Is Robotic Surgery Better for Hip & Knee Replacement?

SCAN TO READ MORE

Robotic surgery is widely marketed as the future of joint replacement. But what does the clinical evidence actually show? This guide examines the research, explains where robotic systems genuinely add value, and explains what matters most when choosing a surgeon for hip or knee replacement in Adelaide.

THE TECHNIQUE

01 What it is

Robotic surgery uses a surgeon-controlled arm and 3D CT planning — the robot assists, it does not operate independently.

02 What evidence shows

In experienced hands, functional outcomes are equivalent to expert conventional technique at 5-year follow-up.

03 Where it helps

Robotic systems are most valuable for less experienced surgeons and complex anatomy cases.

04 What Dr Liew uses

Advanced CT templating, patient-specific instrumentation, and the direct anterior approach for hip replacement.

05 What matters most

Surgeon experience and volume, patient health, implant choice, and rehabilitation commitment.

AT A GLANCE

APPROACH
Evidence-based

HIP METHOD
Direct Anterior

PLANNING
Patient-Specific CT

FOCUS
Precision & Outcomes

> "The surgeon is the technology.
>
> Precision is the standard."
>
> — Dr Chien-Wen Liew

FREQUENTLY ASKED QUESTIONS

Q. Does robotic surgery mean better results for joint replacement?

Not necessarily in experienced hands. Multiple studies and registry data show equivalent outcomes between robotic and expert conventional surgery. Robotic systems are most beneficial for less experienced surgeons or complex anatomy.

Q. Why do some surgeons not use robotic surgery?

High-volume surgeons with refined technique can achieve consistent precision without robotic assistance. The evidence supports equivalent outcomes in experienced hands, making the technology less necessary for those surgeons.

Q. What technology does Dr Liew use for hip and knee replacement?

Dr Liew uses computer-assisted pre-operative planning, patient-specific CT templating, and precision surgical technique. For hip replacement, he uses the direct anterior approach — a muscle-sparing technique associated with earlier recovery.

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

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