



CLINICALLY RELEVANT QUESTIONS



Joint replacement surgery is an established treatment for the disabling pain, stiffness and functional limitation of severe arthritis. It is already highly successful with the huge majority of patients enjoying enormous pain relief and the ability to get back to what they want to do comfortably, at work and at play.

However, there is no doubt that full recovery takes time and that the process of the operation and early weeks of recovery are physically demanding. They can be emotionally stressful as well. A major advantage of elective joint replacement is that effective planning and preparation are entirely possible, prompting the question from patients:

What can I do to prepare for my Joint Replacement Surgery?

The answer is "Heaps!" and my own practice promotes a comprehensive approach to managing the pre-operative phase to prepare patients for their surgery and maximise their outcome as speedily as possible. In PreHab your patients will receive:

- Information - about the procedure and expectations for their recovery.
- Advice - about coming to hospital, medication and equipment necessary.
- Practical tuition - from specialist physios. who will instruct them in an exercise regime as well as the use of walking aids.





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Preparation! Preparation! Preparation!

The best results are obtained when patients fully understand their operation and in particular what they are required to do to ensure a good recovery. An important part of the process is a carefully managed program undertaken by physiotherapists who have a particular interest in joint replacement surgery. This starts **before** operation and is called **PreHab**.

In a 2007 U.S. study of patients undergoing Minimally Invasive Hip Arthroplasty, **"functional improvement, patient satisfaction and walking ability at the time of discharge were better in patients who had received an accelerated preoperative regimen regardless of the size of the incision"**. The study highlighted the importance of "family education, patient preconditioning, preemptive analgesia and rehabilitation..."¹



Multiple studies have correlated weakness of the quadriceps secondary to the pain of osteoarthritis with poor functional outcome after knee surgery.²³⁴ It stands to reason that **PreHab**, which aims to increase strength, **will improve outcome by allowing the patient to start from a higher base**. Studies have shown benefit from even 4-8 weeks of modest resistance training⁵ including Thera-bands and light walking. Others have recommended the **benefits of combining this approach with education**⁶ and have shown that **patient expectations were important independent predictors of improved functional outcomes and satisfaction**.⁷

PreHab improves patient outcomes by:

- ✓ Education about their operation
- ✓ Knowing what to expect
- ✓ Muscle strengthening
- ✓ Practice of their rehab. exercises
- ✓ Practice with crutches/frames

¹Pour AE, Parvisi J, Sharkey PF, Hozack WJ, Rothman RH. Minimally Invasive Hip Arthroplasty: What Role Does Patient Preconditioning Play? *J Bone Joint Surg Am.* 2007; 89: 1920-7

²Jones CA, Voaklander DC, Suarez-Almazar, ME. Determinants of Function after Total Knee Arthroplasty. *Physical Therapy.* Aug 2003; Vol 83: No.8, 696-706.

³Fortin PR et al. Timing of Total Joint Replacement Affects Clinical Outcomes Among patients with Osteoarthritis of the Hip or Knee. *Arthritis and Rheumatism.* Dec 2002; Vol 46, No.12, 3327-30.

⁴Zeni, JA, Snyder-Mackler L. Preoperative Predictors of Persistent Impairments During Stair Ascent and Descent After Total Knee Arthroplasty. *J Bone Joint Surg AM.* 2010; 92: 1130-6

⁵Swank AM, Topp RV, et al. Prehabilitation before Total Knee Arthroplasty Increases Strength and Function in Older Adults With Severe Osteoarthritis. *J Strength and Conditioning Research,* Feb 2011; V 25, No 2, 318-25.

⁶Coudeyre E et al. Could preoperative rehabilitation modify postoperative outcomes after total hip and knee arthroplasty? *Ann Readapt Med Phys,* Apr 2007; 50(3), 189-97.

⁷Mahomed NN, et al. The importance of patient expectations in predicting functional outcomes after total joint arthroplasty. *J Rheumatology,* 2002; Vol 29(6), 1273-79.