL ruptures; **Reconstruction v. Non-Operative Functional testing & Knee radiographs** (Before & After 5 years)

## At 5 Years:

ACL reconstruction vs rehab alone; Did not differ in:

Quadriceps strength

Performance on single-legged hop tests

Activity level

Subjective reports of pain, symptoms, ADLs & knee-related quality of life

Presence of knee osteoarthritis.

Patients treated operatively did report greater:

Global ratings of knee function

Lowered fear at 5 years

Likelihood to possess knee joint swelling

# MAIN TAKEAWAYS

5- year functional and radiographic outcomes are similar between operatively and non-operatively treated patients.

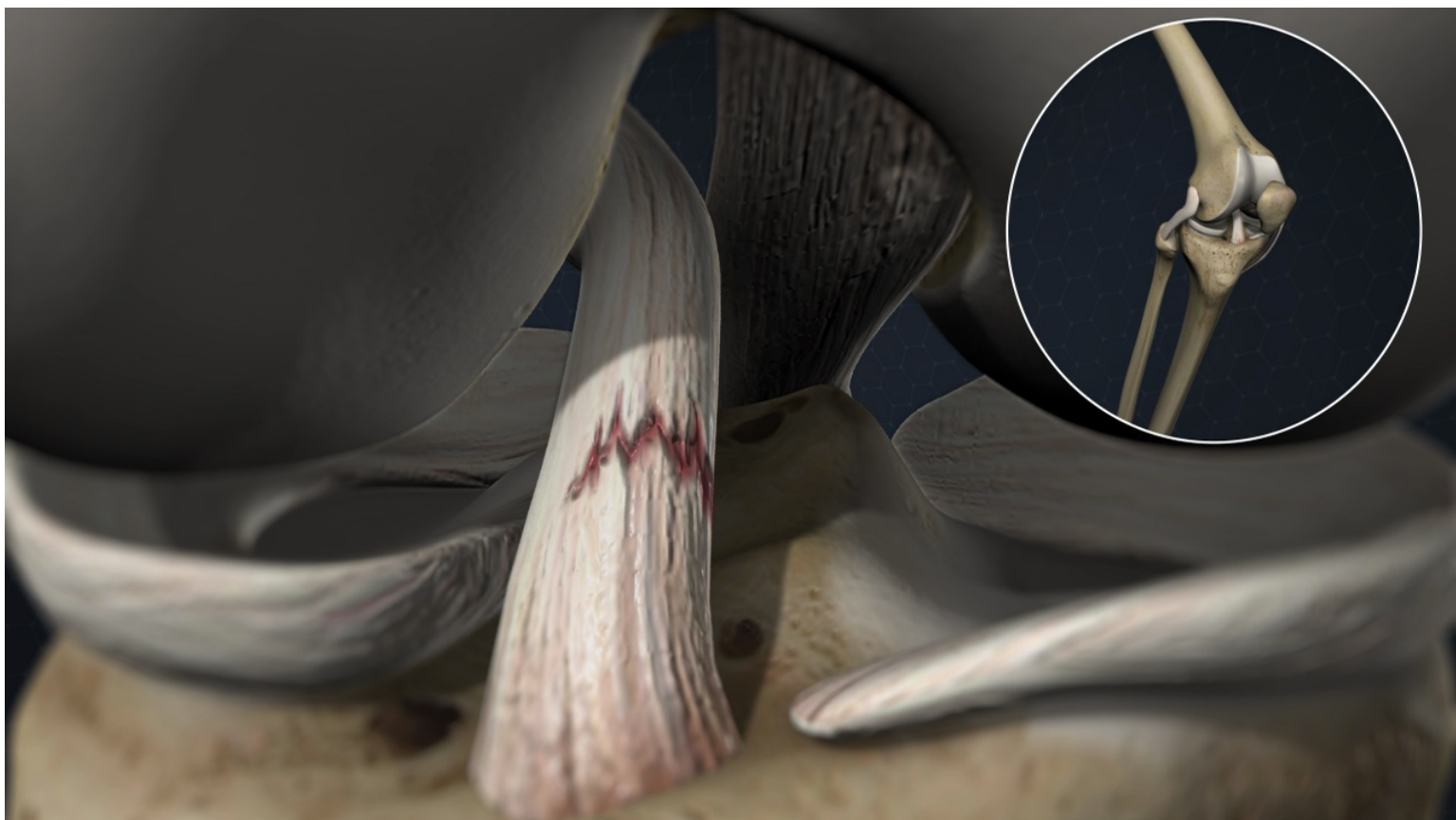
However, patients treated operatively did demonstrate more knee joint effusion, higher self-report in global knee function, and lower self-reported fear.

No statistically significant radiographic differences, although the incidence of osteoarthritis was higher among patients treated operatively (23%), vs. non-operatively (5%).

# ACL RUPTURE: EARLY SURGERY V. CONSERVATIVE REHAB

[Click for Full Text](#)  
([Reijman et al. 2021](#))

This study compared differences in patients' perceptions of symptoms, knee function, and ability to participate in sports, over 2 years in ACL ruptures treated surgically v. conservatively.



# KEY FINDINGS

167 patients; Early ACL Surgery (85) vs. Rehab (82)

## After 2 years:

Early ACL reconstruction group had a significantly better but not clinically relevant IKDC score (84.7 v 79.4)

## After 3 months:

IKDC score was significantly better for the rehab group.

## After 9 months:

IKDC score changed in favor of the early ACL reconstruction group.

## After 12 months:

Differences between the groups were smaller.

ACL surgery group had 4 re-ruptures & 3 ruptures of the other ACL.

Rehab group had 2 re-ruptures & 1 rupture of the other ACL.

41 (50%) of Rehab group elected for delayed surgery.

# MAIN TAKEAWAYS

Those who underwent surgical reconstruction alone, compared with rehab had improved perceptions of symptoms, knee function, and ability to participate in sports at the 2-year follow-up.

Although findings were statistically significant, clinical importance is unclear.

50% of the rehab group did not need surgical reconstruction and had similar outcomes.

Surgery isn't required for successful outcomes with ACL rupture, however, understanding which patients can be successful with conservative-only treatment is important.

# ACL SURGERY FOR ALL RUPTURES IS NOT COST-EFFECTIVE

[Click for Full Text \(Eggerding et al. 2021\)](#)

This study conducted a cost-utility analysis for 2 commonly used treatment strategies for patients after ACL rupture; early ACL surgery vs. rehab & optional reconstruction.



# KEY FINDINGS

WEEK 1: APRIL 2022

167 patients;  
85 early ACL reconstruction  
82 rehab group

## Quality of Life over 2 yr:

Both treatment groups  
experience a QoL between  
[0.72 and 0.84].

Surgery (total of 1.73 QALY).

Rehab (total of 1.69 QALY).

Early surgery had better QoL.

**Table 2** Average costs per patient per treatment arm in euros

	Early reconstruction (n=85)	Rehabilitation plus an optional reconstruction (n=82)
<i>Healthcare system</i>		
Hospital costs (SD)	4348 (1130)	2526 (1947)
<i>Extramural costs</i>		
Sports medicine	23	44
General practitioner	16	18
Occupational medicine	33	19
Physical therapist	1931	1650
Sum extramural	2003 (1166)	1731 (1386)
Medication	16	10
1. Total costs from healthcare system perspective (SD)	<b>6367 (1630)</b>	<b>4267 (3011)</b>
<i>Societal</i>		
Absence paid work (SD)	5636 (7549)	4448 (6987)
Presenteeism paid work (SD)	1480 (2931)	1262 (2624)
Unpaid work (SD)	1373 (2636)	1504 (3045)
2. Productivity costs total (SD)	<b>8489 (9659)</b>	<b>7214 (9137)</b>
3. Direct non-medical costs (travel costs)	<b>94</b>	<b>79</b>
Total costs from societal perspective (1+2+3)	<b>14 951 (10 004)</b>	<b>11 558 (10 579)</b>

# MAIN TAKEAWAYS

Patients after ACL rupture treated with an early ACL reconstruction experienced a slightly higher quality of life over the observed 24-month period compared with patients treated with rehabilitation and optional reconstruction.

The small difference in quality of life and substantial higher costs are unlikely to make early ACL reconstruction for all cost-effective.

Patients who fail non-operative treatment and undergo consequential ACL reconstruction have the lowest quality of life and highest costs.

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## MEMBERS

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We would greatly appreciate any feedback you have, as it helps us continually improve!

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