

# HIP REPLACEMENT IN THE YOUNGER PATIENT

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The demand for primary total hip replacement (THR) has steadily grown with the data from the Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR) confirming this trend. The number of hip replacements (primary partial, primary total and revision hip replacement) in 2011 was 39.2% higher than in 2003.<sup>1</sup>

Over the decades, THR has proved in the majority of instances to be a highly successful procedure. Many recipients attest to this fact. With an ageing population, the demand will only rise.

In the early days of joint replacement surgery, THR was offered mainly to elderly, so called, low demand patients. The younger patient with an arthritic hip, or perhaps osteonecrosis, was counselled to live with their symptoms until they were "old enough" or in some cases offered an arthrodesis, a procedure now seldom seen. However, there are younger patients, under 60 and some under 55 who have disabling disease of the hip joint with a desire and realistic expectations of returning to high functional levels with a THR.

Many conditions can predispose the patient to early onset hip disease. These include developmental dysplasia of the hip (DDH), a history of Perthe's disease, trauma and osteonecrosis. This is in addition to idiopathic osteoarthritis and rheumatoid disease. This group's expectations of life differ from previous generations, and continuing with an active lifestyle is very important to many in this demographic. THR in this age group has been shown to be a successful procedure with excellent quality of life outcomes.

The issue of patient age and THR is largely, but not solely, centred on the potential need for revision surgery in the ensuing years. An elderly low demand patient will likely be served for the rest of their life with a single primary THR. A young patient however (<55) potentially has many decades of life ahead and the issue of component wear becomes a serious consideration. We know that intra-articular particles generated from component wear can

set off a chain of biological responses, which in turn can lead to osteolysis. In some cases, the resultant osteolysis can lead to loosening of the prosthesis over time. In fact, according to the AOANJRR, in all age groups (primary diagnosis OA), the cumulative revision rate of primary total conventional hip replacement at 11 years is 7.2%.<sup>2</sup> The majority of these late revisions are for loosening/osteolysis. When looking specifically at younger patients under 55 at time of surgery (primary diagnosis OA), there is a cumulative revision rate of primary total conventional hip replacement at 11 years of 9.2%,<sup>3</sup> a slightly higher rate than the overall figure.

It is therefore clear that the younger the patient at the time of THR surgery the higher the cumulative revision rate. This is not to say that a younger patient with disabling osteoarthritis of the hip should not be considered for a THR but rather the patient needs to be counselled of the potential need for revision surgery in the future when considering their options.

Further, the younger patient poses the surgeon with another consideration being the choice of bearing surface. There has been a great deal of research and development with bearing surfaces and surgeons today have more than one option.

Other considerations include the patient's occupation. A younger patient with many years of work ahead of them may need to look at their work practices. Constant heavy manual labour is not the ideal scenario when trying to prolong the life of the prosthesis.

Younger patients may also want to continue some sporting activities and careful assessment of the patient's needs and expectations will need to be undertaken. For example, it would be unwise to attempt to continue playing a contact sport after a THR, however, social doubles tennis may be appropriate in consultation with the surgeon.

In summary, whilst younger patients present unique issues, with appropriate patient selection, preoperative assessment, and counselling, a successful outcome can be achieved.

*References available on request.*



WINTER 2013