

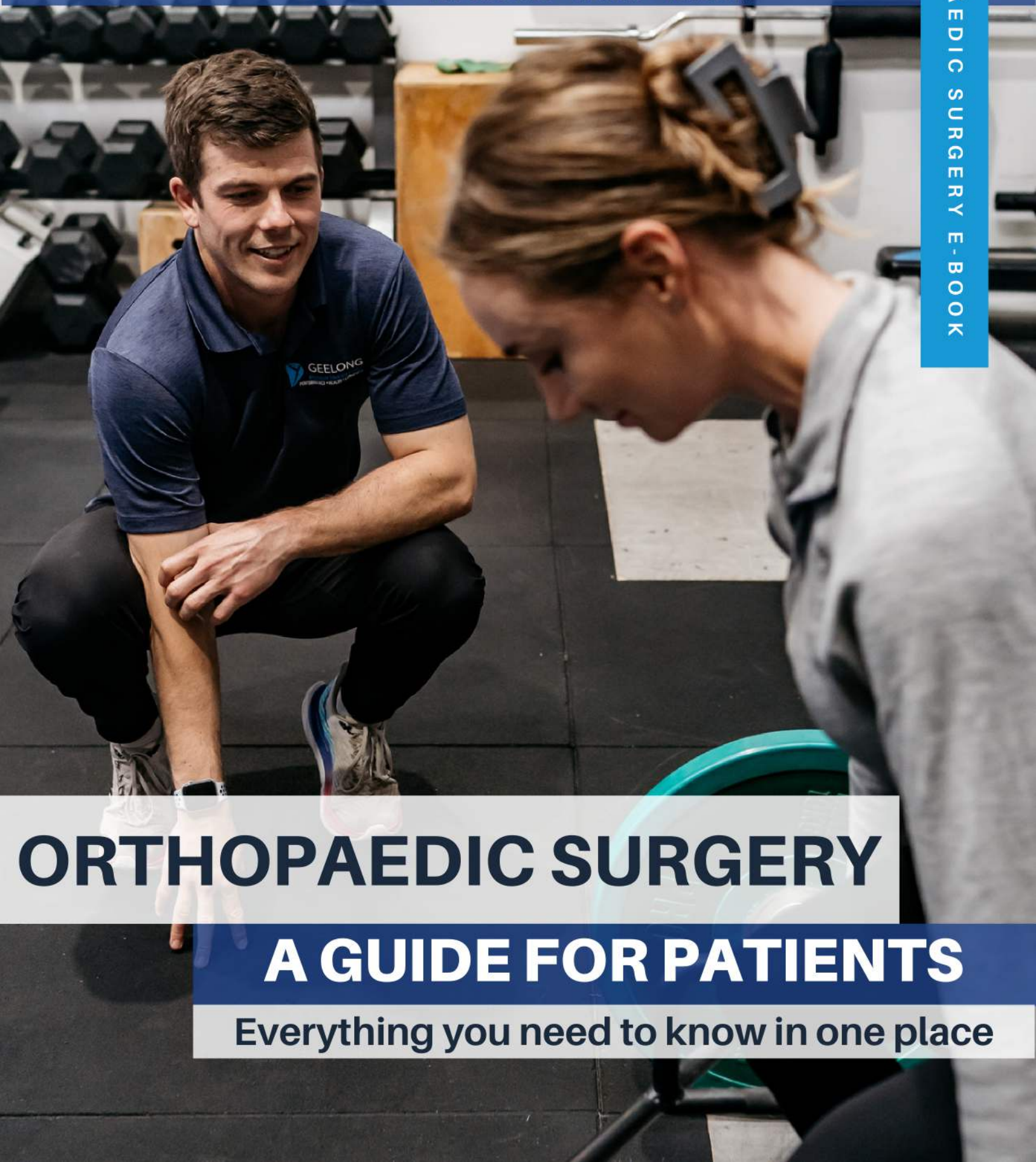


GEELONG

Physical Therapy Centre

PERFORMANCE • HEALTH • LONGEVITY

ORTHOPAEDIC SURGERY E-BOOK



ORTHOPAEDIC SURGERY

A GUIDE FOR PATIENTS

Everything you need to know in one place

- 1 INTRODUCTION**
Key points summary
- 2 IS SURGERY RIGHT FOR YOU?**
You're in pain and ready for something to change; is surgery the right path?
- 3 PRE-OPERATIVE STAGE: DON'T JUST WAIT**
You're moving forward with surgery; what should you do until then
- 4 OPERATIVE STAGE: WHAT TO EXPECT**
What to expect on the day of your procedure and the few days afterwards
- 5 POST-OPERATIVE STAGE: RETURNING TO FULL HEALTH**
How to get back up and active and kickstart your recovery
- 6 TIPS AND TRICKS FOR MAXIMISING YOUR RECOVERY**
The strategies your health care team want you to know
- 7 DEALING WITH SETBACKS**
Common setbacks and how to stay on track with your recovery
- 8 PAIN MANAGEMENT OPTIONS**
Understanding the difference between pain management options
- 9 FUTURE-PROOFING YOUR BODY**
How to maximise your health and reduce the risk of future pain

Introduction

Preparing for surgery can be a worrying and scary time. We've created this ebook to help you be prepared for what's ahead of you and to help you get the best results from your surgery.

You may be readying for surgery because you have suffered an injury that needs to be repaired, or you have been suffering with pain for a long time and your treatment journey has led you to this point. Regardless of the reasons why, there are certain guidelines that can be generalised to most orthopaedic procedures. Although the reason you need surgery may be different to the next person who will read this, we can provide you with key information, timeframes and goals that will help you to be in the best place possible to get great results and get back to doing what you love with the fewest barriers.

Surgery is a serious matter and being prepared for what's to come is very important. You will understandably have a lot of questions and we want to answer those for you.

In this e-book we will cover:

- What has led you to this point and when surgery is right for you
- What you can do before for the procedure
- What you should expect on the day of your surgery
- How you will be cared for immediately after your operation
- When you should begin your rehab and how long it will take
- What to do if you experience setbacks
- Pain relief options and how they work
- What you can do to maximise long term health





IS SURGERY RIGHT FOR YOU?

The journey leading up to the decision to have surgery is either long or short; it's rarely somewhere in the middle. When it's short it's because there has been an injury and it's been decided that the best way to repair that injury is with surgery. When it's been a long journey then there have usually been multiple types of therapists and specialists involved along the way. They usually all have differing ideas and opinions of why you have pain and how best to treat it.

That frustration of trying different things and exploring different treatments is tiring, deflating and often leaves people with a sense of hopelessness about their pain.

For those people, knowing when it's the right time to seek out a surgical opinion is extra challenging. A few questions that it's worth asking yourself are:

- Have I really explored all of my treatment options?
- Is this affecting my quality of life so much that this is now my best option?

The reason it's important to consider whether you've exhausted all of your other options is that once you've had surgery there is no going back. Scar tissue, removing part of a disc or cartilage, changing a tendon attachment etc are permanent changes to your body. Not that these are bad things; it may be that these changes are exactly what you need. But the fact remains that they are generally permanent.

When considering whether you've explored all options available to you, you'll need to be very honest with yourself around the question of rehab and exercise: Have you done your exercises?

Exercise, especially strength training, is like surgery in that it can cause physical change to muscles, tendons, ligament etc and it can have a large effect on pain. Most rehab that is still being prescribed is very basic and very light; it is not challenging enough to physically change you and help your body become more robust and resilient. If you haven't yet explored a treatment path that involves more rigorous and challenging exercise then it is worth try to find someone who has a great reputation for strength based rehab in your area.

If your treatment options up to this point have mostly involved medication and hands on therapy (massage, dry needling, joint manipulation etc) then you have

not challenged your body to repair and heal and an exercise approach is a very valid next step for you.

Medication and hands on therapies can be effective for reducing pain. They do not, however, change the physical structure or capacity of your body. Further to that, if you have been receiving regular hands on care as means of treatment and you haven't been exercising then, unfortunately, your strength and physical health may very well have declined instead of improved.

Even if you have a cartilage tear, joint wear and tear, ligament damage, a disc bulge or damaged tendons exercise and strength training is useful. Although it may be worrying to consider going to a gym or studio as a means of treating your pain, there is an ever growing collection of research showing how effective exercise and movement can be across virtually all pain complaints.

The main consideration when exercising is that it is minimally painful and/or it does not exacerbate your pain 12-24 hours after exercise. This is covered in more detail later. Having some discomfort when restrengthening a previous injury or when training a part of your body that you have avoided using out of fear is very normal and need not be feared. It is actually a healthy part of the experience.



Pain tends to significantly effect quality of life when it limits your ability to work, take care of yourself or it stops you from enjoying the things that you bring you joy.

For joint related issues this may present as re-occurring instability like subluxations and dislocation and persistent catching or locking of a joint. You may also experience recurrent and significant swelling and inflammation due to an issue within the joint. Or there may be persistent or recurring pain that is concerning for you.

In almost all instances you want to have medical imaging (x-ray, MRI etc) that supports and matches your clinical findings exactly. For example, a disc bulge that is on the opposite side to your pain and at a different level of the spine or a meniscus tear that is not in the area where your symptoms are should give pause to your medical team to seek alternative explanations for your symptoms.

In summary, determining whether or not to pursue surgery should depend on the nature and cause of your pain and limitations as well as whether those limitations are affecting your quality of life. Furthermore, it's important that you have genuinely explored all treatment options, especially exercise rehab, prior to pursuing a surgical approach.

PRE- OPERATIVE STAGE

DON'T JUST WAIT!

So, your health care team and you have decided that surgery is the next step for you; don't just wait for that to come around!

The longer you remain inactive the weaker and less healthy you will become. The stronger and healthier you can be going into your procedure the more simple and straight forward your recovery will likely be.

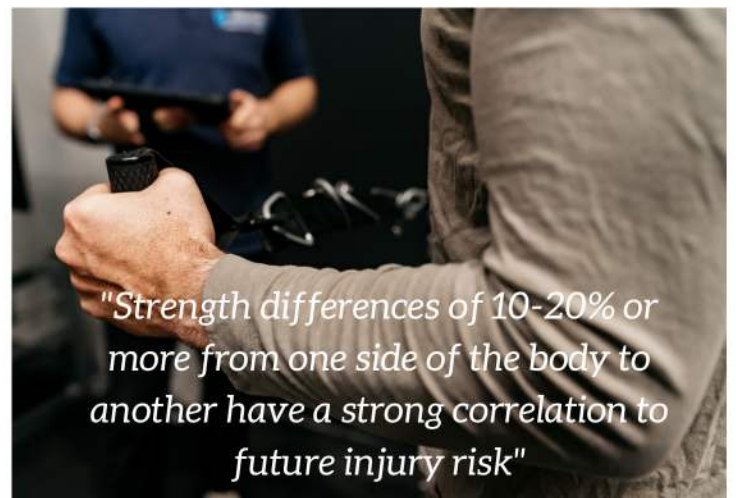
Curiously, our bodies often initiate a process to reduce the size of your muscles very soon after injury. It is thought that this occurs to reduce potential load and strain across a painful area; such as the thigh muscles reducing in size after an ACL injury. Allowing that process to perpetuate will result in an even more significant amount of muscle loss which will mean the rehab process will take longer and will be harder. It also means that you are at a greater risk of other injuries.

Furthermore, strength differences of 10-20% or more from one side of the body to another have a strong correlation to future injury risk. But beyond that, reduced physical activity will negatively impact your sleep, your heart health, your mental and

emotional state and it will also negatively effect your immune system. For optimal recovery after surgery you're going to need all of those body systems working at their best.

Exercise during this stage doesn't have to be particularly strenuous and it doesn't even have to involve exercising the area you are about to have surgery on. Our bodies are pretty amazing. One amazing feat of our bodies is that you can exercise one side of the body and it will help to preserve strength on the other side of the body.

Lets cover a little more detail about what Pre-hab looks like.



"Strength differences of 10-20% or more from one side of the body to another have a strong correlation to future injury risk"



The focus for rehabilitation during the pre-operative stage (which encompasses the whole time frame leading up to your procedure) is to maximise your strength, flexibility, fitness and health status.

- Stronger muscles have a shorter recovery period to get back to full health.
- Better flexibility means better joint, muscle and tendon health.
- Better fitness means a healthier immune system and fewer post-operative complications.
- Better health means that all of the above as well your general well being and mental status make you the most ready to embrace your procedure and the recovery process.

A qualified rehabilitative therapist will identify which flexibility limitations are present and which are the most important to address. If you are preparing for lower back surgery this may involve improving the movement of your hips and/or upper back so that there is less stress on your lower back. For knee surgery the focus may be on regaining hip and ankle flexibility.

Strength training should ideally target the muscles in the area you are about to receive surgery on but should also, at the very least, include training the whole limb. However, as mentioned previously, if strengthening the affected part of the body is too challenging or if pain is a barrier then training the rest of the body is still a perfectly valid approach.

For example, if your left knee is too painful to load you can still get strength benefits in the left leg from training the right leg due to a mechanism called "the cross-education effect". To achieve this you have to train the opposite limb a few times per week with very challenging weights. By training the rest of the body you can also stimulate healthy blood flow through the injured part of the body without exercising it, stimulate the production of hormones and neurotransmitters that help to reduce pain and improve health, improve sleep and improve immune system health.

OPERATIVE STAGE: WHAT TO EXPECT

On the day of your procedure expect to be well cared for by the nursing and hospital staff. Expect a polite welcome and words of support from your surgeon and anaesthetist. Also expect plenty of nervousness and anxiety about what's to come (although some of those 'butterflies' may be due to hunger as you will most likely be asked to not eat anything after midnight the day before the procedure).

By this stage your surgeon will have explained the procedure to you as well as any risks that can occur with the procedure. On the day your personal information will be checked, re-checked and re-checked again. If you haven't been asked already, you may be asked to give a blood sample for testing. This is to allow the anaesthetist to provide the appropriate care to you during the procedure and to ensure you don't have an underlying health issue that may complicate the procedure.

Once all of the pre-operative checks have been done and you are all checked in then it's time to try and relax, distract yourself and wait for the nurse to come and notify you when it's time to head to the operating theatre. This stage will usually involve the insertion of a cannula into your vein and, if necessary, a catheter into your bladder. The anaesthetist will administer their sedatives, anaesthetics and other medicines via an intravenous drip that attaches to the cannula.

The operating theatre will mostly be busy with the activity of the surgical team preparing everything for your procedure. Once they are all set they will take a "pause" to do a final check that all of the details and equipment are correct for a successful surgery, including confirming which side of the body is to be operated on.

You'll then have an oxygen mask placed on you and the sedatives and anaesthetics will slowly allow you to 'fall asleep' into a carefully controlled state of unconsciousness. The surgical team will diligently and expertly perform the procedure whilst the anaesthetist monitors your medical needs.

The next thing you'll experience is the slow return of consciousness as you come out of sedation in a 'post-anaesthetic care unit' (recovery room). Your vital signs and pain will continue to be carefully monitored as your recovery begins and you can see your family or friends.

With the advances that have been made in surgical procedures, anaesthetics and equipment it is increasingly common for patients to be allowed to go home the same day as their surgery or on the day afterwards. This means that your post-operative rehabilitation has already begun. Even getting out of bed and going to the toilet counts as rehabilitation at this stage! Follow your wound care guidelines and prioritise rest.

QUESTIONS YOU MAY WANT TO ASK YOUR SURGEON:

Every procedure is a little bit different because every person is different. Furthermore, different body areas have different responses to different surgeries (i.e a Knee Replacement is very different to an ACL Repair or a Meniscus Debridement of the knee) and therefore healing timeframes will be different and expectations around recovery benchmarks will be different too.

Take the time to make a list of any extra questions you would like to ask that haven't already been answered for you.

How much pain or discomfort should I expect after the procedure? What is normal or abnormal?

What is the typical recovery time frame for people like me who have had this procedure?

What are the complications that can happen with the surgery I am about to have?

What will you be expecting or hoping to see at the post-op review consultation?

Are there common traits or behaviours that you see in people who tend to get the best outcomes from this surgery?

(If you're going to have 'joint replacement' surgery) What is the current estimate of how long this replacement will last? How will I know when, or if, it needs to be re-done?

Although this procedure will help me now, are there any issues that may occur in the future because of it? If so, what can I do to minimise the risk of those issues developing?

(If plates and screws have been used in your procedure) Will there be a time when the screws may need to be taken out? If so, what would that procedure involve?

If you were to have this surgery, what things would you do that your patient's tend not to do?





POST-OPERATIVE STAGE:

RETURNING TO FULL HEALTH

The journey of returning to full health after surgery is divided into 2 stages. The 'inpatient' and 'outpatient' stages. The inpatient stage includes the post-anaesthetic phase that was discussed in the previous chapter as well as the immediate care that you receive after your procedure whilst still in hospital. This stage focuses on ensuring you have a healthy recovery from the anaesthetics, that there are no complications and that you have a level of function that allows you to perform basic tasks like walking (possibly with aids like crutches), going to the toilet and washing yourself. You'll be given instructions on how to care for the wound where the procedure was performed, how to use any aids that you'll need to be independent (crutches, braces etc) and you'll be prescribed some basic exercises by the physical therapy team to begin early stage rehabilitation at home. You may receive some in-patient physical therapy at the hospital depending on the length of your stay and the nature of your surgery.

As an Out-patient, the goal of the early stage rehabilitation exercises and care guidelines that you'll be given are to:

- protect the wound site/stitches
- allow the surgically repaired area time to heal
- reduce swelling
- manage pain
- encourage muscle activity
- restore flexibility

It is very important at this point to keep in mind that wound healing is a process that follows a fairly typical timeline over 4-6 weeks. Swelling and inflammation are very important parts of this process and, although there is pain and discomfort associated with this, optimal healing and recovery aren't possible without it. The inflammatory process brings a myriad of cells, chemicals and hormones that allow your body to heal and strengthen the tissues that were operated on.

Over this period of 4-6 weeks you will be required to tend to your stitches and keep the wound site clean. As the changes your surgeon has made to your body 'take hold' you'll gradually be able to do more and more tasks at home and at work (depending on the nature of your work). Your physical therapist will also provide progressively more challenging exercises and stretches depending on your rate of progress. This increase to your daily activity levels and exercises should provide small, gradual challenges to the area you had surgery on. A sudden, large increase in stress to the wound may over-stress the healing process and set you back. It is better to take things slowly over this stage rather than risk jumping ahead too quickly. However, this advice relates specifically to the wound and the area you had surgery on. There is nothing stopping you from exercising the rest of your body! In fact, there is more and more evidence showing that training "around" your surgery site is very good for your recovery!

This is a great opportunity to take advantage of the "cross-education effect" discussed earlier as well as the myriad of other benefits that exercise has for your recovery. Some of these benefits include:

- Improved sleep (which improves healing and recovery)
- Increased immune system activity
- More blood flow through the surgical site bringing more cells that help with healing
- Reduced swelling
- Improved tolerance to pain and reductions in pain levels
- Maintenance of cardiovascular fitness
- Prevention of muscle loss and strength loss in other parts of the body
- Improved mental health and mood
- Faster progression into the next stages of rehabilitation and recovery.

Once you've successfully navigated that first 4-6 week period of healing you will (hopefully) be feeling and moving quite well. You'll likely still have some swelling or stiffness but the scar site should be looking well healed and you should be moving with confidence in your normal day to day activities.

Now is the time to start to return your full physical health and function. An ideal starting point here is to be able to measure your strength levels and flexibility from one side of the body to the other. Addressing any asymmetries that are found is the first order of business.



We aren't searching for perfect symmetry here but we do want to eventually aim for less than a 10% difference from one side of the body to the other; especially in the muscles related to where your surgery was performed. The other benefit of thoroughly testing strength now is that you can also get a measure of the surrounding body areas and start addressing any weak areas that may limit a full recovery and which may have contributed to you needing surgery in the first place.

There is an ever increasing base of knowledge of what we should expect for "healthy normal" levels of strength and performance. This data should provide goals for where your strength and physical performance can (and should) end up. These tests also provide a fantastic framework for when to progress your rehabilitation.

The timing of when to progress your exercises and your stages of rehabilitation should not come down to arbitrary time-lines; this is an old model of rehabilitation that has seen many people get injured due to being progressed too quickly and many others being held back from progressing as quickly as they could have. Not all rehabilitation providers and physical therapists are up to date on these concepts yet. So, before you begin your rehab journey, research and ask different health care providers in your area how they progress their patients through their rehab before you make your choice.

TIPS AND TRICKS FOR MAXIMISING YOUR RECOVERY

The 'non-obvious' things have a bigger impact than you think:

Prioritising good quality sleep is your best friend when it comes to supporting your bodies ability to heal. Bolster that with good water intake, a healthy diet and stress management and you'll be a healing superhero!

Don't be lazy when it comes to managing swelling early on:

Compression garments, gentle movement, TENS and light massage can be very helpful for minimising swelling. Poorly managed swelling can contribute to unnecessary levels of pain and restriction which can impede your recovery.

"Listen when it whispers so you don't have to hear it scream":

Our bodies are generally pretty good at letting us know when things aren't quite right. If you're starting to push the limits of your recovery too much too soon then your body will let you know with small amounts of discomfort. Do your best to 'listen' to those sensations over the first few weeks of your recovery and heed the warning signs.

But also...don't pay too much attention to pain:

Pain is very complex and is actually more often a "best guess" as to what is going on in your body. Dwelling on pain and focusing on it can actually increase how much pain you feel. Being afraid of pain to the extent that you fear moving is also problematic. Be a "cautious optimist" about your recovery.

You are physically different now; be curious as you learn the new you:

Being a "cautious optimist" also comes with the mindset of being curious about your recovery. Bringing an extra level of awareness to movement and activity will help your nervous system learn the "new you" more quickly.

Managing pain and managing inflammation are different things:

The inflammatory process is a key part of the healing process. Try to minimise the use of anti-inflammatory medicines like Neurofen and Ibuprofen as these will limit inflammation which may limit the healing process. Instead, prioritise the use of ice, heat, gentle self massage and gentle movement to relieve pain.

Place a high value on flexibility from early on:

All muscles, tendons, ligaments and joints adapt to the demands we put on them. The longer we go without moving joints and muscles through their full ranges of motion the more 'normal' it will become for those joint and muscles to be stiff and restricted.

When it comes to strengthening the area, go slow early in order to go fast later :

Regining strength is relatively easy; it just takes persistence and consistency at gradually challenging the muscles to do more and more work. When rehabilitating the area you've had surgery on it is often most effective to prioritise healing of the surgical site over trying to recover strength. Having full and complete healing of the surgery and the wound is priority one; once that's achieved then you can push yourself with very little risk to the surgery. But pushing too early may stress the healing process too much and delay your recovery.

Blood Flow Restriction, TENS, healing creams and other fancy tricks MIGHT help:

There are always new, shiny, well marketed ideas out there for people who are motivated to get back to doing the things they love as quickly as possible. Some of these may help in small ways for some people but none of them replace the tried and tested methods for optimal recovery that have already been described. Again, prioritise sleep and health for the quickest recovery.



PAIN MANAGEMENT OPTIONS

Pain management methods include hot and cold therapies, manual therapy, creams and ointments and medication. Understanding the pros and cons of each of these will help you to make informed choices about how to manage your own pain.

It has been discussed already in this guide, but inflammation is an important part of the healing process. For this reason, the use of strong anti-inflammatory medication should ideally be minimised in order to allow for normal healing to occur. The use of "pain medication" and "anti-inflammatory" medicines are often seen by the public as the same thing. However, whilst inflammation can cause pain, we do not need to change inflammation to change pain. What we mean by this is that pain is the end result of a complex chain of events in the nervous system. Although the cause may be due to inflammation, we can still affect any of the links in that chain of nervous system activity to decrease pain without needing to decrease inflammation. Panadol is an example of a medicine that impacts the processing of pain but doesn't have much effect on inflammation.

With regards to hot and cold therapies, it's well understood (but not well publicised) that hot and cold therapies don't work the way most people have been told. It may come as a surprise, but the way that an ice pack or a heat pack help with pain is by changing the way your nervous system behaves, not

by increasing blood flow or decreasing swelling. If using an ice pack, the rate at which the nerves in that area send their signals to the brain slows down. If using a heat pack, the threshold required before the nerves in that area can send their signal goes up. Both of these mechanisms make it more difficult for nerve activity to occur which makes it harder for your brain to receive "pain signals" from that part of the body. Another way that ice and heat help to reduce pain is that they provide a strong, competing sensation that can overwhelm the pain sensation. This means that they can act as a distraction from your pain.

It also may come as a surprise that hot and cold creams and gels like deep heat, tiger balm and ice gel don't actually change the temperature of the area they are applied. They have chemical ingredients that stimulate nerves in the skin that respond to hot and cold sensations. They make you feel the sensation of heat or coolness but they don't actually create any change in temperature.

Just like heat and ice, these sensations act as a temporary distraction to your pain. This can be a fantastic way of managing pain without using more potent medicines or anti-inflammatories. So when it comes to choosing between using ice or heat for your pain, forget the old adage of "heat for muscles, ice for joints" and, instead, test and try both and decide which one works best for you.

Manual therapy has become a topic of contention in some corners of the physical therapy world. This is because a lot of the research that has studied the use of hands on techniques for pain shows that it often doesn't help much or that it doesn't help for very long. However, many therapists (including us) often see that hands on techniques can have quite positive effects on pain. For clinicians and patients it can feel as though there is a disconnect between what the research says and what we see in our clinics.

What the research is telling us is that there are some people who can respond very well to manual therapies, there are some people who get no benefit and there are some who may actually have more pain from certain techniques. We also need to appreciate that when we do see favourable results from the use of hands on techniques we should not expect those results to last more than a few days. Sometimes those changes can last for weeks at a time, but in general it is best to expect the benefits to be short lived.

If you have received hands on treatment in the past then you can most likely identify with one side of what was just discussed: you get a good result from it but it is generally short lived, or you don't get much benefit from it at all. In our opinion, the best way to think about manual therapies such as massage, dry needling, joint mobilisation and manipulation, is that they can be useful tools to help some people move past their initial pain. It is critical to understand that the longer term goal is to move better, move more and to be able to tolerate moving with heavier loads.

Those are the signs of improvement and progress we should look for. Sometimes, however, it can be tempting to get stuck chasing the short term changes in pain that come from hands on treatment. In the long run this could lead to you becoming dependent on 'getting treated' instead of building the confidence and trust in yourself that you need in order to really improve!

This is the perfect time to once again reiterate that movement (stretching, exercise, walking, cycling etc) can also be potent forms of pain relief. This is broadly summarised as "exercise induced analgesia". Moving your body and exercising can allow you to take advantage of different nervous system mechanisms that reduce pain and muscle tension. A few that we know of are Diffuse Noxious Inhibitory Control (DNIC), Descending Inhibition and Post Isometric Relaxation.

DNIC tends to rely on higher intensity muscular efforts and inputs for its effect. It is a broad 'diffuse' decrease in the ability for 'pain signals' to be received at the spinal cord due to the natural release of opioids.

Descending inhibition is similar but its effect is more specific to the level of the spinal cord where the nerves that travel from the painful area arrive. As opposed to being a broad effect, this effect is more localised. Descending Inhibition can be created by general forms of exercise as well as stretching and cardiovascular exercise.

Post Isometric Relaxation, as the name suggests, is the relaxing of muscles after they have performed isometric exercise. Isometric exercises are exercises where muscle efforts are created but no movement occurs. After repeated efforts of this type, the muscles that were working tend to relax to a lower state of activity than they had prior to the exercise efforts. This type of exercise can be very good in the early stages of the rehab process.

One thing to keep in mind here is that the benefits of exercise for pain relief are enhanced in people who exercise regularly. Being stagnant and stationary reduces this effect and allows your body to feel more pain, more easily. If you engaged in rehab and exercise prior to your surgery then you are in a good place to maximise this effect.



DEALING WITH SET BACKS:

WHAT TO DO WHEN THINGS AREN'T GOING TO PLAN

You, your family, your surgeon and your healthcare team all want your recovery to be as simple and as straight forward as possible. However, sometimes recovery will take longer than expected, small injuries may occur during the rehab process or accidents may happen at home causing you to inadvertently over-stress the healing process.

The level of disappointment that can be felt when things like this occur can be significant and it is completely understandable and very normal. You probably already feel frustration at having to miss out on doing many of the things that bring you joy and the thought of delaying the return to getting back to those things can be overwhelming.

The elements that play a role in your recovery can be clearly split into two categories; Intrinsic Factors (internal to your body) and Extrinsic Factors (anything external to your body). All of these have the potential to impact your recovery either for better or worse. Some of them are within your control and others are out of your control.

Intrinsic Factors:

- Muscle strength and endurance
- Flexibility and mobility
- Age / Weight / body composition
- Diet



- Sleep quality and duration
- Mental health / stressors
- Negative thoughts and beliefs about pain

Extrinsic Factors:

- Training errors / exercise technique
- Work or home environment / task demands
- Surgical complications

Look at this list and try to identify on what is within your control and what is outside of your control. Next, focus on how you can maximise or minimise those factors and do your best to not let things that are out of your control derail your focus and state of mind.

FUTURE PROOFING YOUR BODY

HOW TO MAXIMISE YOUR HEALTH AND REDUCE THE RISK OF FUTURE PAIN

It should be clear by now that the goal of the rehabilitation process is to not just get you back to your previous level of strength or health, but to surpass it so that your risk of any future issues is decreased.

It is widely known in the orthopedic and rehabilitation world that the number one risk factor for any injury is a prior history of injury in that area. I.e if you have torn your hamstring then you have a much greater risk of reinjuring that hamstring compared to someone who has never injured their hamstring. This is telling us that, to date, our rehab processes haven't gone far enough towards creating full and complete recovery from injuries and orthopedic surgery.

It is quite likely that this is due to a variety of factors. The most obvious of these is that it is very easy to mistake being pain free for being recovered. When pain is no longer there we no longer have the constant reminder that something is not as it should be. We summarise this experience as the "out of sight, out of mind" effect.

Another factor that leads to this increased risk of future injury is that changes to strength, flexibility and the way we move occur with injury but it is often only strength and flexibility that get rehabilitated. Depending on the nature of how your pain developed and to which area of the body it occurred,


it is likely that you changed the way that you move in order to avoid causing more pain. It may be that you don't let your knee bend very much or that you push your knee inwards and put more weight on the inside of your foot to avoid pain. Or that you tilt your body sideways and lean forwards slightly to avoid causing back pain.

These changes can become an ingrained movement "habit" and if it remains after your 'recovery' then it is reasonable to suggest that you are not yet fully recovered. There is a growing trend towards the idea of rehabilitating with the goal of having the ability to perform a diverse range of activities. For example, with knee rehabilitation can you jump and land with a soft strategy and a stiff strategy? Can your knee twist inwards and outwards under different loads and on different angles?

Regaining strength and movement symmetry are critical, but retraining your body's ability to do a wide range of activities should be the end goal of rehabilitation.

Furthermore, in many cases there needs to be a focus on building an increased tolerance to the position that caused your pain and injury in the first place.

Movement avoidance is a short term strategy because it's the movements that you don't train that remain weak and vulnerable. Approach your rehab with the goal of having as few weaknesses as possible!



Thank you for downloading and reading this guide. We hope it has given you the information and the insight to move forward with your surgery and rehab journey with optimism and confidence.

**If you would like to reach out to us in person or online for help with your pre or post operative rehabilitation, book online via:
www.geelongphysicaltherapy.com.au/surgery-rehab-geelong**