Waiting For a Hip or Knee Replacement? Here are Some Tips to Control Pain and Stay Active.

In some countries with universal or nationalized health care, a joint replacement is considered an *elective* procedure. That means the person chooses to have the operation but it's not an emergency procedure. So despite pain and loss of motion or function, that individual must wait in a *queue* (line) until the resources are available to them. This could take weeks to months. In the meantime, they are advised to stay active. What's the best way to do that? Should patients exercise on land or in a pool? Is one better than the other? That's what the researchers involved in this study wanted to find out.

Physiotherapists from *down under* (Australia) compared patients with hip or knee osteoarthritis exercising either on land or in a pool while waiting for surgery. The patients were *randomized* (randomly placed) into one group or the other. They were all found to be medically fit and able to exercise.

Both groups engaged in their respective exercise (land-based or pool-based) twice a week for six weeks. The sessions were supervised by a physiotherapist. Each exercise session cost $6.00 per patient. They were also asked to continue exercising at home at least three times a week for 30 minutes. Exercise could take any form: riding a bike, walking, or doing land-based exercises similar to what they did in class.

In addition to the exercise program, patients in both groups were given instruction (education) about their condition (advanced osteoarthritis). They were taught how to exercise safely. An occupational therapist visited their homes and helped them modify the environment for safety. Each patient kept a log or diary to show when, what, and how long they exercised at home throughout the follow-up period (15 weeks).

Results of exercise was measured using the *Western Ontario and McMaster Universities Osteoarthritis Index* (WOMAC), *Global Assessment of Change* (GAC), a timed walk test, and a Chair Stand Test. Mental health was assessed using the *Short Form-36* score. Pain intensity was recorded before each exercise class, immediately after class, and the next day.

The study was geared to look for differences between these two exercise forms when combined with education and home environment modifications. The data was analyzed to see if land-based exercise or pool-based exercise worked better for reducing pain and improving function. Did the patients tolerate one type of exercise easier than the other?

They found that either form of exercise had equal results. Land-based exercise was less expensive than trying to maintain pools designed for therapy with water warm enough for arthritic patients aren't always easy to find. Some patients were sore after exercise, but there were no other major complications in either group.

The pool-group reported less pain right after exercise and into the next day. That may be a major advantage of pool-based exercise since pain is the main reason patients with advanced osteoarthritis don't exercise. Most of the individuals in this study were obese, so pool-based exercise with its buoyancy may have been a benefit in reducing joint pain after exercise.

When they took a look at the participants daily diaries, they found a large percentage were *compliant* meaning they did exercise at home regularly. The home exercise sessions were usually 30 to 45 minutes long. The average person completed exercising at home three to four times a week during the initial six-week study period. This dropped off slightly to two to three times per week during the extended follow-up period. Reasons given for not exercising included not feeling well or not enough time due to other commitments.

The results of this study provided evidence that there are ways to manage arthritis pain for patients waiting to have joint replacement surgery. Understanding the disease condition, exercising, and modifying the home environment are three steps everyone can take to reduce pain and help patients facing a long wait for their joint replacement surgery. But the study results also show that anyone with arthritis pain can benefit from these three simple ways to improve quality of life.