RESEARCH READER | Revised November 10, 2026

Rehabilitation After Lumbar Fusion

What one research review found, what it cannot tell you, and questions to take to your care team.

> **Rehabilitation may help some people after lumbar fusion.** This review does not identify a universally safe exercise, return date, or workout. Activity decisions stay with your treating team.

Start with the study

Cheng and colleagues combined 15 randomized studies involving lumbar-fusion rehabilitation. They report 1,026 participants: 528 receiving rehabilitation and 498 controls. Their search covered seven databases and studies published before March 2022.[1]

Participants had varied lumbar diagnoses, including degenerative conditions and spondylolisthesis. Procedures, recovery stages, program content and comparison care differed. The review did not provide a separate answer for every operation or level fused.

What was compared?

Exercise, CBT-related psychological support, and multimodal rehabilitation were compared with usual care or other rehabilitation. CBT means cognitive behavioral therapy; multimodal means combining approaches. Comparison care could itself include exercise or physiotherapy.[1]

What was measured?

Pain, pain-related fear and self-reported disability. Those outcomes do not directly measure fusion healing, readiness to lift, or whether a specific gym exercise is appropriate.

Reader summary: Michael Dilworth, NASM Certified Personal Trainer, Certified Nutrition Coach and Corrective Exercise Specialist; lived experience of two lumbar fusions. Fitness education and coaching do not replace medical care or clinical rehabilitation.

Original summary: September 23, 2026. This revised resource summarizes published research; it is not a new clinical study.

The five pooled comparisons

All five estimates below compare the named rehabilitation approach with its usual-care comparison. Negative values favor rehabilitation. The rows are **not head-to-head rankings** of exercise, CBT and combined care.[1]

Outcome / approach	SMD (95% CI)	I^2	Plain-language reading
Fear / CBT-related	-0.56 (-0.99 to -0.14)	79%	Lower average fear scores; considerable between-study variation.
Pain / exercise	-0.56 (-0.83 to -0.28)	42%	Lower average pain scores; individual responses remain uncertain.
Pain / multimodal	-0.26 (-0.51 to -0.01)	45%	A smaller average difference, with the interval close to no difference.
Disability / exercise	-0.63 (-1.27 to 0.01)	87%	No clear pooled difference: the confidence interval includes zero.
Disability / multimodal	-0.30 (-0.48 to -0.13)	0%	Lower average disability scores; low observed inconsistency in this comparison.

SMD: standardized mean difference, combining different measurement scales. It is not a percentage or a pain-score change out of ten. **CI:** confidence interval, expressing uncertainty. **I^2:** inconsistency across studies; 0% does not prove the programs or patients were identical.

How much confidence should you place in this?

The authors describe moderate confidence overall. They also flag limited samples, variable programs and follow-up, and statistical differences that may not be clinically meaningful.[1] That author assessment is not an independent guarantee of evidence quality.

> **Keep the limits visible.** This review did not establish comparative safety, complication rates, long-term benefit for every person, or prevention of further surgery. It did not test the My Last Fusion Program.

The source's exercise/disability paragraph contains inconsistent significance wording. This summary follows its confidence interval crossing zero and its discussion's cautious conclusion, rather than calling the result clearly significant.

Bring this page to your care team

A printed summary can support a conversation. Your surgeon or rehabilitation professional decides how general findings apply to your procedure and recovery.[5]

1. Which restrictions apply to me now?

Ask about the tasks you want to return to, not only whether you may exercise.

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2. What should guide a change in my activity?

Clarify which milestones, symptoms or follow-up findings your team uses.

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3. How should I respond to symptoms?

Ask when to stop, contact the team, or seek urgent care. Follow your own discharge instructions.

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4. What support fits my next step?

Ask whether that means clinical rehabilitation, independent activity, or fitness support within agreed boundaries.

Michael's coaching perspective

My coaching focus is to help you practice appropriate movement, build a repeatable routine and adjust progression to your response within your treating team's guidance. My experience of two lumbar fusions informs how I listen; it does not make my recovery a template for yours.

This is coaching interpretation, not a protocol tested by these studies. Breathing, movement control and a next-day symptom check are not proof that a fusion has healed. Coaching does not provide diagnosis, treatment, CBT therapy or exercise clearance.

Explore the My Last Fusion Program

Submit the program inquiry to request a complimentary **Your Path Forward Call**. Michael reaches out by email to arrange it. No purchase is required.

Prefer to start by reading? Get the free Spinal Fusion Guide. For the related discussion, read the strength-training article.

Read the findings in context

Broader review, 2022: Bogaert and colleagues included 18 trials with 1,402 unique patients undergoing lumbar fusion for degenerative conditions or adult isthmic spondylolisthesis. They rated short-term evidence low quality; combined care offered some advantages over exercise alone, with differences not maintained beyond one year. This context is based on the authors' accessible abstract.[2]

Earlier evidence, 2012: Rushton and colleagues found two trials with 188 participants and insufficient evidence for firm conclusions. The review totals overlap and must not be added together.[3]

A supervised trial, 2018: Kernc and colleagues studied a small, selected group aged 45-70 after single-level instrumented fusion. Previous lumbar fusion and scoliosis were excluded. Supervised training improved some physical measures; no hardware failure was observed in the training group. This does not establish safety after repeat or multilevel fusion, or a start date for readers.[4]

1. **Primary review.** Cheng H, Liu J, Shi L, Hei X. The Rehabilitation-Related Effects on the Fear, Pain, and Disability of Patients With Lumbar Fusion Surgery: A Systematic Review and Meta-Analysis. Neurospine. 2023;20(1):278-289. DOI: 10.14245/ns.2245056.528. Read the full review. PMID: 37016875; PMCID: PMC10080435.

2. Bogaert L, Thys T, Depreitere B, et al. Rehabilitation to improve outcomes of lumbar fusion surgery: a systematic review with meta-analysis. Eur Spine J. 2022;31(6):1525-1545. DOI: 10.1007/s00586-022-07158-2. Read the publisher abstract. PMID: 35258644. Full text was not available for this revision.

3. Rushton A, Eveleigh G, Petherick EJ, et al. Physiotherapy rehabilitation following lumbar spinal fusion: a systematic review and meta-analysis of randomised controlled trials. BMJ Open. 2012;2(4):e000829. DOI: 10.1136/bmjopen-2012-000829. Read the review. PMID: 22833649; PMCID: PMC4400578.

4. Kernc D, Strojnik V, Vengust R. Early initiation of a strength training based rehabilitation after lumbar spine fusion improves core muscle strength: a randomized controlled trial. J Orthop Surg Res. 2018;13:151. DOI: 10.1186/s13018-018-0853-7. Read the original trial. PMID: 29914580; PMCID: PMC6006840.

5. Royal National Orthopaedic Hospital. A Patient's Guide to Low Back Fusion Surgery. Therapies Department. Published March 2024; webpage updated July 9, 2025. Read the clinical patient guidance. Accessed November 10, 2026. Used for individualized activity guidance, not a universal recovery schedule.

Evidence review: November 10, 2026. Cheng's authors reported no conflicts and no specific funding. This summary contains original explanatory text, not reproduced study figures or a prescribed exercise plan.