Stem Cells — What the Research Shows

SCAN TO READ MORE

Stem cell therapy holds genuine promise for orthopaedic medicine, but the clinical evidence to date does not yet support routine use. A 2021 systematic review and meta-analysis of randomised controlled trials found no statistically significant improvement in pain or function for stem cell injections versus placebo in knee osteoarthritis. Understanding the current state of the science helps patients set realistic expectations and make informed decisions.

THE TECHNIQUE

01 The Science So Far
Mesenchymal stem cells (MSCs) can differentiate into cartilage in laboratory models.

02 Meta-Analysis Finding
2021 systematic review: no major improvement in pain vs placebo in clinical trials.

03 The Clinical Challenge
Reliably placing cells at the right joint location with durable effect remains unsolved.

04 Realistic Timeline
Meaningful clinical application to established arthritis: estimated 5–10+ years away.

AT A GLANCE

CELL SOURCE
Mesenchymal MSCs

META-ANALYSIS
No Major Benefit

STATUS
Research Phase

TIMELINE
5–10+ Years

> "The science is exciting —
> but the evidence must lead the way."
> — Dr Chien-Wen Liew

FREQUENTLY ASKED QUESTIONS

Q. What did the meta-analysis find?
A 2021 systematic review of randomised trials found stem cell injections showed no statistically significant improvement in pain or function compared to placebo for knee osteoarthritis.

Q. Can I access stem cell treatment for arthritis now?
Not as a proven standard treatment. Several commercial clinics offer injections, but robust evidence for clinical benefit is currently lacking. Exercise caution with unproven offerings.

Q. Should I wait for stem cell therapy before having surgery?
For significant pain and functional limitation, delaying proven treatment for speculative therapy is generally not advisable. Discuss your individual situation with Dr Liew.

ABOUT THE SURGEON
Dr Chien-Wen Liew exclusively performs total hip replacements via the direct anterior approach and total knee replacements via kinematic alignment only. He utilises patient-specific technology for both procedures, and practices from Orthopaedics 360 — within the Eastwood Private Hospital Precinct.

Dr Chien-Wen Liew

Hip and Knee Replacement Surgeon

Orthopaedics 360 · Eastwood Private Hospital, Adelaide SA

General educational purposes only. AHPRA Registered Specialist.