



## HOW YOU CAN AFFECT THE OUTCOME OF YOUR KNEE REPLACEMENT OPERATION

### EXERCISE PHYSIO AND PRE CONDITIONING YOUR LEG

Having a total knee replacement is a big decision, a serious one, in some ways like buying a car, only that in this instance the new joint will be part of you. The new joint will replace the ends of your bone where the cartilage used to be. In this way it takes away the pain you have when you walk on your worn knee. However it doesn't replace the MUSCLES.

The function of the muscle is more up to you than up to me as your surgeon. Once I have put the new knee "surfaces" in and balanced the ligaments, the muscle work is up to you!

So some understanding of how IMPORTANT this is, is needed, and the best way is to understand this, and practise this BEFORE the operation, so you know why and what to do after--in that crucial time, where what you do can affect how good your new knee replacement can be!

Even though we teach you to bend your knee after the operation, the most important thing to practice is **straightening** your knee. You must not let your knee sit for too long in even a slightly bent position, in the first 6-8 weeks. This is because the muscles at the back of the knee have a way of recovering

their strength, and getting tighter and stronger, quicker than the big muscle at the front of your knee—the QUADRICEPS.

### KEEPING OR REGAINING THE ABILITY TO STRAIGHTEN YOUR LEG

To do this you will have an appointment with our physio before the operation to teach you the importance of the QUADS exercises and the most important ones to master.

Static quads exercises are practiced the most as these encourage the build up of strength with the knee and muscle in the straight or extended position.

This is also the position we want you to rest your knee in, in the first few weeks—until the muscles have healed.

That is, even if you are sitting in a chair, you should not hold your knee in a fixed bent position for too long. You should continuously straighten the knee, or place it on a stool to rest it

The Quadriceps or the "QUADS" is the single most important muscle you use to walk, as far as the knee is concerned!

The cut of the operation goes right over and through it, so it normally feels some pain after the operation and so takes longer to catch up to normal, strength and function.

**If you don't get the QUADS working your knee will have problems fully straightening, and this will make walking harder and your muscle will fatigue and get sore earlier, after a walk, and you will appear to have a limp.**

A few people can cope with some fixed knee bend, (in fact before operation most patients struggle with a bent arthritic knee for a while before making the decision to have a knee replacement) but the best function and the knees that feel the most like a natural knee are the ones that can fully straighten.

This is hard to achieve with any extra operations or physio once the stiffness sets in---- so from day one---**straighten straighten STRAIGHTEN!**

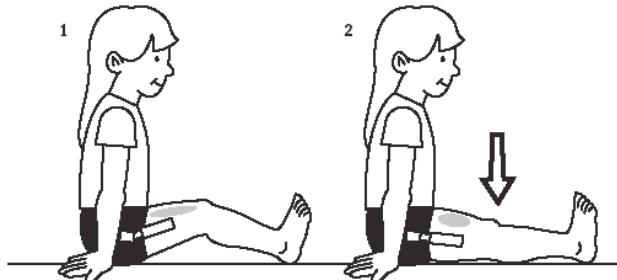
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in a straight position.

Making the muscle go hard, or contracting it every now and then, even when not doing "formal" exercises should be the rule.

When resting in bed, in hospital, DO NOT have anything under your knee to make it sit in a bent position, if anything you should have a rolled towel or **pillow under your ankle**, encouraging a space under your knee to allow it to straighten with gravity. This may ache at the beginning, because many of you will have muscles that were used to being a bit bent at the back due to your arthritis, but the few days of ache will be worth it when you can walk naturally without pain!



## QUADS QUADS QUADS

So by now you will have got the idea that we need you to work hard on your quads, and knee straightening in the first two months, but especially in the first few weeks.

Bending exercises are also important, and we will show these to you.

You will also have a machine the first few days in hospital, which helps to bend your knee.

## KNEELING

Kneeling is not necessarily made easier by this operation, and the scar can be sensitive.

However we will show you some early manoeuvres to get your knee used to pressure on the front over the scar.

Some of these are like the “cat posture” used in yoga., and may help you to train your skin to be accepting of pressure on the front of your knee again.

The area over the outer, or lateral side of your knee will normally be numb for many months after the operation, after some time only a strip of numbness will accompany the scar.

**DRIVING.** You can drive when you can place full weight on your leg comfortably. This may take two to three weeks.

## SKIN CARE BEFORE AND AFTER

Before the operation, you will be asked to purchase chlorhexidine skin wash. At home for two days before the operation you should shower and lather up your leg, knee area, groin creases, feet, arm pits and generally all over with this wash. Avoid getting it in your eyes.

It is useful in helping to reduce the Staph bug that we all carry on our skins.

We will shave the operative knee of hair on

your admission. This is done in the ward. However if you normally shave or wax, you can do this two days before surgery, or alternately, use a hair removal cream like NAIR or equivalent if you prefer to do it yourself at home.

Please keep in mind, any scratches, rashes or wounds over the knee or near the knee may cause delay in your operation date, until healed.



## PREVENT INFECTION

All the above helps your body's immune system to prevent post surgical infection.

Keeping well., eating healthily, attention to hygiene, will all help.

Keeping medical conditions well treated such as diabetes, and kidney and bladder function, will also help.

Any future procedures, which have a risk of infection, or operations in an infected part of your body, such as operations on bowel, bladder, drainage of abscess, or dental work, should have antibiotic cover---discuss with



me, your orthopaedic surgeon, or your doctor, before the procedure. If in doubt, better to have a dose of antibiotic that will cover the bacteria in the body part you are having operated, and something to cover Staph.

Broad guidelines in other specialties may not be in sync with current orthopaedic concerns about infection.

The early exercise that we subject you to after your operation is the single most effective thing in reducing your risk of developing a clot in your deep veins, so move move move! Even between knee exercise sessions, moving your ankle up and down, creates a pump that improves flow in your veins. Clexane injections, stockings, sequential leg pumps, and aspirin and sometimes warfarin are used to reduce the risk. All patients without a previous history of a clot, will have Clexane injections, and on leaving hospital, aspirin for 6 months.



It is important that you let us know about your past medical problems, and operations you have had.

## OSTEOPOROSIS

Osteoporosis is more common the older you get, and more so in women, once they reach, and enter menopause.

Osteoporosis can over a long term affect the way your Knee replacement sits on the bone, and can affect the risk of fractures occurring around the time of the operation. If you have risk factors for osteoporosis, then a bone densitometry scan will be performed pre operatively, and treatment discussed. Treatment can be started at the same



## MEDICAL BACK GROUND

It is important that you let us know about your past medical problems, and operations you have had.

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Sometimes this “history” can affect the outcome of a new operation, or change the way you recover.

Any heart or lung problems, kidney or liver problems are obviously important, but also conditions which can effect healing such as Diabetes, vasculitis and inflammatory conditions.

## DENTAL CHECK UPS

The human mouth is filled with bacteria. Every time you brush your teeth, your body is used to your own brand of bacteria, whisking through your blood stream, only to be filtered out again by your spleen.

However if you are sick and have a collection of pus in your tooth, or have a procedure on your mouth such as drilling, the exposure to bacteria may be different, also in the first 6 months after the Knee operation, extra fluid may be sitting in the knee joint. This collection can be attractive to bacteria, so if in doubt, when you visit your dentist, ask for a dose of protective or prophylactic antibiotics. These should be broad enough to cover the bugs in the mouth--- 3grams of Amoxil in one go is sufficient.

Some article argue that the risk of infection of your Knee replacement is low in these circumstances, however an infected Knee replacement can be very hard to treat, so prevention is key.