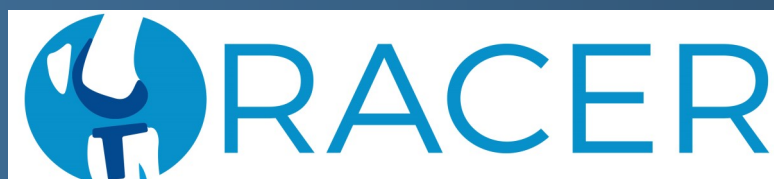




REHABILITATION BOOKLET

YOUR GUIDE TO RECOVERY AFTER YOUR KNEE REPLACEMENT

Participant Trial Number



INTRODUCTION

This booklet provides information to help you recover after your knee replacement when you get home.

You can share the information in this booklet with your family and friends so that they can support you once you have been discharged home.

Your recovery may take a number of months.

The exercises and advice in this booklet are aimed to get your recovery on the right path during the first 6 weeks after your operation.

We recommend that you continue these exercises for as long as you feel they are beneficial, preferably for at least the first 3 months after your operation.



The only change to that is if your physiotherapists or surgeons tell you to do something different.

Regular exercise for your knee and your whole body is good for your recovery and your overall health.

Keeping active is great!

HOME RECOVERY AND EXERCISES

Before you are discharged from hospital, your physiotherapist will tell you what exercises you need to do at home from the next pages.

They will tick and mark which ones are important. It is essential that you continue these throughout the day, aiming for 4 times a day if you can. Your pain relief medications should allow you to do the exercises if they become too painful or uncomfortable. Cease exercising if the pain becomes extreme and notify the hospital team.

You should aim to start at a 'fairly light' level where you feel you can have a conversation during the exercises. As you get stronger over the weeks, you should aim to exercise a little harder to a more 'strenuous' level where you can feel a little out of breath or a bit sweaty at the end of the session.

Please continue to do your rehabilitation after the initial 6 weeks. You will find some of the exercises are particularly challenging at first. As the knee pain settles, you will find the exercises will become easier, so please progress them as you feel able.

The exercises have been divided into STARTER EXERCISES which you can start as soon as you leave hospital, and PROGRESSOR EXERCISES, which you can start once the STARTER EXERCISES feel like they are getting too easy.

We have supplied you with a resistance band if you need it. If you do not have one or have lost it, you can contact the therapy department at your treating hospital.

Please use the diary at the back of this booklet to help record how often you do your exercises. This can be a helpful reminder about your progress and what you are doing over the first 6 weeks after your operation.

Good luck with your recovery!

1A—STARTER EXERCISE—THIGH SQUEEZES

Tick here if prescribed



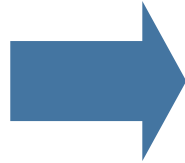
Lying down or slightly reclined with a rolled-up blanket under your knee so that it rests in a bent position.

Lift your foot off the bed whilst keeping your thigh on the blanket; straighten your knee as fully as possible.

Hold for 5 seconds. Repeat 10 times.

1B—STARTER EXERCISE—STRAIGHT LEG RAISE

Tick here if prescribed



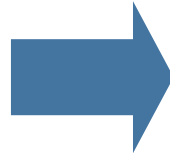
Lie down or slightly reclined.
Lock your knee straight.

Lift your whole leg 10cm/4
inches off the bed. Aim to
keep your leg straight.

Hold for 5 seconds. Repeat 10 times.

1C—PROGRESSOR EXERCISE—STRAIGHT LEG RAISE (with weights or an exercise band)

Tick here if prescribed



To make the exercise more challenging you can use a 1kg weight around your ankle.

Lift your whole leg 10cm/4 inches off the bed. Aim to keep your leg straight. Hold for 5 seconds Repeat 10 times.

Hold for 5 seconds. Repeat 10 times.

If you have ankle weights, these are ideal for this exercise, but alternatively you can use the exercise band attached to the foot of a bed/couch to achieve the same effect.

1D—STARTER EXERCISE: CALF STRETCHES

Tick here if prescribed

Lying down or slightly reclined with a rolled-up blanket under your ankle so that the back of your knee is off the bed; straighten your knee as fully as possible.



Hold the stretch for 5 seconds. Repeat 10

1E—PROGRESSOR EXERCISE: CALF STRETCHES (with sheet or towel)

Tick here if prescribed

To increase the stretch on the calf, wrap a rolled up sheet or large towel around your foot, holding the two ends in your hands. Pull the two ends so your foot is pulled towards your head.

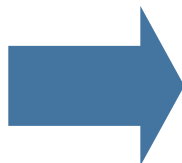


Hold stretch for 5 seconds. Repeat 10 times.

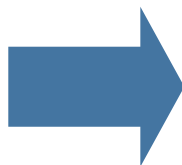
2A—STARTER EXERCISE: KNEE BENDING IN SITTING

Tick here if prescribed

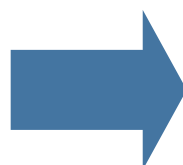
Sit on a chair with your feet on the floor.



Bend your knee as much as possible.



Use your other leg to push your knee back a little further as in the photograph.



Repeat 10 times.

2B—PROGRESSOR EXERCISE: KNEE BENDING IN SITTING (with exercise band)

Tick here if prescribed



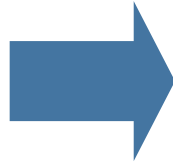
To make the exercise more challenging, an exercise band can be securely attached in front of you, for example to the leg of a table and around the ankle of the leg you are training .

Bend your knee against the resistance by sliding the foot backwards on the floor. In a controlled manner, return to the starting position.

Repeat 10 times.

2C—STARTER EXERCISE: SEATED LUNGE (Flexion)

Tick here if prescribed



Slide your bottom forwards on the chair.

Sitting, bend your operated leg back as far as you can. Keep your foot flat on the floor and do not allow it to move forwards.

Repeat 10 times.

2D—STARTER EXERCISE: KNEE STRAIGHTENING IN SITTING

Tick here if prescribed



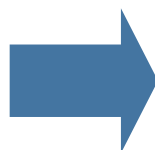
Sit up straight on a sturdy chair, so that your feet are supported on the floor.

Bend your ankle and straighten your knee using your front thigh muscles. In a controlled manner, return to the starting position.

Repeat 10 times.

2E—PROGRESSOR EXERCISE: KNEE STRAIGHTENING (with resistance bands)

Tick here if prescribed



As in exercise 2D, sit up straight on a sturdy chair, so that your feet are supported on the floor. This can be done against the exercise band or with a 1 kg weight around your ankle.

Bend your ankle and straighten your knee using your front thigh muscles. In a controlled manner, return to the starting position.

Repeat 10 times.

3A– STARTER EXERCISE—MINI-SQUATS

Tick here if prescribed



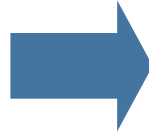
In standing, hold onto a stable surface.

Slowly bend your knees. Keep your heels on the floor. Slowly return to standing by straightening your knees.

Repeat 10 times.

3B— STARTER EXERCISE—BALANCE

Tick here if prescribed



Standing at a kitchen work surface or study chair.

Stand on your un-operated leg only, hovering your hands over the support. See how long you can balance on one leg. Aim for 30 seconds. Try the same thing with your operated leg.

3C– PROGRESSOR EXERCISE—BALANCE (with closed eyes tapping the support)

Tick here if prescribed



To make this harder, try with your eyes closed or try to tap the support in front of you to tap out a count of 10.

3D– PROGRESSOR EXERCISE— 3B or 3C while balancing on pillow/cushion

Tick here if prescribed



To progress this further, see if you can do these balancing activities standing on a cushion or pillow. Just make sure that the surfaces aren't slippery under the pillow, so you stay safe.

WALKING

It is important that you continue walking when you have left hospital. Over time, you will feel more confident and strong. Gradually increase the distance with which you walk. Your body is the best judge on when you feel able to do this. Once you feel confident and safe, you can stop using your walking aids.



If swelling worsens or your knee gets sorer and more painful, do a little less next time and gradually build up your distance and speed.

You may want to ask a family member or friend to accompany you in the early stages.

You may require assistance and this may also help your confidence as you get stronger.

Is swelling, bruising and numbness normal after the operation?

It is normal for the knee to be swollen up to 3 months after the operation, and some mild swelling may persist for 6 months. If your swelling increases and causes pain which is not relieved by taking pain relief medicines and rest, please ring any of the telephone numbers provided within this leaflet for advice or speak to your GP.

Bruising may appear down the leg and may take up to 4 to 6 weeks to disappear. The knee scar may also feel numb after the operation. Whilst this may persist and is often permanent, this does not cause any problems with the knee and is usually considered a normal experience after surgery.

It is unlikely that you will have any of the following problems but it is important to look out for the following and contact your hospital team if you have any concerns:

- Increase in pain in the calf of your operated leg
- Increased redness or swelling around the wound area
- Increase in wound leakage/discharge
- Bleeding from the wound (except some mild bleeding in the first few days).

When can I have a bath?

You need to keep your wound dry to reduce the risk of infection. You can shower as the wound is protected by a waterproof dressing. However, due to wet floors and the risk of falling, it may be dangerous to shower whilst you are using crutches or sticks, so a strip wash may be the safest option. The waterproof dressing is not strong enough to keep your wound dry in a bath, so, you should only take a bath once the wound has healed and you can safely get into and out of the bath.

COMMON QUESTIONS ON EXPECTATIONS AND ACTIVITIES

Wait until your muscles are stronger before getting into and out of the bath. Take all usual safety precautions (for instance, use a non-slip mat in the bath / shower.) You may like to have someone present in the house during your first attempt to make sure you are safe and can get in and out of the bath. Similarly, you shouldn't swim until the wound has fully healed.

How long should I expect the knee to be painful for?

Pain is a common problem after knee replacement. It is not unusual for knee pain to continue for 3 to 6 months after a knee replacement. Over time, the pain will reduce. Continuing with your exercises will help.

What should I eat and drink to help my recovery?

A good diet and hydration will help you to recover faster and also prevents constipation and other problems after surgery. Ensure you eat and drink well after your operation:

- Increase your daily intake of fibre. High fibre foods include vegetables, fruit, and cereals.
- Drink plenty of water.
- Take in an Iron-rich diet (this may include red meat, spinach, kale, white beans, lentils, sardines, shellfish).
- Reducing your alcohol consumption and ceasing smoking will also help your knee recovery. If you want to stop smoking, ask for information about the Smoking Cessation Nurse or talk to your General Practitioner or Practice Nurse.

COMMON QUESTIONS ON EXPECTATIONS AND ACTIVITIES

When can I restart normal household tasks?

You may need help with common household tasks at first, particularly ones which require squatting, kneeling and bending your knee.

Lifting heavy/hot objects may also be difficult and potentially hazardous. Kneeling is often difficult as the scar can be sensitive on the front of your knee for a number of months.

As your knee gets stronger and less stiff, household activities in and around the home will become easier.

Within 4 to 6 weeks of the operation, you can practice lighter or easier tasks first and gradually build up to more strenuous activities.

When can I go back to driving?

You should not return to driving until you are no longer taking strong pain killers (anything more than paracetamol or anti-inflammatory drugs such as ibuprofen) and you are able to think clearly.

You need to ensure you are able to safely control a car, and perform an emergency stop safely.

Return to driving is dependent on whether you have an automatic car and which knee you have had replaced. If it is your left knee that has been replaced and you have access to an automatic car you are safe to drive once you feel that the effects of the painkillers have worn off and you are able to think clearly and be fully in control of the vehicle.

If you have a manual car or it is your right knee that has been replaced then you need to have recovered sufficiently to be able to press the peddle quickly enough in an emergency. Until you can do this you should not turn the engine on.

COMMON QUESTIONS ON EXPECTATIONS AND ACTIVITIES

You will need to tell your insurance company that you have had an operation. Please ask your orthopaedic team member for further clarification on when you can re-start driving when you attend your follow-up appointments in the hospital.

When can I return to work?

When to return to work will depend on your recovery and the type of work you do. We usually recommend not returning to work any earlier than 6 weeks after your operation if you have a non-manual job. If you have a manual job, this may be longer.

Discuss returning to work with your surgeon or physiotherapist as they may be able to provide advice on estimated timescale and on how to help this with your recovery.

If you have further questions please contact:

Name:

Phone number:

Email:

Or contact the trial office at: racer@warwick.ac.uk

Racer Exercise Diary

Exercises – START DATE: ___/___/___	Week 1							Week 2							Week 3						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
Number of days in the week from 1st day you leave hospital:																					
1A - Thigh Squeezes																					
1B - Straight leg raise																					
1C - Straight leg raise (with bands or 1 Kg weight)																					
1D - Calf Stretches																					
1E – Calf Stretches (with sheet or towel)																					
2A - Knee bending in sitting																					
2B – Knee bending in sitting (with resistance bands)																					
2C - Seated lunge (flexion)																					
2D - Knee straightening in sitting																					
2E - Knee straightening in sitting (with resistance bands)																					
3A - Mini Squats																					
3B - Balance exercises (one leg stance)																					
3C - Balance exercises (one leg stance, progressing to tapping support surface 10 times)																					
4 - Walking exercises (weight-transference, carrying objects, slalom, different speeds)																					
5 - Other physical activities recommended																					

Racer Exercise Diary

Exercises – START DATE: ____/____/____ Number of days in the week from 1st day you leave hospital:	Week 4							Week 5							Week 6						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7
1A - Thigh Squeezes																					
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5 - Other physical activities recommended																					

Thank you for taking part in the RACER study!

Good luck with your recovery!





Racer@warwick.ac.uk