

back ■
pain ■
solutions ■



East Gosford
Physiotherapy
& Exercise
Physiology

Phone: (02) 4323 7499

Fax: (02) 4322 1499

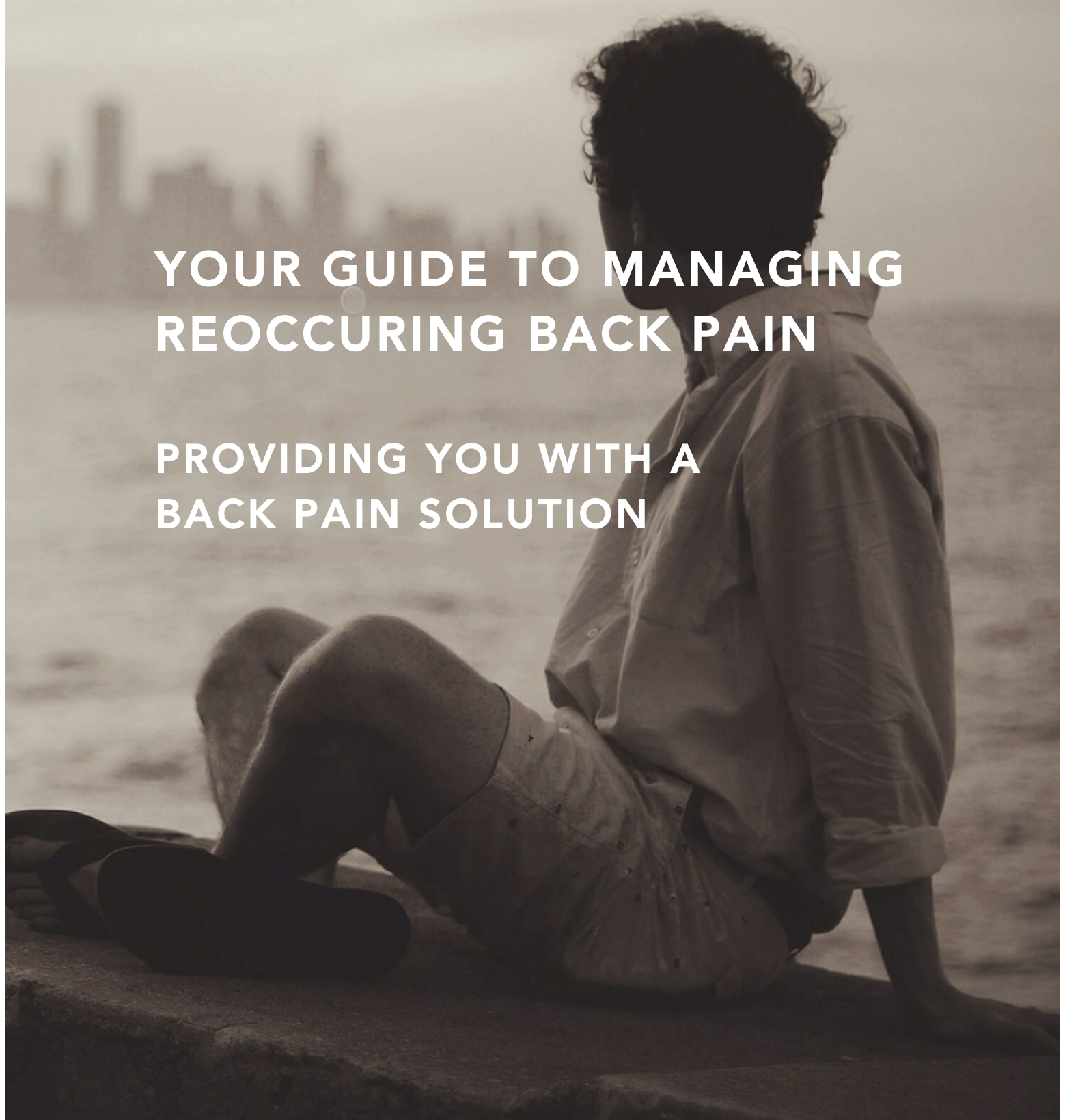
24 Brougham Street East Gosford 2250

mail@eastgosfordphysio.com.au

www.eastgosfordphysio.com.au

YOUR GUIDE TO MANAGING REOCCURRING BACK PAIN

PROVIDING YOU WITH A BACK PAIN SOLUTION



Back Pain Solutions
Your Guide To Managing Recurrent Back Pain

Program e-book – Online
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CHAPTER 1.

INTRODUCTION

In Australia back pain is the second most common condition presenting to General Practitioners, and 80% of all Australians will experience severe low back pain. One of the most common findings in Physiotherapy Private Practice is the “recurrent nature” of back pain. People recover from their pain episode, but, up to 84% of patients report a further back pain episode within a yearⁱ(Hides 2001).

East Gosford Physiotherapy sees many patients who have tried many approaches to “SOLVE” their back pain, but continue to suffer from back pain or recurrent back pain, despite intervention.

Commonly reported intervention is Physiotherapy, Chiropractic, Pilates, Acupuncture, Massage, Personal Training, gym attendance or Exercise Physiology, all giving some help BUT never really solving the problem of their back pain recurring.



CHAPTER 2.

WHY DOES BACK PAIN REOCCUR?

This problem has been looked at from a research perspective for many years, and findings from MRI, EMG and **Real Time Ultrasound** studies have shown that even one episode of low back pain produces dramatic deep muscle weakness and incorrect muscle “firing” patterns.ⁱⁱ The key spinal muscles involved are deep core muscles, multifidus and gluteals, and are often inhibited or “switched off” when pain persists.

The result of these muscles firing incorrectly is the loss of deep spinal stabilization and excessive shearing forces through the spine and discs. The body will always try and compensate for this “loss of stability” with over-activation of more superficial muscle groups like oblique

abdominals and erector spinae (large “strut” muscles down your spine). This strutting of your spine creates a stiffness or rigid spinal stability that restricts movement.

This presentation of “stiffness” with recurrent back pain is common as you try to protect your spine with muscle over-activity. This becomes your “preferred method” of spinal stabilization that is inefficient and ineffective at protecting your spine and discs when you move. This can present as tightness around the ribs and upper back called “chest gripping” or tightness around the hips and pelvis in what we call “butt gripping”. Both chest gripping and butt gripping will stiffen your core and spine (core stability) but not allow normal movement. It may even make you hold your breath to protect your

spine. You can't have efficient core stability while holding your breath.

This is why people reinjure their spine and get reoccurrence of pain, because they are not stabilizing efficiently.

A simple movement like bending and twisting will reinjure your spine and it's simply due to poor co-ordination and synergy of your muscles.

Over time this may accelerate degenerative changes (wear and tear around the discs and joints) and result in further episodes of back pain.



CHAPTER 3.

WHY DOES BACK PAIN "PERSIST" ONCE IT'S REOCCURRED?

To understand this phenomenon, you need to understand some of the physiology behind pain.

In a normal response to an acute back injury, you will have pain and inflammation that will most likely settle in time. The healing process takes place and your pain goes away.



In some instances your nervous system, which produces pain, can become "sensitized" during the healing process. That means increased sensitivity within the nervous system and the brain registers more pain signals and starts to register pain from signals that previously were not painful, like light touch!

If your "reoccurring pain" becomes "persistent" or "chronic" pain, this neural sensitivity is often a feature and your brain has set up a system of being over protective. The important thing to realize is, to you, **THIS IS REAL PAIN**, but it is not a response to damage to your back or discs. The difficult thing to understand is that you can work into this pain a little and not have further injury or damage.

Your **Physiotherapist or Exercise Physiologist** will help you understand this during exercise and even encourage you to work into this pain a little and teach you about pacing.

Being reassured that you are not causing further damage is often what is needed to improve your pain and get you moving again. Remember we are designed to move!

It is common with persisting or chronic pain to feel like your pain is an indicator of further damage to your spine and to reduce your activity. Often, by the time people come to us with persisting recurrent back pain, they have de-trained, become unfit, put on weight and walk differently. What we find on assessment is, they have developed muscle weakness and poor firing patterns discussed in the

above chapter. This loss of deep core stability is worsened by the fact that every time you move, you get pain, so you tend to stop moving and increase back stiffness and tightness.

If we know that a sensitized nervous system is being over protective, and is signaling pain when non-damaging activities are occurring, we can start to confidently move our backs again. You need to trust this process (under the guidance of your **Physiotherapist or Exercise Physiologist**) to learn how to stabilize your spine and protect it again.



Once stabilized in a controlled pattern you are able to “turn off” the over activated, over protective muscles and move more normally again. Maybe still with a little pain but under the knowledge that you are not going to get worse!

When you have persisting pain, you often become more anxious and worried and this causes more tightness in your muscles and joints. This is what we call “**Tension Relation Pain**” and is a common symptom with chronic back pain sufferers. If you know that this tension related pain is an “**over activity**” phenomenon and can be improved quickly with awareness and relaxation, you can start to relax a little with your pain responses and this little change in mindset can really help your anxiety and confusion to the cause of pain.ⁱⁱⁱ (Sinfield and Wisby-Roth 2013)

As we start to progress you through our **BACK PAIN SOLUTIONS** program, you will realize that managing the tension related pain will really help you cope with exercise progression. As you understand nervous system sensitivity you will be able to cope more effectively with a pain response during exercise that you know won’t hurt you, but previously had stopped you from exercising!

As you can see, we are really linking your body to your mind and you really can’t recover from persisting back pain until you understand this connection.

Now it’s time to **FIND A SOLUTION** and deal with some of these barriers that have stopped you progressing in the past and get you out of the pain cycle.

UNDERSTANDING THE PAIN CYCLE

An excellent resource to learn more about “**The Pain Cycle**” is a book written by Nick Sinfield and Trish Wisbey-Roth (founder of Bounce Back Active Rehabilitation).

The book is called ²“**The Bounce Back Edition of The Back Pain Personal Health Plan**” and you will find the reference for this at the conclusion of this ebook.

Nick and Trish really explain the vicious cycle of pain people find themselves in, and identify the need to recognize the psychological aspects of your condition and any resulting behaviour. No, this doesn't mean your pain is “in your head”, but it means your “head is in your back pain” and needs to be considered.

If you stay in the cycle of diagnosis, fear, anxiety, stress and pain, you will struggle to improve.

As you move into the **BACK PAIN SOLUTIONS** program, your Physiotherapist or Exercise Physiologist will help you break this pain cycle by making you mindful of some of the things which give you tension related pain. They will help you connect your mind to your body and help you start to improve. Part of the solution is, understanding this may have been a barrier to you getting better in the past.



CHAPTER 4.

THE SOLUTION

BACK PAIN SOLUTIONS are our specialty at East Gosford Physiotherapy and Exercise Physiology. The solution will involve a Pathway to Recovery.

The solution to recurrent back pain involves three stages.



1. Acute treatment to address joint stiffness, muscle tightness and alignment.
2. Restore core stability and postural awareness. Applying core stability principles to simple postures like sitting, standing and squatting.
3. Improving your spinal strength with Functional Rehabilitation and Conditioning. This is often the most important stage as it will prevent you falling back into the pain cycle with reoccurrence.

Each stage is very important in the **"solution"** as each stage sets you up for the next stage.

We often hear of people with reoccurrence of their lower back pain once they feel they had recovered. In these instances they had been **PAIN FREE** but not recovered. They are still vulnerable, as they had not “conditioned” their back or spine to cope with the stresses of everyday life and loads like lifting and twisting.



STAGE 1.

ACUTE TREATMENT

Your **Physiotherapist** will thoroughly assess your presenting problem before deciding on what treatment is required to break you out of the “**pain cycle**”. This stage may involve treatment you have had before and will involve stretching and mobility exercises. Often people with recurrent back pain become “stiff” as they are moving less and use abnormal stabilising patterns to support their spine. This “stiffness” can often happen over many years and can “drive” the recurrent pain. You tend to lose segmental movement (movement between spinal levels) and move as a “block” - your spine becomes rigid.

Your **Physiotherapist** will mobilise your spine and use massage, trigger point therapy or dry needling

techniques to make you move more effectively and reduce your stiffness. This will be reinforced with some home stretches and postural change, and changing how your muscles work.



If you have chronic or persisting pain, your **Physiotherapist** will improve your biomechanics (how your body is moving) and try and improve your pain. Unfortunately, this is more difficult with chronic or persisting pain as often your nervous system (brain and nerves) has become hypersensitive and more

reactive to pain (see previous chapter).

Your Physiotherapist will help you understand this complication of chronic pain and help you work through the stages of **Back Pain Solutions**, with gradual pacing of activity. Once you are moving better (have less stiffness) you will most likely feel improvement, but unfortunately this will generally not last.



If you have seen many **therapists** in the past without long-term success, this is often where your treatment has been concluded. You feel better and feel like you are “cured” but as you know, your pain will return (sometimes worse). Stretching and further treatment will help again, but again pain will return when the “band aid falls off”. That’s right, this is “band aid treatment”, it makes you feel better but doesn’t get to the cause or root of the problem.

It has been well documented that the cause or root of recurrent back pain is lack of good deep stabilization of the spine. That means the small deep endurance type muscles (the deepest layer of your abdominals) that support the spine and are working ineffectively or poorly. This is often explained as “weak core

muscles” but sometimes it is an inability to fire these muscles and use them as stabilizers, which is the cause. If muscles are weak, you can just strengthen them. If muscles are inhibited or “turned off”, they need to be found and activated again before you can strengthen them. This is where we need to use **Real Time Ultrasound** to assess the problem and teach you how to find these deep stabilizing core muscles.

At East Gosford Physiotherapy and Exercise Physiology your Physiotherapist will assess you with **Real Time Ultrasound** and use this technology to help you understand “how” to change your muscle control, so you can move into Stage 2 of Back Pain Solutions.



STAGE 2.

CORE STABILITY AND POSTURAL AWARENESS

Once the stiffness and biomechanical problems have been addressed, you often feel better. Your pain has improved and you can move better. You may even feel like you are “fixed”.

We don't believe you are truly recovered from your back pain and have a lasting solution until you deal with the problem of poor core stability, posture and muscle control.

This has been identified in your assessment and your **Physiotherapist** will show you this with **Real Time Ultrasound**, so you have visual feedback on your problem that is preventing you truly recovering from your back pain.

This stage will involve teaching you how to achieve and maintain a neutral spine. It will also involve teaching you how to active your deep core muscles to protect your spine. It will teach you how to breathe normally while using your core muscles as many people hold their breath when trying to stabilize their spine. We will then teach you to use your stabilizing muscles to help maintain your posture in sitting and standing. Remember, your core muscles are postural muscles. We will then teach you how to activate your core muscles to maintain spinal control with simple movement.

Think about how we use our core muscles, most of the time? It is posturally. When we are sitting or standing our postural muscles are working in a low grade way to hold us up against gravity.

You don't brace yourself strongly and hold your breath to stand in the checkout at Woolies. This is a time when your core or postural muscles are working to support your spine and must be ready to pick up the heavy grocery item when needed.

We initially teach you how to use your core muscles under simple postural loads and move from lying down to sitting and standing.

Once this is achieved, you are ready to move onto more difficult patterns of control, which involve body and limb movement with core stability. This is what people without back pain take for granted.

Our **Bounce Back Active Rehabilitation System** is an ideal program to help people gain this postural and core muscle control and progress it into more complex patterns.



A leading specialized physiotherapist, Trish Wisbey-Roth, has developed the **Bounce Back** system.

Our **Bounce Back** program can be applied in a cost-effective Class or in Physio clinic sessions. It is an 8 week program with clear weekly instructions and progression of exercises.

At the end of this program you will have a much greater understanding of core and postural muscle control and how to apply it to your life. It will teach you how to use your new muscle control in everyday life and apply it “at the checkout in Woolies”.

By this stage you are often pain free and have a real understanding of applying the changes needed to “stay feeling better” and remain pain free with movement.

You have now gone from “just feeling better” to really understanding and applying the changes needed to “stay feeling better”.

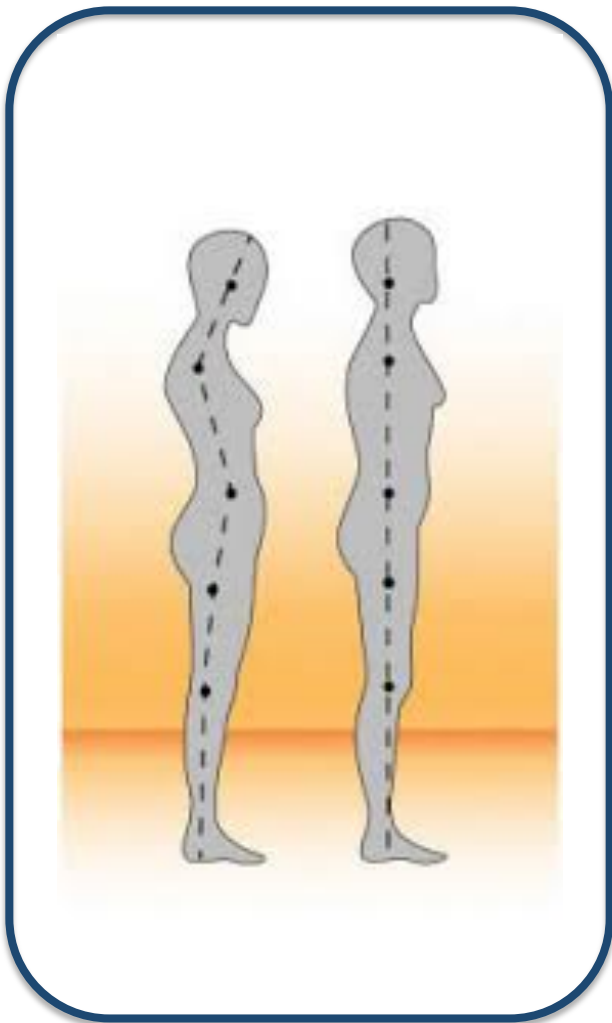
You will be given a clear **HOME PROGRAM** to maintain the changes you are learning and be able to apply to everyday activities.

Your **Physiotherapist** will then advise you on how you are travelling along your “**PATHWAY**” to recovery and achieving your goals. Your **Physiotherapist** will refer back to your goals to help you stay motivated to achieve these goals, whether it is playing with your grandchildren or standing at work without pain.

At the end of Stage 2 you are well on your way to your **Back Pain Solution**. This is when you need to really apply it to all parts of your life and get **STRONGER**.

POSTURE CORRECTION IS ESSENTIAL

The trick to Posture Correction is “little is more”. Make only subtle changes as this is all your brain and body will manage and maintain.



Start with standing with soft knees and keep the weight off the back rim of your heels. This will shift your weight slightly forward and allow your pelvis to sit more efficiently with better postural core muscle awareness.

Remember your core muscles are your postural muscles, but poor posture tends to make them “turn off” and weaken. The good news is, good posture makes your core muscle “turn on” and strengthen, more easily. We use these muscles in a low grade, endurance pattern all the time to stand up against gravity. This is how you must learn to “use them” and “strengthen them”.

If you try too hard or use too much muscle activity, you will fatigue and not be able to maintain the correction. You will fall back into your wrong pattern fairly quickly.

In standing we want to aim to have your head “stacked” on your chest, your chest “stacked” on your pelvis and pelvis over knees and feet. You normally have a slight inward curve in your lower back (**Lordosis**) and outward curve in your upper back or chest (**Kyphosis**). It is the balance between the two

curves which gives our spine a bony stability against gravity. Add good core/postural muscles and you are core stable and posturally correct.

Your **Physiotherapist** will explain correct sitting and standing posture and help you apply this in everyday life.



STAGE 3.

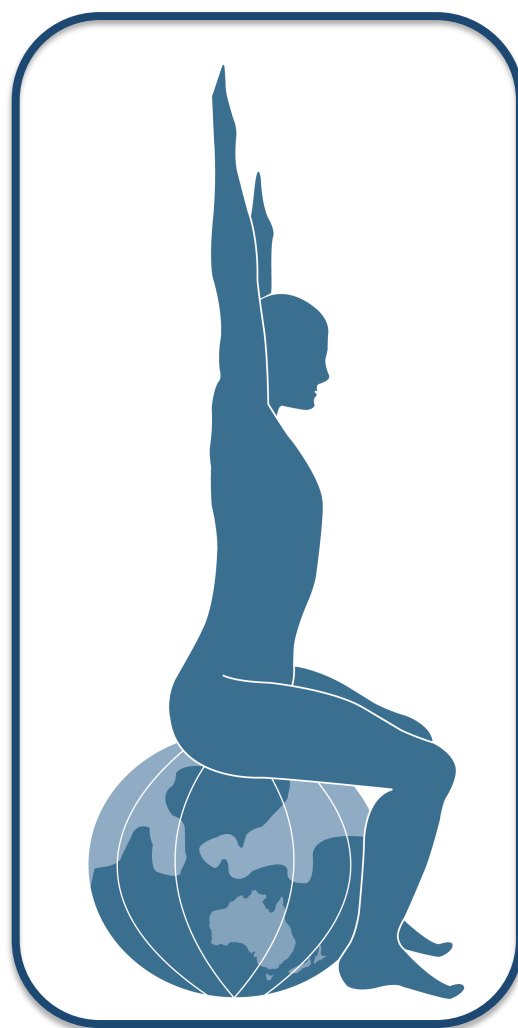
FUNCTIONAL REHABILITATION WITH STRENGTHENING AND CONDITIONING - THE KEY TO PREVENTION

This is when we introduce **Exercise Physiology** to the program. Your Physiotherapist will advise you if you are ready to move onto this stage based on feedback from your **Bounce Back Instructor** (Physiotherapist or Exercise Physiologist).

This will be the “icing on the cake” to **PREVENT** falling back into the “pain cycle”. It will reinforce the muscle control you have learnt and put it under more load with strengthening and conditioning.

This is when you discuss some specific “things” that tend to make you worse, eg. lifting, running or gym

exercises and we can tailor your program to really prevent reoccurrence of pain with reinforcement of the strength program. This is when you start putting your “power” superficial muscles and big moving muscles, to work over the “endurance” deep stabilizing muscles.





This often involves lifting weight and reaching across your body and combines leg and upper body movement as your body works in this fashion when you move. It will restore **Normal Movement Patterns**.

Your Exercise Physiologist will grade the program and progression with a pacing strategy to minimize aggravation of your symptoms.

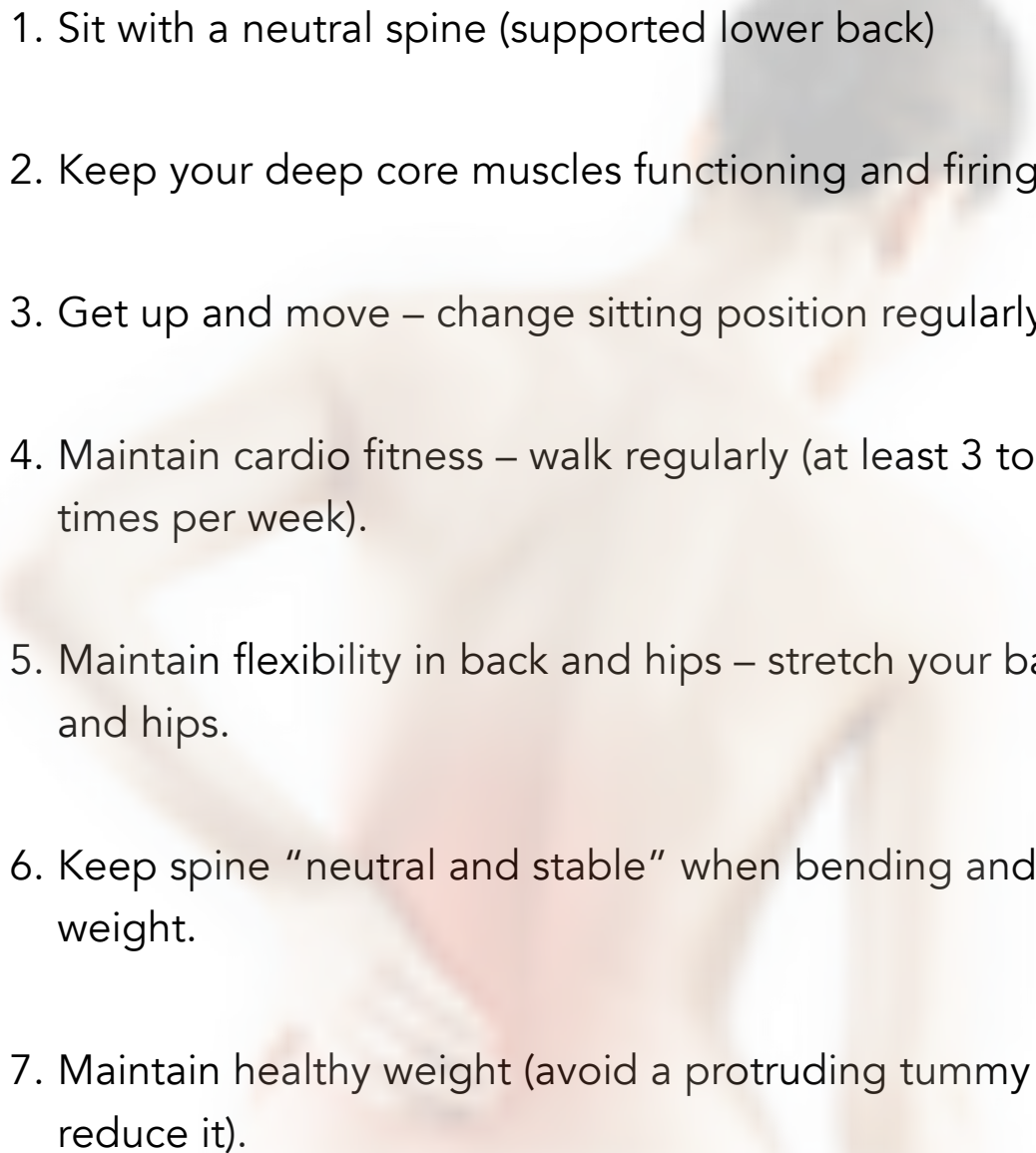
Once you are reliably doing Normal Movement Patterns with correct recruitment of muscle activation, you will have a **"BACK PAIN SOLUTION"**.

This needs to be reinforced and become part of your life and it will soon be applied subconsciously.

Your **BACK PAIN SOLUTION** is in your hands and we are able to guide you through the stages to achieve it. If you continue to follow a few simple rules you can remain pain free.



RULES FOR A HEALTHY SPINE

- 
1. Sit with a neutral spine (supported lower back)
 2. Keep your deep core muscles functioning and firing.
 3. Get up and move – change sitting position regularly.
 4. Maintain cardio fitness – walk regularly (at least 3 to 4 times per week).
 5. Maintain flexibility in back and hips – stretch your back and hips.
 6. Keep spine “neutral and stable” when bending and lifting weight.
 7. Maintain healthy weight (avoid a protruding tummy or reduce it).



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how we can help you.***

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ⁱ Hides, J.A et al. (2001) Long Term effects of Specific Stabilizing Exercises for First Episode Low Back Pain, Spine, June 2001 Vol 26; 11; e243-e248

ⁱⁱ Hides, J.A et al (1994) Evidence of the lumbar multifides muscle wasting ipsilateral to symptoms in patients with acute low back pain, Spine 19; 165-177

ⁱⁱⁱ Sinfield, N. Wisbey-Roth, T. Bounce Back Edition - The Back Pain Personal Health Plan, 2013 Therapy Programmes Limited, UK.