

Your New Knee Recovery Guide

Helping you recover from Total
Knee Replacement surgery



GCKG

GOLD COAST KNEE GROUP

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WELCOME TO THE NEW KNEE GUIDE.

This guide is born out of over 60 years of combined clinical experience, working closely with surgeons, evaluating 100's of patients in our research and treating patients daily following Total Knee Replacement.

This combination of expert clinical care with a strong foundation in research gives us the tools to facilitate your recovery from Total Knee Replacement.

This program is certainly not about:

- Pushing you to bend your knee, giving you more pain.
- Giving you a laundry list of exercises that take half the day to complete.
- Trying to fight the natural recovery process after such a major surgery.
- Getting you to come into the clinic for multiple sessions a week.... let's keep it simple!

With a wealth of experience and knowledge behind us, we have developed a path to recovery that serves you. It looks like this:

- Providing simple and relevant information, so you have clear expectations and go into the operation prepared physically and mentally.
- Targeted strategies to improve your knee movement with less pain.
- A selection of a few specific exercises to facilitate your recovery.
- Recovery benchmarks based on hundreds of others, so you know you are on track.
- Respecting the healing knee to guide and encourage your recovery.
- Appointments to keep you on track and give you confidence in your knee.
- Advice and guidance to get you back to the activities you enjoy when the time is right.

It is about providing you with absolute confidence before and following the operation that you do everything you need to do to complete your recovery.

Let's get started!

THE NEW KNEE RECOVERY SYSTEM



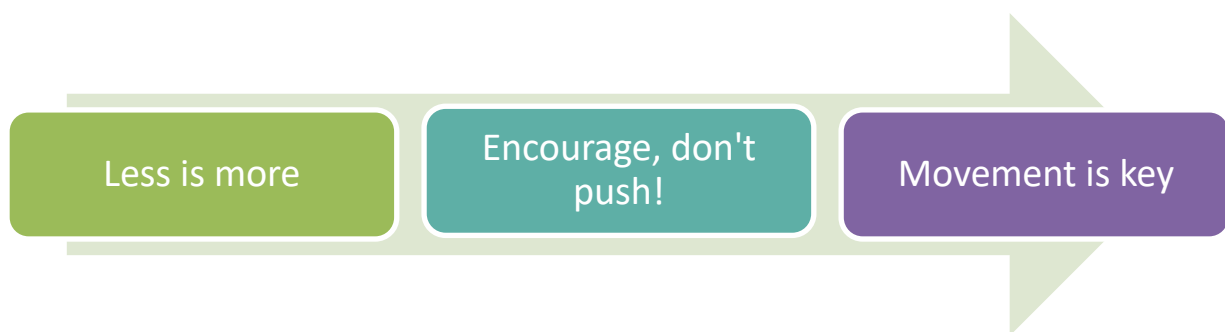
REHABILITATION EXERCISES

This section contains all you need to know about your rehab exercises. We believe that exercises after Total Knee Replacement are often done poorly and prescribed with little consideration of the person and the significance of the surgery.

We are responsible for providing you with a targeted set of exercises based on your needs and background information to understand why you are doing them.

Exercise Principles

Our exercise prescription is guided by our 3 Foundational Principles, which set us apart from other rehabilitation programs.



1. Less is more

It is common for physios and post-op exercise programs to give a list of 8-10 exercises after surgery to get someone stronger and increase movement. You may have even seen this in the guide provided to you by the hospital. But we find this leads to increased pain, stiffness, and poor function.

In fact, to check this, we completed a research project looking at precisely this. Patients either received a 'standard' exercise program of 8-10 exercises or 3 specifically selected to help straighten the knee, improve bending, and promote walking. We thought the minimalist program would be just as good as the standard program, but it was **better!** People reported **less pain and improved function and walking ability** by doing **LESS!**

So don't be fooled by the simplicity of our exercise programs. It is about how you do them and what you are feeling. This is where expert guidance makes all the difference.

2. Encourage, don't push.

Patients still worry about seeing the physio as they think they will hurt them! That is not what we are about. Gone are the days of aggressively pushing into more bending or straightening. Stiffness is highly correlated to swelling. Hence, this approach creates more pain, swelling and inflammation, which drives stiffness and makes an unhappy patient.

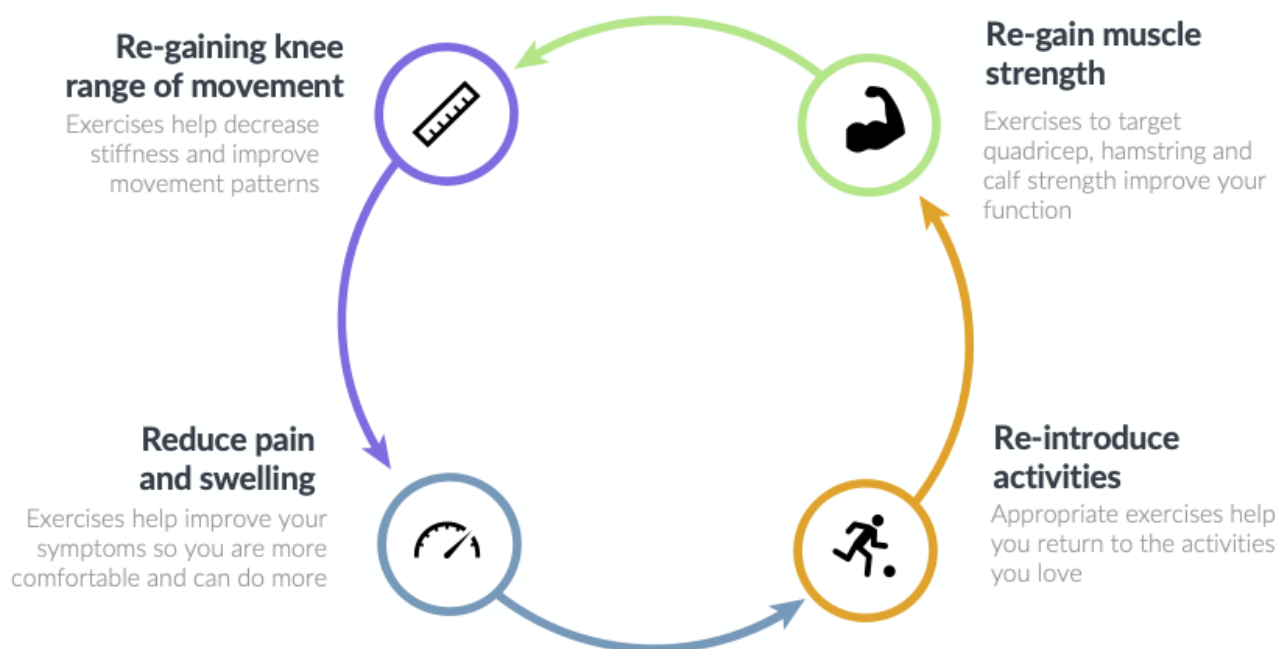
Improving your range of motion and returning to the activities you love is about **respecting the joint** and doing the right exercises. Hence, you feel less pain, not more.

3. Movement is the key

The body and the mind love movement. So, even though we say less is more, that doesn't mean less activity. The patients that do the best are the ones who can regain independence in their daily activities and hobbies but have a clear understanding of their abilities and recovery.

Purpose Of Exercises

Exercises provided to you after surgery have 4 primary purposes: The four R's:



Pain During Exercises

You should expect the exercises provided to create awareness and minor movement discomfort. You should feel OK with this, it is normal. It's major surgery, and some pain sensations are associated with your recovery.

As physiotherapists, we can only provide you with a guide on the number of repetitions and frequency of exercises. Your ability to complete the exercises depends on many factors, such as medication use, daily activities, sleep quality and pain tolerance. This could vary daily.

As a result, we encourage you to modify your exercise dosage (amount, intensity, and frequency) based on how your knee feels daily. Consistency is vital, so tracking your exercise completion on the tracking sheet provided is always essential.

Traffic Light System



Red light: Reduce (dosage/intensity) if -

1. An increase in symptoms that stops you from completing the exercises as prescribed
2. Symptoms that persist for more than 1 hr after sessions

Amber light: Continue if –

1. You feel some pain or discomfort, but you can complete the exercises as prescribed
2. No increase in symptoms that persists for greater than an hour after exercising

Greenlight: Increase if –

1. Exercises feel too easy
2. Experience minimal pain whilst completing
3. Feels like you are not improving. Increase the amount or intensity as guided by your physio and instructions

Your Exercises

There are no exercises in this guide for you to perform. Individual variability makes it almost impossible to make blanket recommendations on what exercises to perform. Each patient has slightly different needs, goals and tolerance. One exercise may be perfect for one patient but be detrimental for the next.

As a result, in consultation with your physio, you will be provided with an exercise program to suit your current needs based on your circumstances and considering the information provided above.

THE PREPARE PHASE

This phase aims to fully prepare you to go into the operation. This means you are mentally and physically ready for what is to come. You have also prepared your home, sourced equipment, and put support systems in place to help you manage after the operation.



Prepare Your Mind

Having a good understanding of the operation and clear expectations for the recovery makes a big difference in ensuring you have a good experience and start your recovery with confidence.

What Does The Surgery Involve?

You will receive information from your surgeon about the operation. There are several different techniques, components, and anesthetic processes that you can discuss with your treating team.

Some helpful questions you may want to ask your doctor are:

- What happens during the surgery?
- How long will the operation take?
- What type of anesthesia will be used (regional, general or combination)?
- What are the risks during and after surgery? How can I prevent them?
- How much will I improve?
- How long will the surgical wound take to heal?
- How long will I stay in the hospital?

Pain After The Operation

Strong pain is expected after your operation. This is normal. Pain can be caused by structures cut for the incision, cuts to insert the prosthesis and the stretching or compression of soft tissues (muscles, tendons, ligaments, and nerves) surrounding the knee.

Initially, in the first 24 hours, you may not experience much pain due to the anesthesia used during the operation. Pain then typically increases in the following days. You can expect consistent, well-managed pain that improves from one week to the next, particularly over the first 6 weeks of your recovery.

During your hospital stay, it is essential to achieve a level of pain that is manageable. It is highly recommended that you stay on top of your pain medication when offered, especially before your physiotherapy session.

Many patients are worried about "being a pill popper" after discharge from the hospital. However, an appropriate pain medication management plan is essential to recovery and regaining mobility. In the Recovery Phase, we provide further details on pain management following the operation. For additional information, refer to resources provided by your surgeon. Don't hesitate to have your medications reviewed if you feel that you have excessive pain or are experiencing side effects.

Should You Go To Inpatient Rehab?

The evidence now fully supports people returning to their own environment. When people discharge home, they report better outcomes and function than those like them who go to rehab. It is only in particular circumstances that we would recommend inpatient rehab. We will discuss this with you if this is relevant.

Discharge From Hospital

Most patients spend 2-3 nights in the hospital. A set of goals are pre-determined by your surgeon and physiotherapist to ensure a safe discharge. Examples include:

1. Medically stable and pain controlled
2. Knee range of motion: 90 degrees
3. Able to mobilise ~50m with selected gait aid independently
4. Safely negotiate stairs with your aid independently

Physiotherapy in Hospital

While in hospital, a physio will visit you to start your rehabilitation. In most cases, you will stand or walk on the day of your surgery. This is progressed daily with a focus on achieving your discharge goals by targeting these 4 factors:



Positive Attitude

“What we think about the state of our body determines the state of our body”. How we view our recovery significantly affects how we respond to surgery. Keeping a positive attitude will facilitate your recovery. Being informed and knowing that post-operative pain and reduced function is only temporary allows you to stay consistent with your rehab and take active steps in your recovery.

Recovery Expectations

Milestones

It may be tempting to compare your progress to others after the operation; however, recovery time and resumption of daily activities can vary significantly between people. It is generally accepted that it will take approximately 12 months to be close to full function and achieve a silent knee (you no longer think about your knee).

While everyone is on their own journey, the below serves a guide to what to expect in the months following the surgery:

Milestone	Estimated time frame
Walk post-surgery	Day of Surgery
Safely navigate stairs with aids	1-2 days
Discharge from hospital	2-3 days
Bending to 90 degrees	2-7 days
Commence domestic duties	2 weeks
Hydrotherapy	2-3 weeks
Return to sedentary work	3 weeks
Upper body exercise	3 weeks
Stop using walking aids	2-4 weeks
Straight knee	3-6 weeks
Swimming	4-6 weeks
Driving	6 weeks
Independent stair walking	8 weeks
Return to manual work	8-12 weeks
Prolonged walking	8-12 weeks
Outdoor cycling	3 months
Travel	3 months
Bowls	3 months
Golf	4-6 months
Resistance training	6 months
Surfing	6 months
Regain a sense of normality	12 months

Prepare The Body

A Total Knee Replacement is a significant stressor to the body. Consider the following key factors to prepare you physically for the operation, anesthetic and post-operative recovery. We will discuss these areas with you to develop interventions specific to your needs.



Becoming familiar with your post-operative exercises before surgery is also very helpful. Practice the activities provided to you daily leading up to the operation.

Prepare The Home

Apply simple strategies to prepare your home environment for your return home.

Six Tips To Prepare Your Home

1. Minimise fall and trip hazards – Pick up loose rugs, mats, and cables
2. Clear walkways - For you to walk through with crutches / other gait aids
3. Easy access - Ensure toiletries, towels, toilet paper and frequently worn clothes (such as socks and underwear) are within reach
4. Put clean sheets on the bed
5. Prepare meals and freeze them in single-serving containers
6. Arrange to have someone collect your mail and take care of the pets

Support Network

It can be challenging to manage all your activities of daily living by yourself. Ensure you have extra hands around to assist with cooking, cleaning, and general mobility. This is particularly important in the first 2 weeks. Many people do go home alone after Total Knee Replacement, especially if they have someone who can visit to assist them.

Pre-organise Aids and Equipment

At discharge from surgery, several aids are recommended. These are:

1. Walking aid (a specific aid will be advised)
2. Bathroom aids
3. Iceman machine
4. Exercise pedals

Optional

1. Long handled reacher
2. Leg lifter
3. Shoehorn

Equipment Hire

To find out more about where and how to hire/purchase various mobility aids and the iceman machine, scan the QR code!

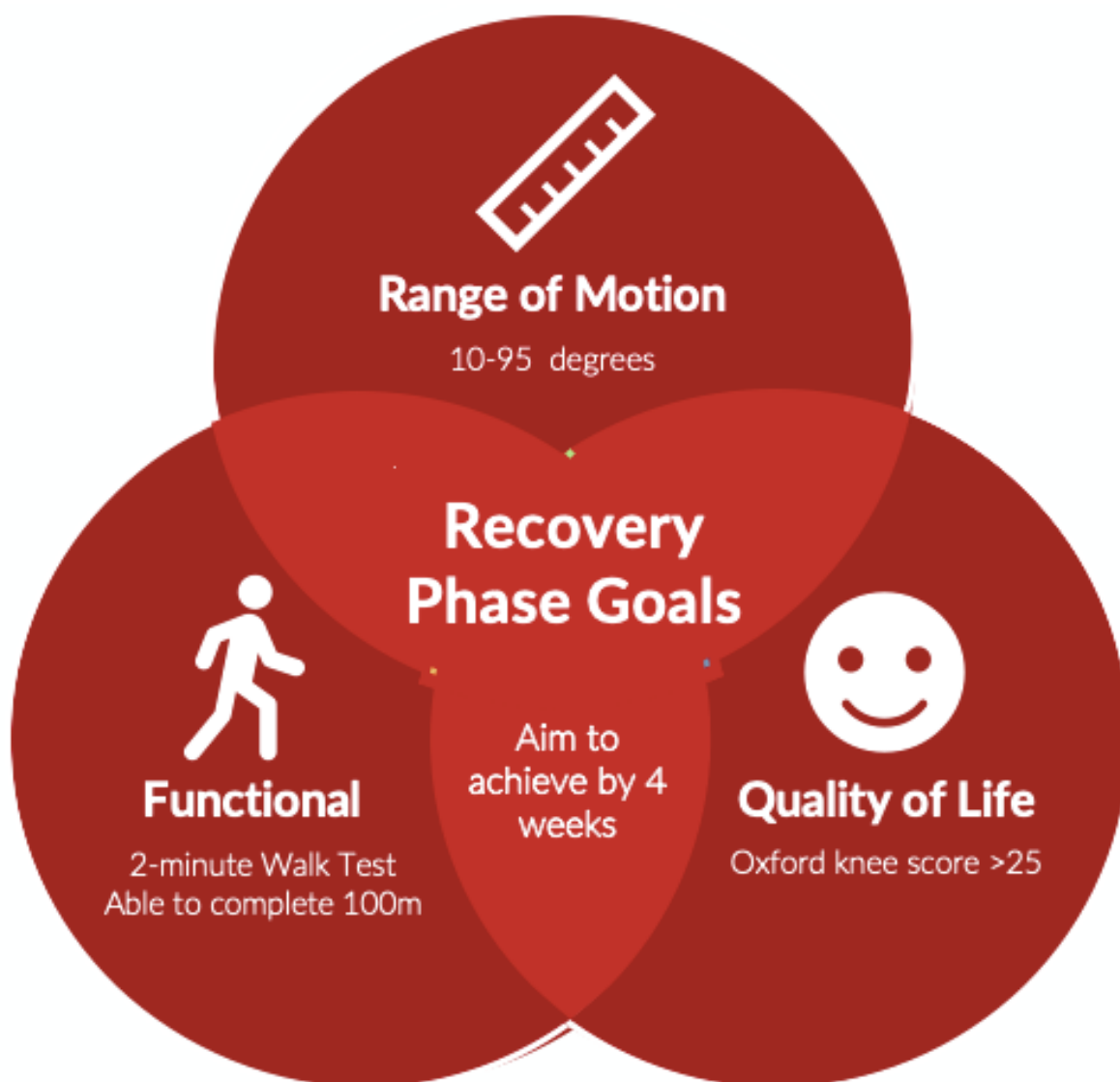


Tasks to complete before surgery

- Set up home
- Arrange frozen meals
- Arrange help after surgery
- Pack hospital bag
- Complete all surgeon paper work
- Hire iceman
- Have pedals

THE RECOVERY PHASE

The aim of this phase is for you to feel confident in your new knee. You understand that pain and stiffness are expected, and you have sound knowledge of managing it, getting yourself moving and regaining independence at home. You also know how to self-monitor for complications and recognise when things are not progressing.



Medications

As physiotherapists, it is not within our scope to provide you with detailed advice on medications. Please always speak with your surgeon and nursing team if you have concerns regarding your medication.

Generally, the following principles apply:

1. Use regular pain medication and/or anti-inflammatories for a consistent dose and use stronger pain medications for breakthrough pain as recommended by your doctor.
2. Most people can expect to take some medication for the first 6-12 weeks.
3. Time your medication appropriately to maximise relief around activities.
4. Appropriate medication to facilitate improved sleep is crucial for healing and recovery post-surgery.

Numbness

Patients commonly report numbness or hypersensitivity on the front of the knee or shin following the operation. This is normal and results from cutting, compressing or stretching small nerves around the knee during the operation. This is nothing to be concerned about. It will recover with time.

The skin can become very sensitive to touch in a small portion of people. This can be reduced with a desensitisation program. If you feel this, please report it to us, and we can discuss it with you. It may also be more comfortable to wear loose-fitting clothing to avoid irritation.

Managing Pain & Swelling

Pain and swelling are good indicators of how well the knee is recovering post-surgery.

Your new joint will be pretty swollen for several weeks following the operation. You should expect some swelling for 3-6 months.

Appropriate management of the pain and swelling can make a big difference to your recovery. Excessive swelling can cause:

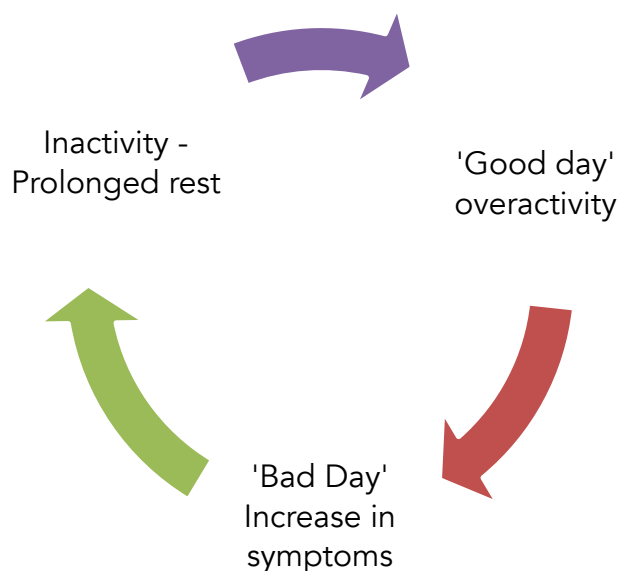
1. Decreased function
2. Limited range of motion
3. Inability to complete exercises
4. Wound problems

5 **KEY** ways to manage your pain and swelling:



Activity Pacing

Your recovery journey will consist of 'good' and 'bad' days – this is entirely normal. However, you may feel tempted to do more on your good days to make up for the bad days by doubling your walking distance or getting all your household chores done in one day. This may result in the “Over Activity Cycle”.



Find the middle road and avoid overdoing or underdoing physical activity. Break your activities into smaller portions. Build your tolerance gradually over weeks/months to ensure a smooth recovery journey. Some benefits of pacing yourself:

1. Continue doing pleasurable activities rather than cutting back
2. Avoiding extreme symptom flare-ups
3. Increasing long-term productivity
4. Gradually increase physical activity tolerance – increase strength/fitness
5. Improve mood

Managing Daily Activities

A lot of daily activities you perform without thinking twice may be challenging following surgery. Here is a guide on how to navigate said tasks!

Walking

Do's:

- Walk within moderation
- Use your symptoms as a guide to how much you can tolerate
- Use your aid to facilitate a normal walking pattern

Don't:

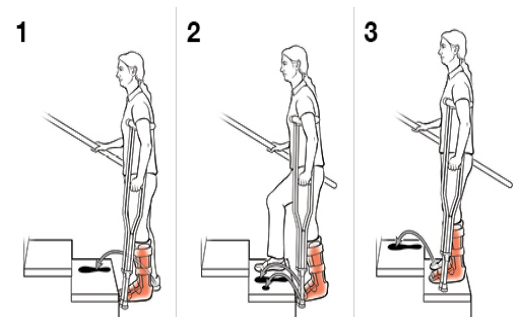
- Continue to push through extreme pain
- Ignore symptoms (pain/swelling) as a guide to your tolerance

Stairs

It is essential you feel confident with stairs regardless of your home setup. The physio should have practised stairs with you before discharge.

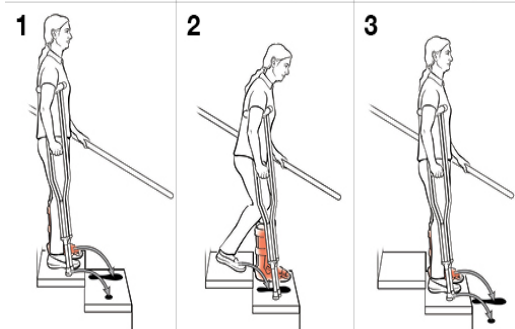
When going upstairs:

1. Stand with both feet close to the bottom step
2. Hold the rail and walking aid firmly
3. Step up on your 'good' leg first (non-operated)
4. Then step up with your 'bad' leg (operated); your walking aid comes up with your 'bad' leg



When going downstairs:

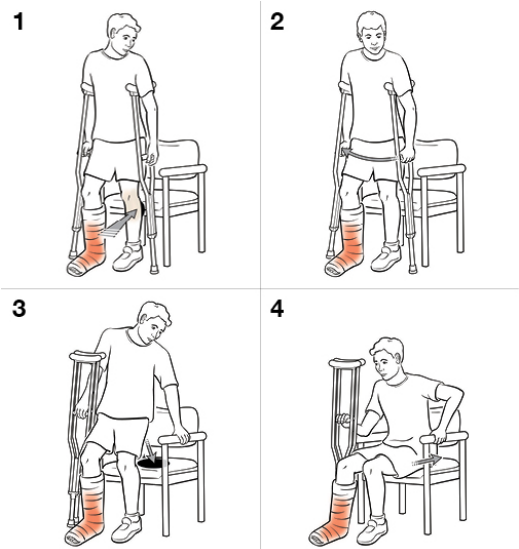
1. Stand with both feet close to the edge of the step
2. Hold the rail and walking aid firmly
3. Step with your aid and operated 'bad' leg down first
4. Then step your 'good' leg (non-operated) down under control



Sitting

Sit in firm chairs with arms, not a swivel or rocking chair. Soft and low chairs can be challenging to get out of without help. When getting up from a chair:

1. Move to the front of the chair
2. Place your operated leg flat on the ground wherever comfortable
3. Place your unoperated leg firmly on the floor to push you up
4. Use arm rests + crutches to push up



Getting in/out of a car

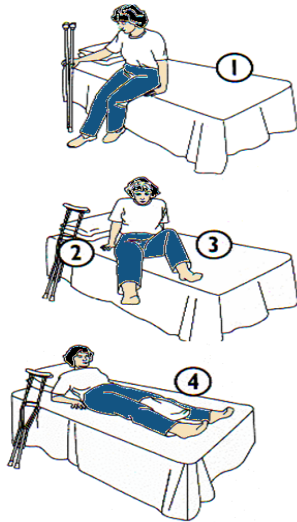
Cars are often relatively low or confined and hard to get into. A plastic bag on the seat may assist with swinging legs into the car. A firm cushion can be used to raise the seat height.

To get in and out of the car:

1. Ensure the front passenger seat is slid back to provide enough space
2. Holding the door frame, sit down on the seat facing away from the car
3. Slide the bottom backward in the direction of the driver's seat
4. Leaning back, swivel legs into the car



For personal safety and insurance purposes, it is essential to gain medical clearance before returning to driving.



Getting in and out of bed

It would be best if you tried to get in and out of bed by yourself as much as possible. Some people may need a towel to lift their operated leg into the bed. To get in and out of bed:

1. Sit down on the bed bottom first
2. Slide bottom back into the bed
3. Pivot and lift legs carefully onto the bed
4. Reverse the procedure to get out of bed

Getting dressed

You may require the help of another person. Here are a few tips to help make getting dressed easier:

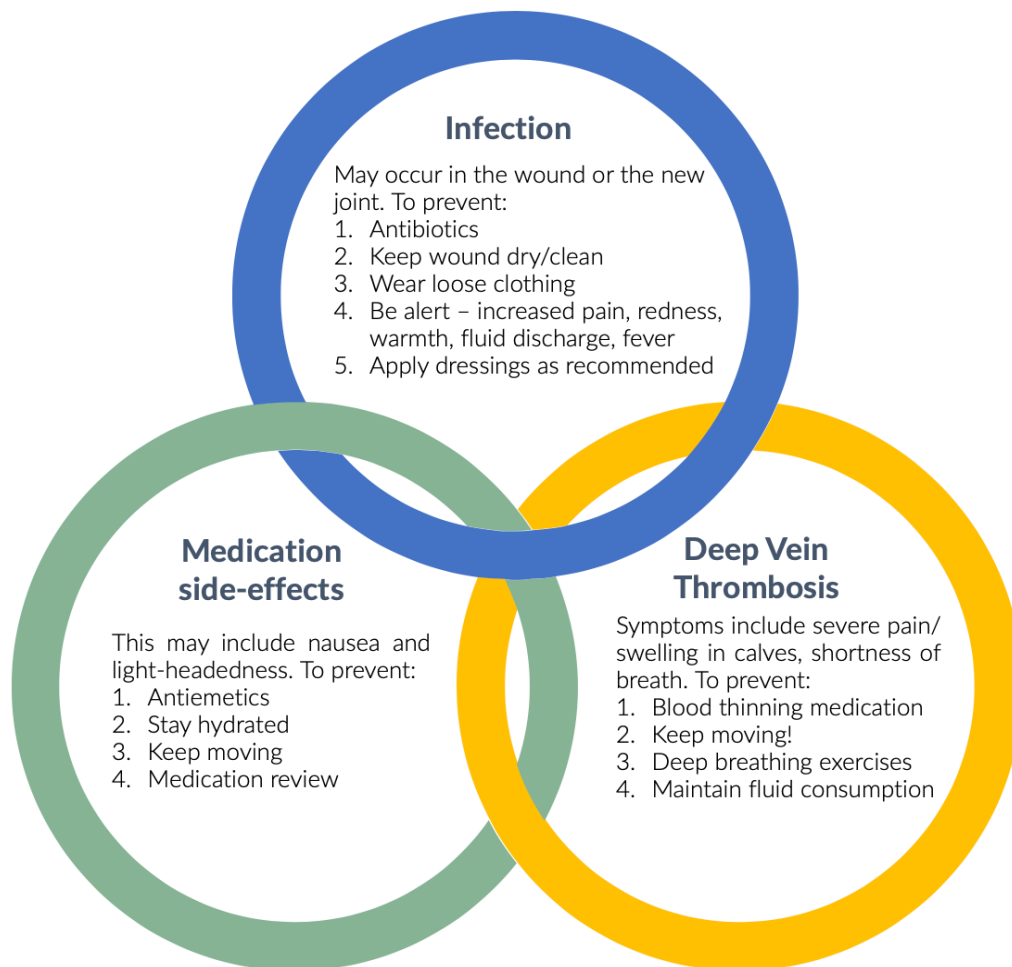
1. Always put your operated leg into clothing first
2. Use of sock aid and shoehorn
3. Perform whilst sitting down

Showering and toileting

Patients may require equipment such as an over-toilet frame and shower chair to ensure safety during the recovery period. Patients should store toiletries up high to prevent the need for bending.

Potential Complications

Joint replacement surgery is highly successful in restoring mobility and function. As with any major surgical procedure, patients are at risk of certain complications. These include:



Wound Care

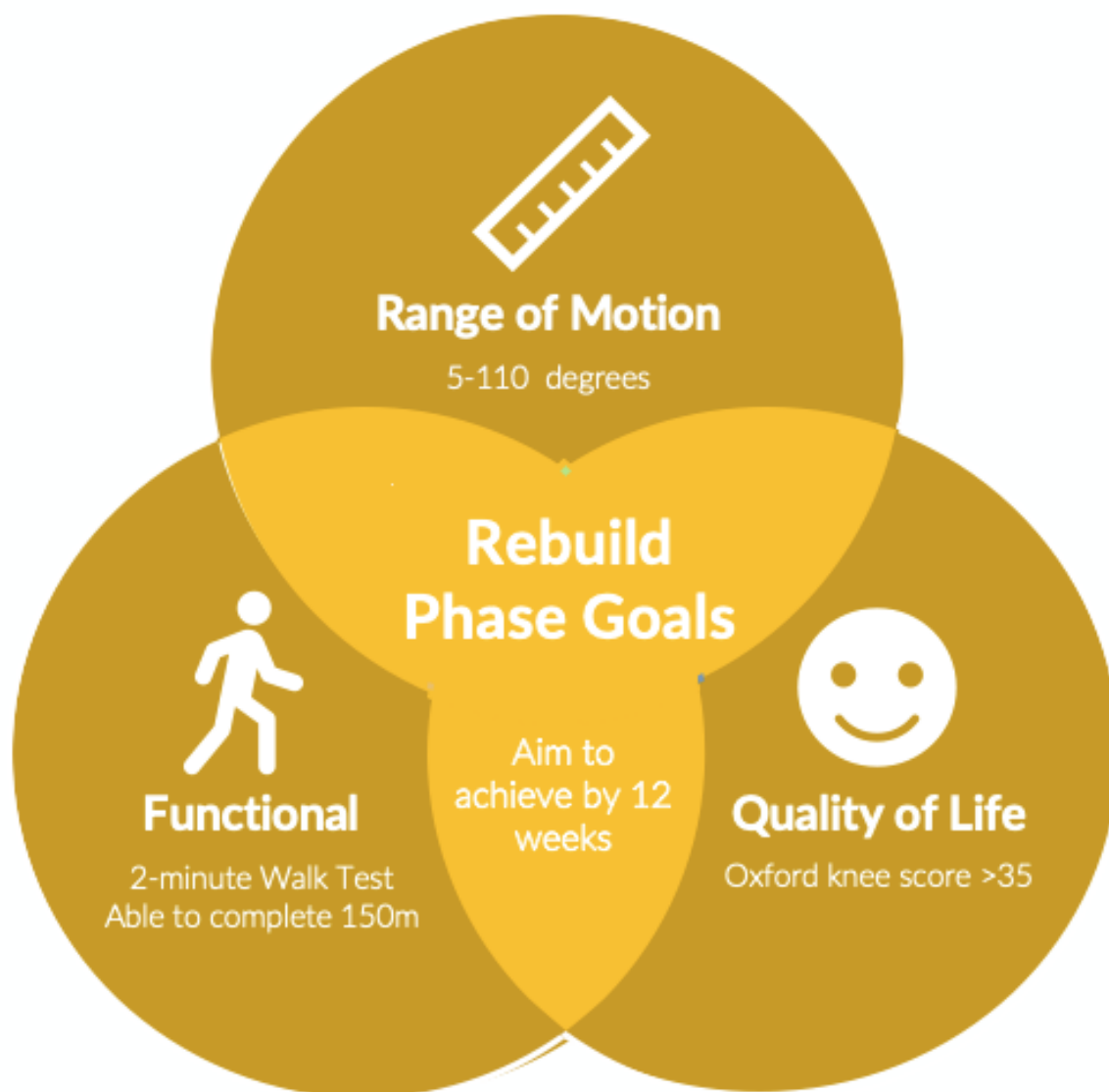
A well-healed wound is more aesthetically pleasing and allows a faster return to function. Keep the wound dry for a minimum of 2 weeks, and until it has been checked by your surgeon or nurse. Perform regular self-examinations for signs of infection as listed above. If you enter the water and there is any scab remaining, cover it with a waterproof dressing. If the wound is consistently moist, give it some air.

If you have any concerns regarding the wound, contact your surgeon immediately. It is better to be safe than delay getting it checked. Taking a photo of the wound and emailing it to your surgeon is an easy way to get it checked.

Once the wound is fully healed, creams and scar dressings can assist with the scar appearance. These include vitamin E cream, Strataderm cream or silicon dressings.

THE REBUILD PHASE

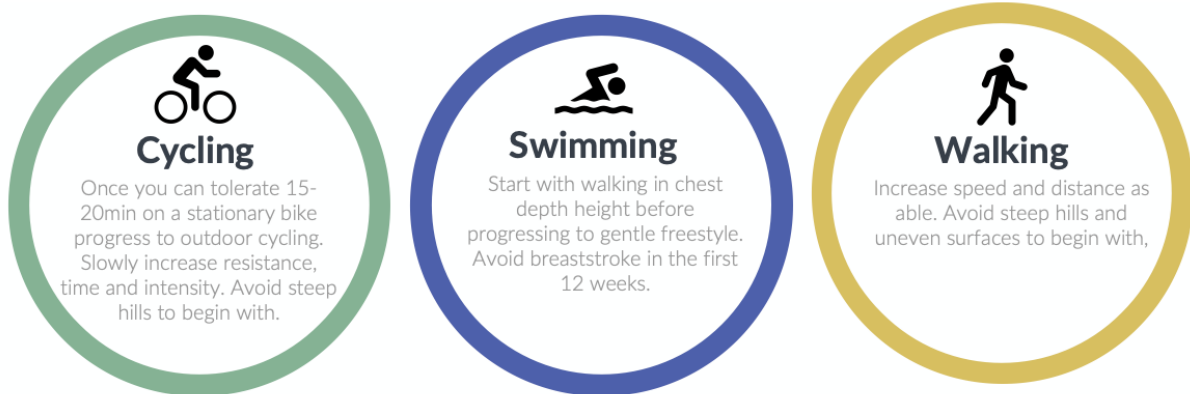
This phase aims to further rebuild your muscle strength and mobility to ensure a smooth return to activity. We will also introduce specific strategies/exercises to reduce knee stiffness for those with limited knee range of motion.



Rebuilding Physical Activity

As you recover, you should gradually introduce more significant levels of physical activity and more knee-strenuous recreational and leisure activities. Always remember to talk to your surgeon or physiotherapist about your individual circumstances.

Cycling, walking, and swimming are 3 key activities that assist in building lower-limb strength, regaining range of motion, and improving cardiovascular health. We will prescribe a physical activity plan based on your goals and function to ensure you do the right amount for yourself.



Kneeling

Kneeling is a standard part of living. For example, we need to kneel to get into low cupboards, pick up things on the floor, play with grandkids, and garden. Kneeling after a knee replacement is often quite uncomfortable. This can be due to the following:

- numbness at the front of the knee
- incision discomfort
- lack of knee flexion (bending)
- swelling
- nerve pain and irritation

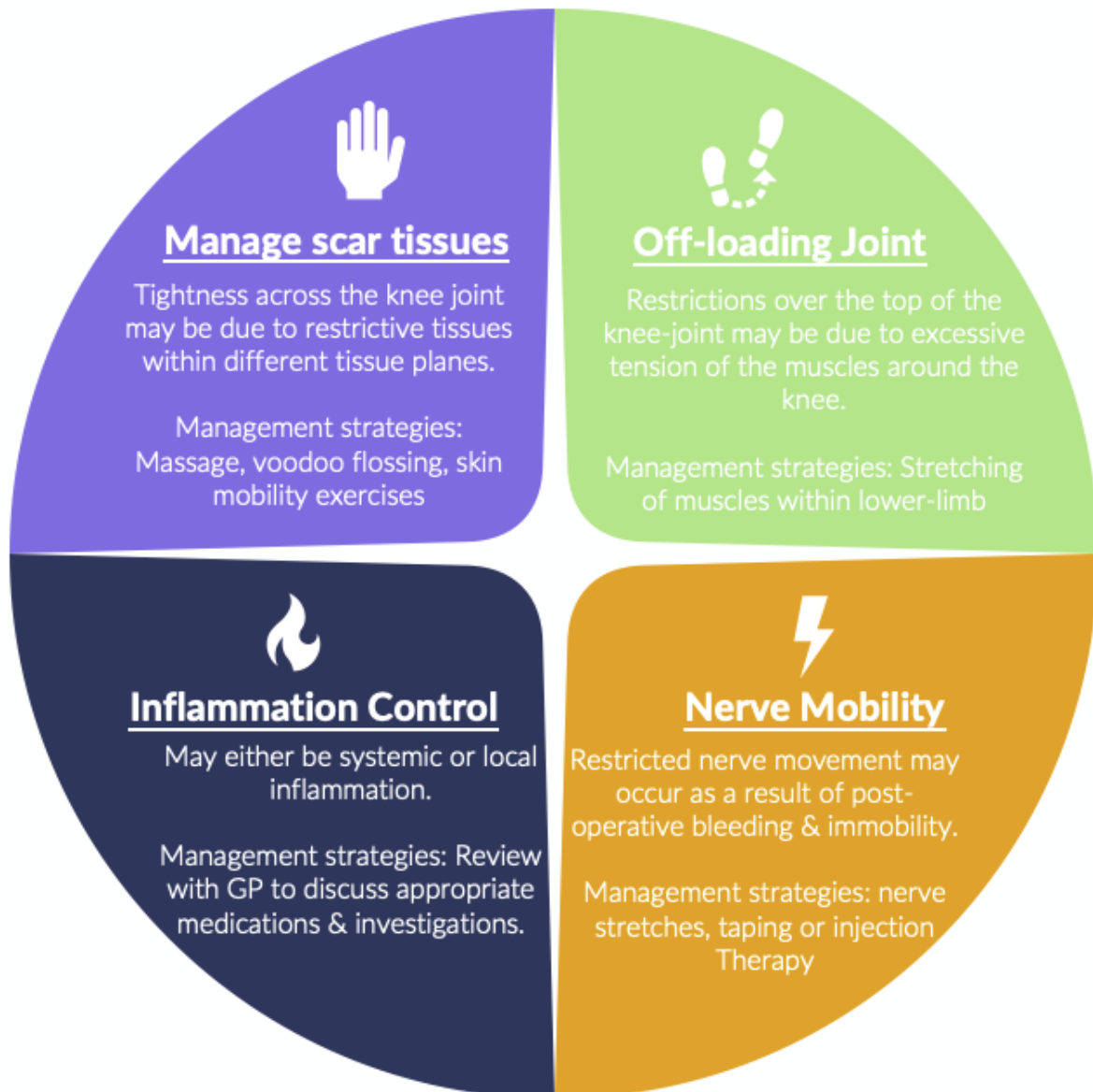
Kneeling is absolutely possible and safe. To start, when you kneel, you want to put pressure on the bottom of your knee near the shin bone, not kneel on the kneecap. Then you can work on a kneeling program to help desensitise and train your knee to kneel. The goal is to slowly increase the time you kneel and change the surfaces from soft to hard.

If you are having issues with kneeling, let us know, and we can talk you through a program if you are deemed suitable.

Troubleshooting Stiffness

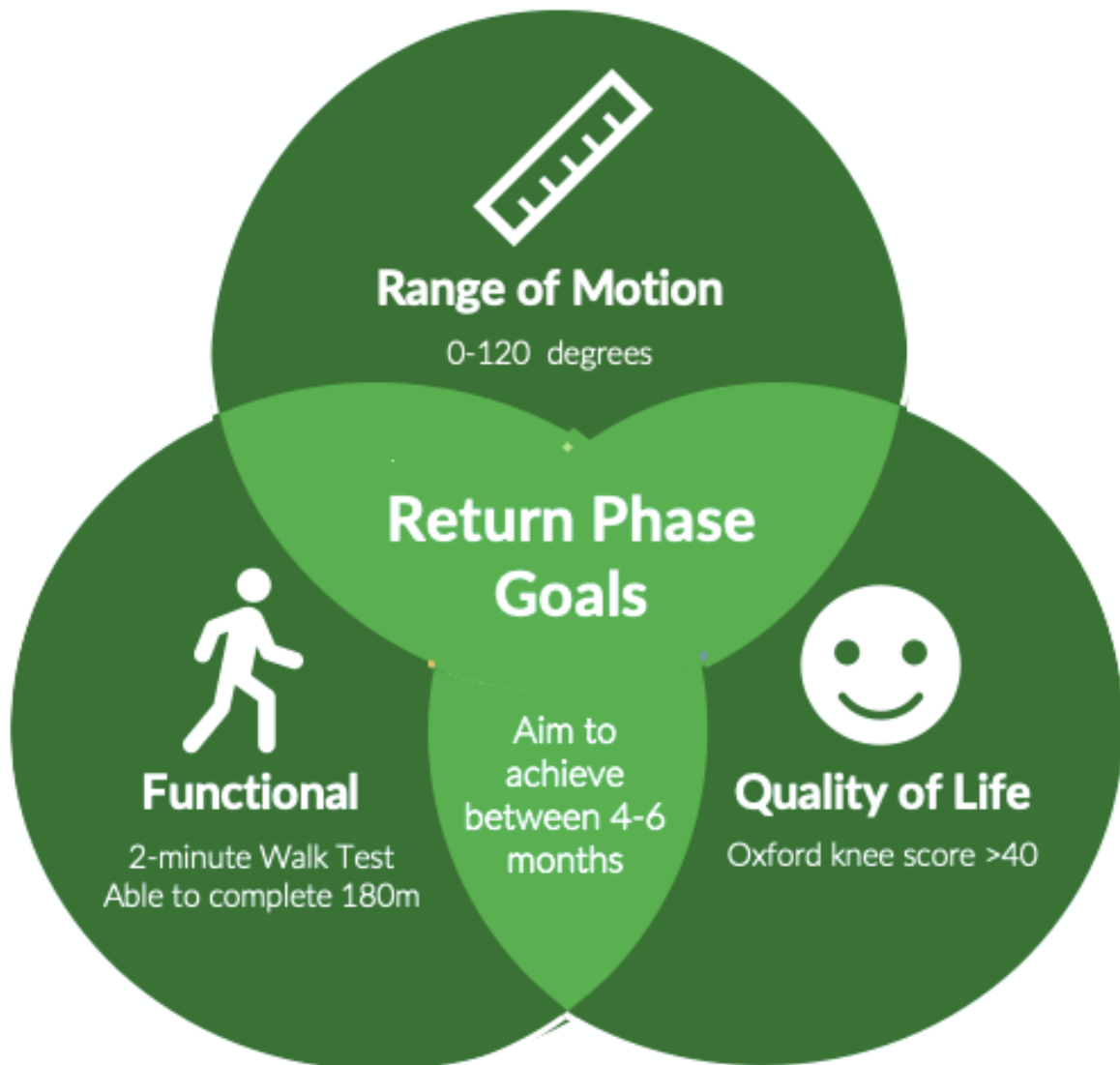
Prolonged stiffness after knee replacement can be a significant problem and worry for patients. It is normal to expect a limitation in the range of motion. Still, if we deem it is behind schedule, the following strategies may assist.

It is advised to **not** complete the following activities unless instructed to:



RETURN PHASE

This phase aims to guide you on which activities are recommended and which should be avoided to protect your 'new' knee long-term.



Returning To Activities

It is important to plan your return to the activities you love. Examples of suitable progressions are listed below. It is always important to monitor symptoms following the activity and the next day and develop a plan in consultation with an exercise professional. The time to return to these activities will vary based on the individual.

Golf:

1. Putting/chipping
2. Driving range (short to long clubs)
3. 9-holes (first with cart)
4. 18-holes (first with cart)

Lawn-bowls

1. Use of aid to assist with release/pick-up of bowl
2. Reduced innings with longer breaks in between
3. Gradually add innings/ends

Hiking

1. Tolerating desired distance on flat ground
2. Introduce small hills and short stairs
3. Introduce uneven ground (such as beach walking)
4. Gradually progress length and intensity

Surfing

1. Practice takeoff on land
2. Short session longboard with a small swell
3. Increase the length of the session or intensity of waves
4. Transition to the desired board

Road cycling

1. Gradually build flat ground distance
2. Add small amounts of elevation
3. Increase elevation or distance as tolerated

Resistance training

1. Commence machine-based loading (e.g. leg press)
2. Start with high reps, slow tempo and less load (15-20reps / set)
3. Gradually increase the load and reduce reps (8-12 / set)
4. Transition to weight-bearing exercises (e.g., squat and deadlift)

Tennis

1. Start practising strokes with minimal movement
2. Start with doubles tennis, limiting the number of sets played
3. Try and move your feet rather than twisting, initially limiting deep lunges
4. Progress to singles if reasonable control and experience

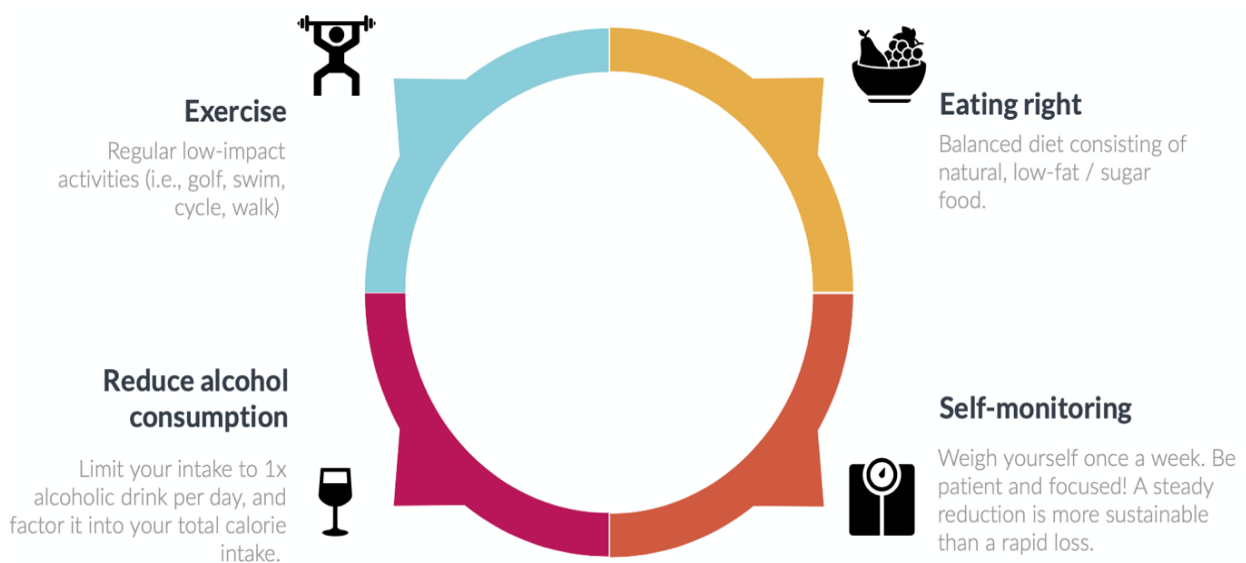
Long-Term Knee Replacement Health

Current research has suggested that your 'new' knee will last for 15-20 years. However, many factors contribute to the longevity of your 'new knee'. This includes:

1. Body weight
2. Physical activity choice

Body weight

Increased pressure on your knees due to excessive body weight will cause your artificial joint to wear out sooner. Consult an exercise professional and dietician for assistance. Here are 4 simple methods to manage your weight:



Activity Recommendations After Joint Replacement

The table below provides a guide on recommended activities to protect your 'new knee'. But as a general rule of thumb: Avoid high-impact activities!

Allowed	Allowed with Experience	No Consensus	Not Recommended
Road cycling	Aerobics	Squash/racquetball	Jogging
Golf	Yoga	Tennis (Singles)	Basketball
Surfing	Ice skating	Weight machine	Football
Speed walking	Skiing	Hockey	Soccer
Hiking	Tennis (doubles)	Weightlifting	Volleyball
Kayaking	Horseback riding	Baseball	
Dancing	Rowing	Gymnastics	
Pickleball		Rock climbing	
Bowling			
Lawn bowls			

RESOURCES

Want to learn more about what you can do to make your recovery journey as smooth as possible?



Scan the QR code for more information!

1. YouTube Videos
2. Podcasts
3. Research publications

Further Management

If you have significant ongoing symptoms such as pain and stiffness, are unsatisfied or not meeting the benchmark standards, we can arrange further management. We may also advise further consultation with your surgeon if necessary.

NOTES



We would love to help more people like you. Google reviews are one way that helps us reach more people. Scan the QR code to give us an honest review of our services (it only takes 60sec). Thank you in advance.



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