

Taking the ouch out of knee surgery

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Osteoarthritis that often develops in people after knee surgery will be a thing of the past if a young researcher at The University of Western Australia is successful.

Dr Jay Ebert - from UWA's School of Sport Science, Exercise and Health - has attracted the attention of one of the world's leading biotechnical companies for his investigations into the aftermath of [knee surgery](#) and prevention of osteoarthritis that costs billions of dollars annually.

As part of his PhD and ongoing post-doctoral research, Dr Ebert undertook the world's first [randomised controlled trial](#) to develop and evaluate recovery after the [medical profession's](#) 'gold-standard' knee

operation.

And biotechnical group Genzyme Corporation has published, co-badged and globally distributed his rehabilitation protocols after the breakthrough surgical treatment.

MACI - matrix-induced autologous chondrocyte implantation - regenerates cartilage. But there is still the risk that some patients may develop osteoarthritis afterwards.

"The overall health burden of knee cartilage injury and the pain and disability of osteoarthritis is immense," Dr Ebert said. "In 2007, more than 1.6 million Australians were suffering from it, and the nation spent \$2.3 billion directly on its treatment and more than \$7 billion on additional indirect costs.

"In my work, I see the loss of quality of life, and the life-changing pain and disability of osteoarthritis. It's disturbing that it is expected to affect more than three million Australians in the near future. I hope my research will contribute to significantly reducing this burden."

Dr Ebert's research has helped MACI progress from an open procedure to less invasive key-hole surgery which decreases the risk of complications. His work features in the *Video Journal of Orthopaedics*.

Dr Ebert is also investigating prosthetic total hip replacement design in optimal long-term patient [clinical outcomes](#); prosthetic stability and [bone growth](#); the development and improvement of gluteal tendon repair surgery for optimal long-term patient clinical outcomes; and biomechanics.

Provided by University of Western Australia

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