What is My Implant Made Of?

SCAN TO WATCH VIDEO

Modern joint replacement implants are engineered from materials chosen for their strength, durability, biocompatibility, and resistance to wear. Advances in ceramic heads, highly cross-linked polyethylene, and titanium alloy stems have transformed implant longevity beyond what was achievable even a decade ago. Understanding what your implant is made of provides confidence in both the safety and the lifespan of your replacement.

THE TECHNIQUE

01 Hip Implant Components
Titanium stem, ceramic head, titanium cup shell, and XLPE liner.

02 Knee Implant Components
Cobalt Chrome femoral; titanium tibial; HKPE polyethylene bearing.

03 Why Metal-on-Metal Failed
High failure and ion release rates drove worldwide withdrawal by 2012.

04 Current Gold Standard
Ceramic-on-XLPE (hip) and CoCr-on-HKPE (knee): proven over 20+ years.

AT A GLANCE

HIP STEM	Titanium Alloy
HIP HEAD	Ceramic
KNEE	Cobalt Chrome
BEARING	XLPE / HKPE

> "The right materials mean a replacement that lasts."
> — Dr Chien-Wen Liew

FREQUENTLY ASKED QUESTIONS

Q. Is there any metal in my implant?
Yes — the femoral stem and tibial tray use titanium or cobalt chrome. Modern bearings avoid all metal-on-metal contact.

Q. Can I have an MRI with a joint replacement?
Yes. All implants used at Orthopaedics 360 are MRI-compatible. Always inform the radiographer of your implant at the time of the scan.

Q. What is highly cross-linked polyethylene?
XLPE is a radiation-treated polyethylene with dramatically improved wear resistance — producing up to 90% less debris than conventional polyethylene.

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

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