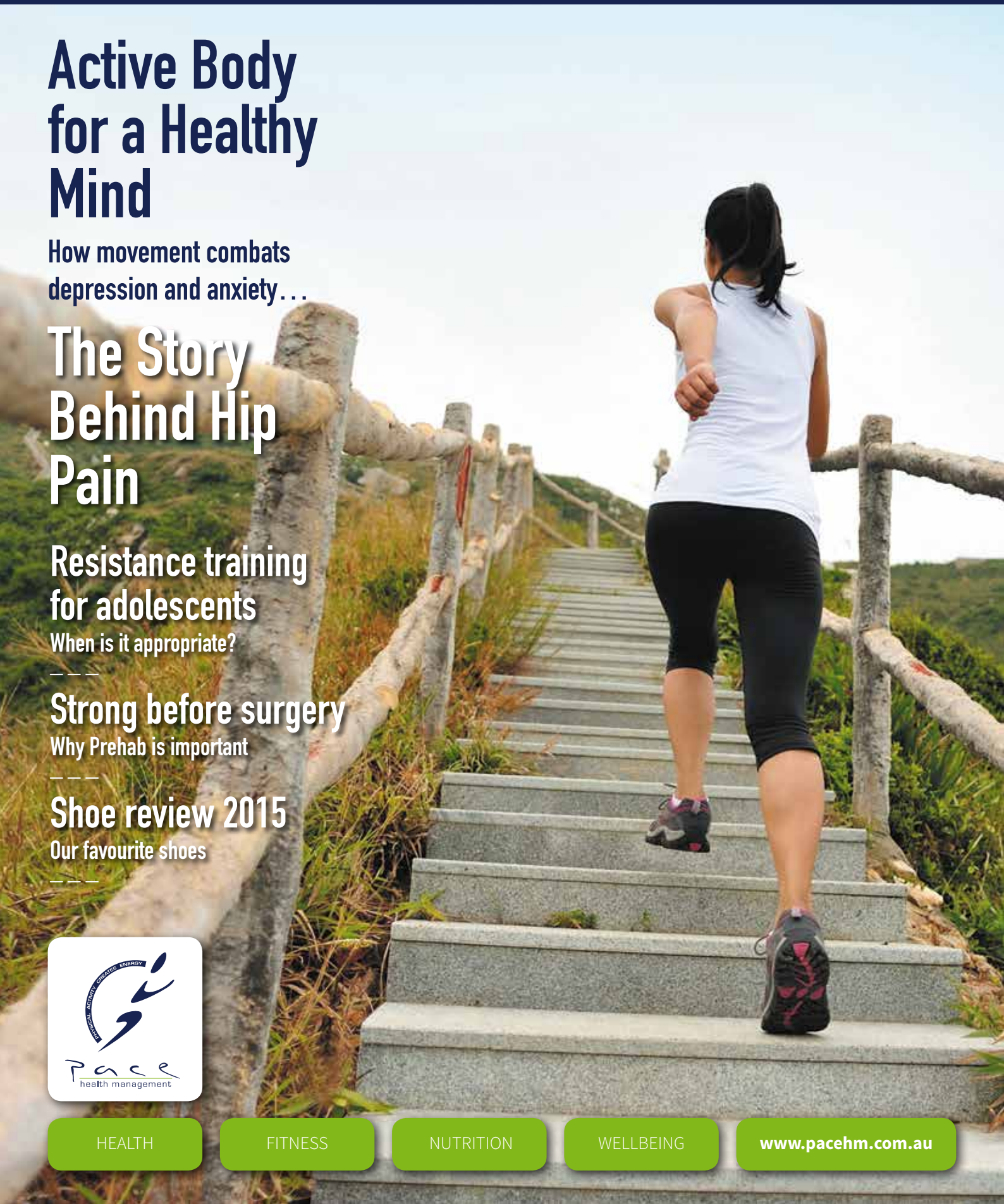
A HEALTHY PACE

Lifestyle Magazine > Issue 2



Active Body for a Healthy Mind

How movement combats depression and anxiety...

The Story Behind Hip Pain

Resistance training for adolescents

When is it appropriate?

Strong before surgery

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Shoe review 2015

Our favourite shoes

Pace health management

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Ryan Poole
MD OF PACE

Welcome to our first edition of A Healthy Pace for 2015! We hope you're ready to be inspired, informed and motivated to make your health goals a reality this year!

It can be easy to get caught up in the day-to-day routine and forget about prioritising our health, or the health of our loved ones. The refined art of goal setting may be exactly what you need to guide you through the start-up phase to developing positive, lifelong habits.

Or maybe there are some aches and pains that are preventing you from gaining the momentum you need. Neck and shoulder pain, hip, knee and joint pain can all put the brakes on the best intentions we may have. In this issue you'll see some simple, easy to follow exercises to help with these common problems.

Within these pages you'll learn how to set SMART goals and to overcome barriers to activity or lifestyle change. You'll also see how to correct and how to maintain better postural alignment to help alleviate aches and pains. Simple strategies to help you become the best you can be!

Our modern lifestyles can be taxing – however I was surprised to read that 45% of Australians are expected to experience some form of mental health disease or illness in their lifetime. Luckily there are some evidence-based measures you can put in place to ensure you are in the best possible position to deal with life's challenges. Read on to discover further benefits of exercise for those with depression and anxiety.

To help you with your active pursuits our resident podiatry team have put together a comprehensive list of footwear for both walkers and runners. It's often so confusing with all the options these days – this list makes it easy to choose what's best for you.

If you like keeping up to date with the latest advancements in health related research and best approaches for sustainable activity then head online and connect with us through facebook, instagram or twitter!

Since 1998 PACE have been helping people make better choices towards creating a healthier lifestyle. Our team provide services through our private clinics, community groups, workplaces, schools or sporting clubs to name a few. We're here to help!

We hope you enjoy this issue, we welcome your feedback and we look forward to seeing you in one of our clinics soon.

Yours in Health
Ryan Poole

Sick of ongoing neck and upper back pain?

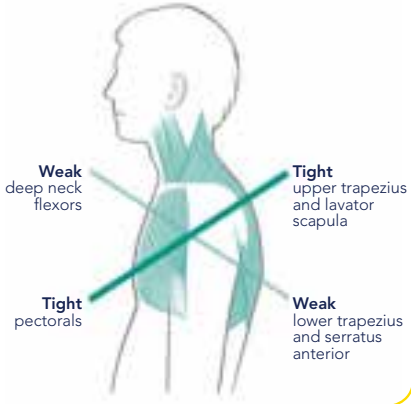
Your posture could be to blame…

Upper crossed syndrome is a common postural presentation seen in our society, and a leading cause of neck and upper back pain. It refers to a forward head carriage and rounding of the shoulders, which places excessive load on the spinal joints in our neck, which in turn creates pain.

Upper crossed syndrome occurs due to changes in posture as a result of desk based work or poor posture in standing. This leads to shortening/tightening of specific muscles, and weaking/lengthening of the opposing muscles. This creates a muscular imbalance, making it harder for us to stabilise our joints and create a neutral (good) posture. These changes to the muscle balance (length tension relationships) cause the poor posture to become more permanent, which therefore creates an overload in the joints, and in turn pain is experienced. These muscle changes are described below.

When these changes in muscle balance are created, we typically see inhibition (switching off) of stabilising muscles. As a result of pain, which creates further weaking/lengthening to these critical stabilisers. As a result, the tight/ shortened muscles continue to be over worked, therefore placing further load on the joints as the problem becomes worse.

Upper crossed syndrome



Tightness:	Weakness:
• Upper trapezius	• Deep cervical muscle
• Elevator scapula	• Lower trapezius
• Pectoralis major/minor	• Serratus anterior

These changes in muscle length and strength alter our body's posture and cause forward head position, rounded shoulders and thoracic kyphosis (hump back). With this changed posture, symptoms include:

- Neck pain
- Headaches
- Shoulder instability
- Upper body muscle weakness
- Reduce range of motion
- Shoulder pain

Next posture is best posture, stay moving throughout the day to decrease muscle stiffness and pain

Janda's upper cross syndrome cont...

Staying hydrated helps keep muscles, joints and tendons lubricated, which decreases aches and pains

Exercises are a great starting point in reducing your pain and improving your posture. For more information, why not check out our Posture Program, designed specifically to reduce aches and pains associated with daily life!

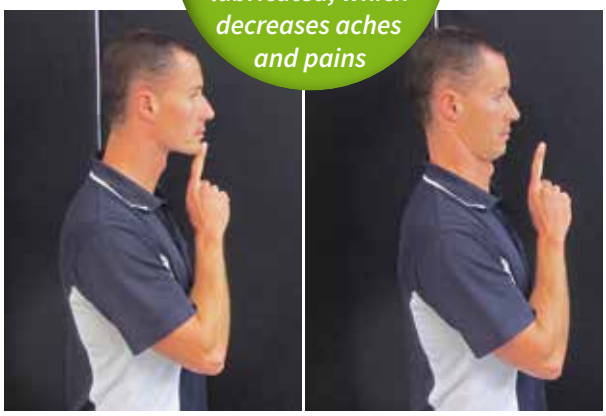
So what can you do about it?

Try improving your workplace ergonomics to improve your posture at your desk, help unload the spinal joints of your neck and upper back and decrease daily aches and pains.

QUICK DESK CHECKLIST

1	**Chair**	Hips higher than knees, back rest supporting middle of back
2	**Eyes & Shoulders**	In line with top of monitor and shoulders relaxed
3	**Elbows & Wrists**	At right angle, close by side and relaxed
4	**Keyboard & Mouse**	Within 15cm of the edge of the desk and centred to the monitor
5	**Posture**	100 second micro-breaks, reset stretches, and core stability exercises

Building a healthy workplace culture



CHIN TUCKS

SEATED THORACIC ROTATION

PEC STRETCH

THERABAND ROW

How good are your ergonomics?

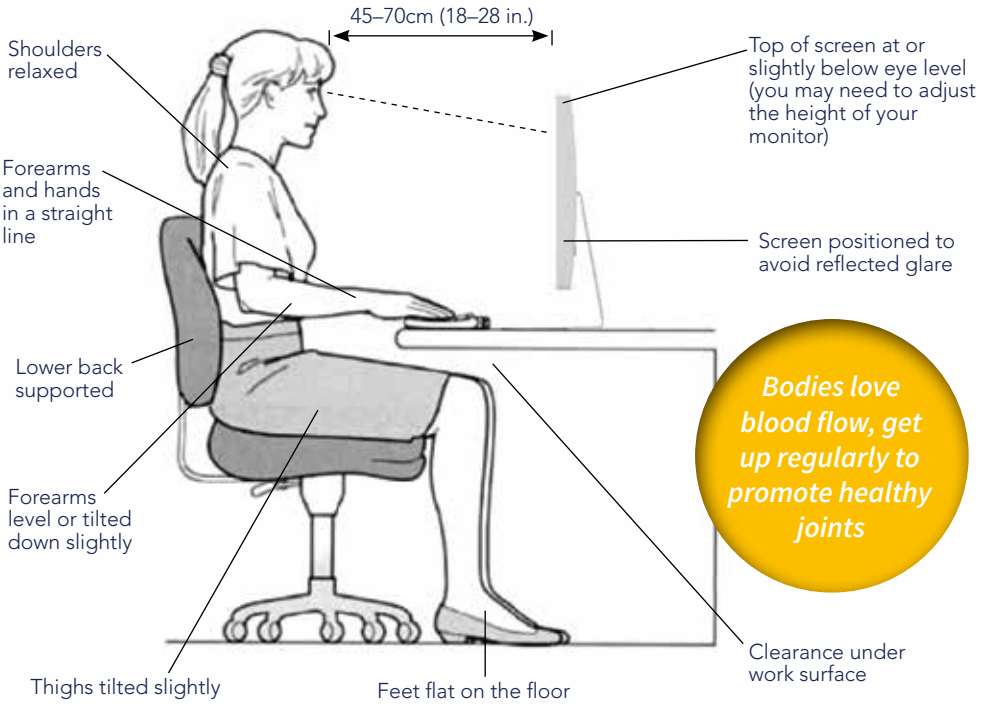
Ergonomics is the study of how a workspace, the equipment used there and the work environment itself can best be designed for comfort, efficiency, safety and productivity.

Poor ergonomics – whether at home or work, can lead to serious musculo-skeletal problems if left undetected.

Try using the diagram and checklist to improve your work station, to help decrease aches and pains associated with poor posture and ergonomics. Try fitting in these simple exercises in small and frequent breaks to increase blood flow, improve posture, and feel better!

Micro-breaks are a great way to reduce muscle stiffness and discomfort.

DESK ERGONOMICS



Bodies love blood flow, get up regularly to promote healthy joints

MICRO-BREAKS

Micro-Breaks is designed to use the opposite movements, muscles and postures to those used in your work.

These correct muscle imbalances, keep you alert and reduce risk of injury.

POSTURAL CUES
1. Head high, chin in
2. Raise sternum, set shoulder blades
3. Kegal on

ARMS & FINGERS
- Extend arm down at 45° & open fingers
- Gently side bend neck

> Repeat once or twice as part of the 100 sec each 30 min

STRETCH-UP
- Clasp fingers and reach hands forward and then up

> Repeat once or twice as part of the 100 sec each 30 min

SHOULDER BLADES
- Open arms & hands
- Gently draw shoulder blades together

> Repeat once or twice as part of the 100 sec each 30 min

INVISIBLE HUGS
- Start with arms in hug position
- Open arms wide

> Repeat once or twice as part of the 100 sec each 30 min

FRONT HIP
- Keep feet straight ahead
- Bring one hip to front
- Stay tall, tuck tail under

> Repeat once or twice as part of the 100 sec each 30 min

BACK BEND
- Stand tall with hands on back of hips
- Gently lean backward

> Repeat once or twice as part of the 100 sec each 30 min

100 seconds
EVERY
30 minutes

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SIDE BEND
- Stand tall & bend to one side
- Can take arm over, or not

> Repeat once or twice as part of the 100 sec each 30 min

ROTATIONS
- Hands across shoulders and rotate torso in each direction

> Repeat once or twice as part of the 100 sec each 30 min

SHOULDER CIRCLES
- Roll shoulders forwards and backwards

> Repeat once or twice as part of the 100 sec each 30 min

Key points:

MAINTAINING GOOD POSTURE FOR ALL EXERCISES

> Stand straight
> Chest high and wide
> Chin in
> Eyes looking forward
> Shoulders back and down
> Feet hip width apart
> Knees slightly bent

- **Stop if you feel dizzy, uncomfortable or experience any pain.**
- **Always perform slow and gentle movements.**

Strong before surgery – *"Prehab"*

With a steady increase in the amount of total knee and hip replacement surgeries occurring within society, it seems that people are becoming so absorbed in the rehabilitation process that often prehabilitation is overlooked.

Prehabilitation! What is this you might ask?

The first question a patient will ask their surgeon is "how long until I am able to walk?" This is well and good, but the success of your surgery does not only rely on the professional skills of your surgeon, but also your compliance as the patient to complete your rehabilitation; it's a 50/50 method.

So "prehab" is a relatively new concept in the rehabilitation and orthopaedic world. Basically it is an exercise prescription program that is commenced 6 weeks (or longer) prior to surgery that strengthens the muscles and surrounding structures of the joint. The concept, and proven researched method, is that by going into your surgery stronger your rehabilitation process will be significantly quicker post-surgery. You will get back to activity and functional independence sooner rather than later and usually at a higher function.

How effective is "prehab"?

A study conducted by Harvard Medical School found that those who participated in an active water and land based exercise program prior to their knee and hip surgeries, including strengthening, aerobic and flexibility exercises, reduced the need for inpatient rehabilitation by 73% post-surgery. Of course there will be protocol rehabilitation due to the common invasive surgery methods. However it makes sense, being stronger before surgery will make your recovery process easier.

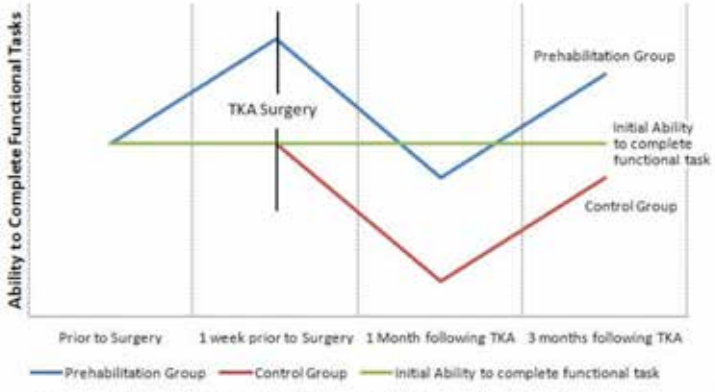
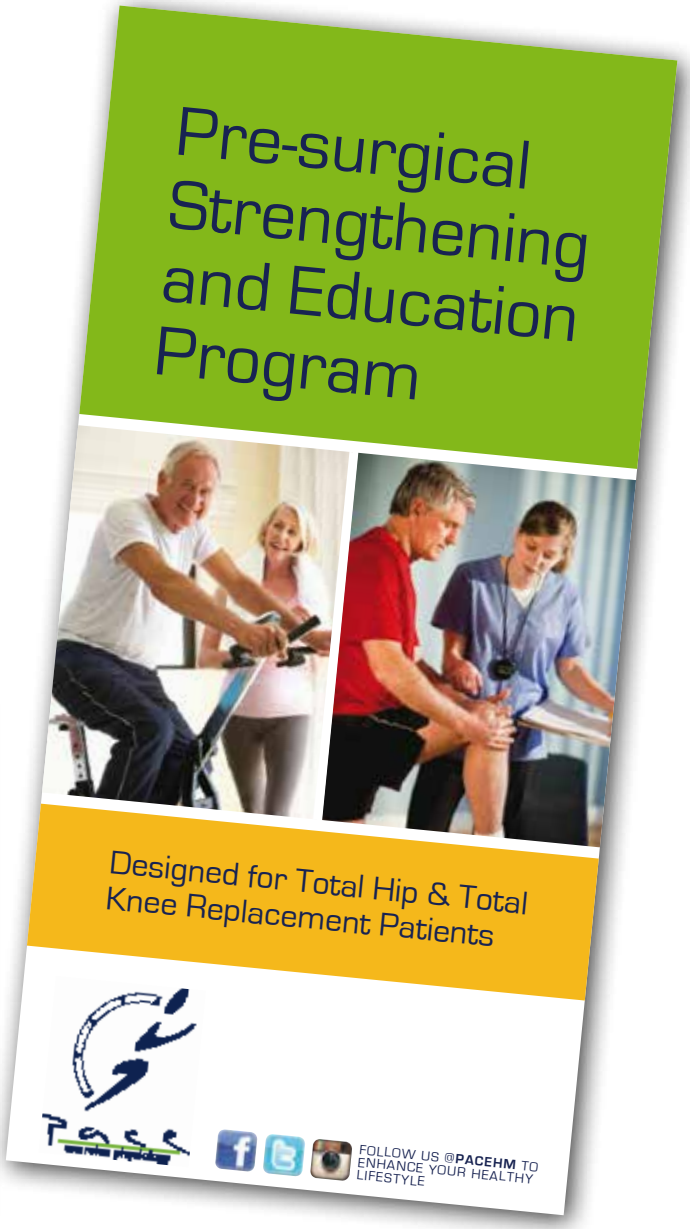


Figure 1. Theoretical model of the effect of prehabilitation on the ability to complete functional tasks among TKA patients (adapted from Topp et al. (2009)).

Have a think about the first five days post your knee surgery. Patients are expected to be up and walking and climbing some small steps before leaving hospital. The pain will be lessened due to your "prehab" and your ability to climb stairs will be increased.

It all makes sense, do the work before surgery and it will pay off!



Achieving long term success – *A how to guide*

Why is it that some people seem to achieve every goal they set for themselves, whilst others seem to be constantly chasing the unachievable?

Here's four quick strategies you can put in place to change best intentions into achieved outcomes. These can be applied to any aspect of your life, from physical activity and nutrition for long term health improvements, to financial savings or hobbies at home.

1 Define your goal, and why it is important to you.

a. **SMART** goals

Specific
Measurable
Achievable
Realistic
Time Framed

   i. A SMART goal should address each of the above points.

b. Put steps in place, changing it from a goal to a plan.

   i. Plan out how and when you will achieve the processes needed for the outcome. Eg. Book in a morning walk every morning at 8am with a walking partner.

   ii. The goal is now a plan. This vision should be your driving force, and used when making decisions about physical activity and nutrition, if you really believe in it then it should help with motivation on those hard days.

2 Identify enablers & barriers.

a. Make a list of the things that will stop you from achieving your goals (barriers to success). This may include lack of time due to other commitments, stress, bad weather, etc.

b. Now make a list of solutions to overcome those barriers.

c. Make a list of the things that will help you to achieve your goals (enablers). Eg. A dog that has to be walked, an encouraging friend, etc. Stay focused on these things, and aim to build on this list.

3 Take a glass half full approach to the situation.

a. Stay focused on the processes (your step by step plan from point 1) as opposed to the outcomes (long term goal). Celebrate every small victory. Remember long term change is about progress not perfection.

b. Don't feel like you have failed if you have a bad day, remember all the good days you have had, and take steps to re-establish good habits.

c. You are more likely to succeed if you are in a positive and happy mindset. Enjoy the process.

4 Create habits, and put a structure in place that will support these as long-term changes.

a. Enlist a friend or family member to help you achieve your goal.

b. Complete your physical activity at regular times of the day to form habits/routine. We don't want to rely only on motivation, as we will have up and down days.

c. Plan and record your desired physical activity. Eg. Book it in your diary when you will walk, mark it off on your calendar once you have achieved it.

d. Create meal plans and set time aside to prepare good food. An easy strategy is to cook large meals, then divide into portions and put in the freezer for days you don't have time to cook a healthy meal.

Active body for a healthy mind

How movement combats depression and anxiety…

3 million Australian's are currently living with anxiety or depression, with 45% of Australian's expected to experience some form of mental health disease in their lifetime. Anxiety is the most common mental health problem in Australia, with depression the leading cause of disability worldwide. While depression and anxiety are different conditions, it is not uncommon for the two to occur at the same time.

Regular exercise has been found to alter the levels of several neurotransmitters in the brain; including serotonin, dopamine, acetylcholine and norepinephrine. These changes help to improve symptoms of depression, lift mood and libido, decrease anxiety and stress, improve sleep patterns and appetite as well as the other well documented benefits of physical activity such as increased metabolic rate for weight management and decreased risk of chronic diseases. This improved mood is related to an increased release of endorphins, which is commonly referred to as a post exercise high.

Exercise does not need to be vigorous to be helpful for depression – a brisk walk of just 10 minutes can be beneficial. Pharmacotherapy (medication) targets the same pathways and neurotransmitters in the brain as discussed previously. That is to say, medication aims to replicate the natural changes seen to brain chemistry following exercise.

Research is now showing that physical activity has as strong of an effect as medication in dealing with symptoms in mild to moderate depression patients. Deslandes et al., 2009 concluded that exercise is an effective treatment for depression, and that physical activity may have a protective effect in preventing depression.

"Individuals who lead physically active, healthy, lifestyles have decreased symptoms of mental illness and increased feelings of self-worth and body satisfaction." *Beauchemin 2008.*

Exercise also has the benefits of improving overall health and wellbeing, and empowers the individual to adopt a pro-active role in their own mental health, which can help to further boost self-esteem and self-efficacy. Exercise as a form of therapy gives improvements in both mental and physical health outcomes *(Young, S. 2007)*. "A recent study has shown the overall prevalence of depression in the elderly to be 22%, and that a sedentary lifestyle is significantly correlated to depression morbidity." *(Blay et. Al, 2007)*. Blay also states that regular aerobic and strength-training activities of light or moderate intensity can result in up to a 50 per cent reduction in symptoms of depression or anxiety, especially for women and older people.

"Exercise has shown to be as effective as medication or psychotherapy, particularly in the long term. When you consider that up to 59% of people stop taking antidepressants within three weeks of the drugs being prescribed, exercise may be the only option for some."

One study found that on average people with depression tend to exercise only half as much as their non-depressed counterparts. Combine this with a proven link between obesity and depression *(Konttinen et al, 2010)*, and it is clear to see that patients experiencing depression are also at a greater risk of co-morbidities such as heart disease, stroke, type 2 diabetes and some forms of cancer. Milani et al, 2011, found that 42% of cardiac rehabilitation patients will experience some form of depression, and Dang concluded that this depression can affect quality of life as well as the patient's ability to recover from co-existing medical conditions. While exercise can help to manage both of these conditions, often people with depression are less inclined to be physically active as they lack motivation or energy. A sedentary lifestyle increases the risk of depression and depression increases the risk of a sedentary lifestyle.

Whether depression precedes or follows chronic conditions is specific to the individual. Due to the insidious nature of many of these chronic conditions it is impossible to determine a causal relationship between depression and chronic conditions, other than to say they are highly correlated. However, the benefits of exercise in the management of an individual's chronic condition and depression is undeniable.

So is exercise right for you? One study found that 85% of people with mental health problems who had tried exercise found it helpful.

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Not sure where to start?

Anything is better than nothing, why not use the setting goals article in this magazine to help make a plan.

Our favourite tips in getting started are:

- Download favourite music to exercise with
- Go with friends or family members
- Find an activity you enjoy
- Schedule 3 sessions weekly
- Start small

THE STORY BEHIND HIP PAIN

Do you have pain that is located on the outside of the hip and thigh, or in the buttock? Does the pain get worse with activities such as walking and stairs? Do you have pain with lying on the affected side? If yes to these questions, then you may have greater trochanteric pain syndrome (GTPS).

GTPS is a condition previously known as trochanteric bursitis, is a common condition that occurs in up to 25% of the general population. It is characterised by persistent pain and tenderness over the bony prominence of the hip called the greater trochanter. [1] The cause of the pain is not always clear, once it was thought to be due to inflammation located over the hip bone known as the tochanteric bursae. However recent research has now found there can be various causes of GTPS including, problems with the muscles and tendons of the buttock muscles known as gluteus medius and minimus [2] and tightness and issues with the band on the outside of the leg known as the Iliotibial band. These findings show that swelling does not always occur in the trochanteric bursa but within the gluteus muscles and surrounding tissue.

The main symptoms are pain and swelling over the outside of your hip over the bony prominence of the hip called the greater trochanter. Pain may also extend forward into the front of the thigh or groin and into the buttocks. The pain is often worse at night lying on either side and may be aggravated by walking, particularly up hills and stairs, standing on one leg, prolonged sitting, sitting with crossed legs and there is often some pain and stiffness for the first few steps after rising to stand.

GTPS is more common in women than men (with 4:1 ratio female to male), particularly in women aged 50-70

years.[3] This is found to occur due to the greater hip angle and reduced lean muscle mass of the gluteal, leading to more onset of symptoms.

Why does it happen?

Sometime you may not be able to identify an accident or injury that started the problem. It might have occurred as a result of an accumulation of a number of small things, like poor postural habits, a gradual reduction in general fitness and muscle strength, and a gradual increase in weight over time or from repetitive movements of the lower limb like jogging.

Loading habits tend to be a primary factor in the development of GTPS. The gluteal tendons like regular loading patterns to stay healthy and pain free, either too much or too little loading can cause problems, and a lack of activity can cause gradual deterioration. For example a rapid increase in the tendon loading by going for a long run, hike, walk up hill and stairs without previous training may overload the tendon, and those who are not active and become sedentary may experience muscle and tendon deteriorations. Either way the gluteus tendons suffer and eventually pain is experienced.

Excessive compressive loading of the gluteal medius and minimum tendons are also thought to be important factors contributing to GTPS. These two muscles tendons insert to the greater trochanter and sit beneath a thick fibrous band called the illitobial band or ITB. This thick band starts at the top of the pelvis and runs down the side of the thigh, and joins to the knee. When the gluteal muscles are not working efficiently this band is put on tension and it will wrap tighter around the greater trochanter and cause compression of the underlying tendons. Often this takes many years of compression before gradual deterioration of the tendon becomes painful.

The gluteal muscles are primarily responsible for moving the hip and stabilising the pelvis during activity and are particularly active during walking, running, jumping, climbing stairs, lunging and squatting. If the gluteal muscles are not strong enough to adequately perform their role movement dysfunctions occur placing increase loads on the hip, spine and surrounding tissues. As a result GTPS is also known to have a strong associating with lumbar back pain. A recent study showed that 20% of people with GTPS were also found to have instability issue around L1-L3 area.[4]

Treatment

Depending on the length and severity of the symptoms, there are different options for treatment. The goals of treatment are to reduce the inflammation/pain and restore normal mobility and muscle strength. Conservative treatment may include non-steroidal inflammatory medications, corticosteroid injections, and a corrective exercise program. It is proven that 90% of GTPS patients will respond with conservative measure alone, which includes exercise, behaviour modification including weight loss.[5]

How can exercise help?

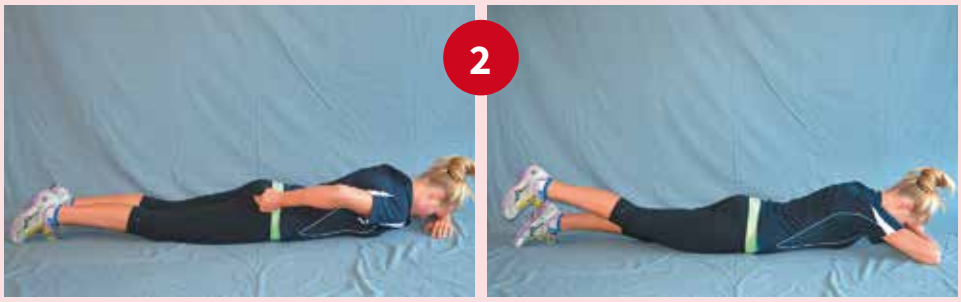
Exercise has an important role in managing GTPS, and literature shows exercise provided the best long term outcome for tendon pain. Progressive exercises help to strengthen the gluteus muscles around the hip and restore normal mobility. Core stabilisation is as important as strengthening the hip muscles, because if the pelvis and spine are not stable then extra forces are placed through the hip. The role of exercises has an important focus to correct any movement deficiencies responsible for the pain. An exercise physiologist will conduct a detailed movement assessment to identify the root cause which may be a muscle weakness, tightness, deconditioning, muscle atrophy or poor balance.

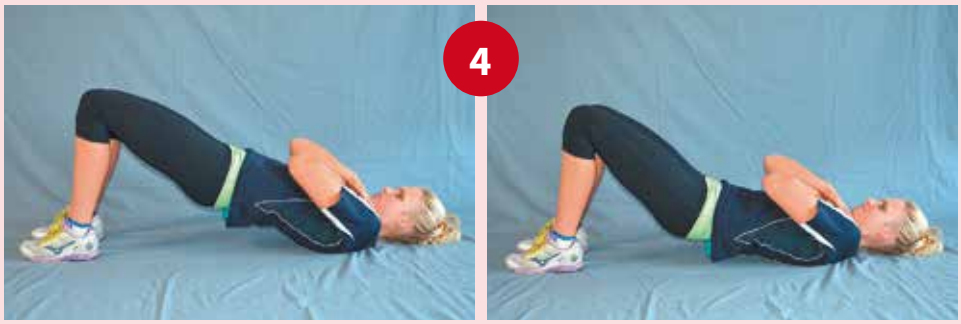
EXERCISES

The following exercises are prescribed to help manage GTPS, with the goal to wake up the gluteal muscles and activate the core muscles. These exercises can be performed twice a day. You should discuss the suitability of these exercises with your exercise physiologist prior to beginning.

TIPS TO AVOID COMPRESSIVE LOAD ON THE LATERAL SIDE OF THE HIP

> Do not sit crossed legged
> Avoid sitting on a low chair
> Try to avoid laying on affected side
> Avoid stairs and sitting for long periods of time





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1. BUTTOCK SQUEEZES

> Lie on your tummy
> Tuck pelvis under
> Squeeze your buttock cheeks together (keeping the leg muscles relaxed)
> Repeat 30-40 times
> Variation progress to knees bent in

2. HIP EXTENSION

> Lie on your tummy with leg straight
> Squeeze one buttock muscle (pressing the thumb into the gluteal can assist)
> Keeping the pubic bone into the floor, slowly extend one leg off the ground
> Avoid arching your back when the leg extends, it should be a small movement initiated by the buttock muscles only
> Repeat 10 each side for 2 sets

3. KNEE LIFTS

> Lie on your back with knees bent in
> Find neutral spine where the hip and pubic bones are aligned
> Without moving the spine, lightly draw up the pelvic floor muscles
> Hold for 10-30 seconds
> Variations: hold the pelvic floor contraction and slowly raise one knee, keeping pelvis still
> Repeat 10 each side

4. BRIDGES

> Lie on your back with knees bent in and feet parallel
> Squeeze the buttock muscles and slowly lift the hips (about 5-10cm) off the floor
> Keep squeezing the buttock for 5 seconds
> Slowly lower
> Repeat 10-20 times

So get your buttock muscle strong and you may just help your hip pain.

Contact your closest **PACE Exercise Physiologist** for more information.

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Resistance training for long term health

It has long been assumed that resistance training, sometimes thought of only as weightlifting, is for athletes and those wanting to be the next Arnold Schwarzenegger.

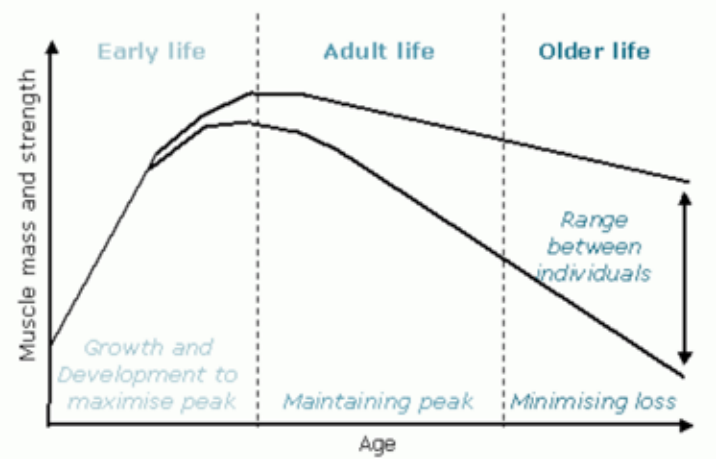
The truth, however, is that anyone can benefit from resistance training regardless of their age, gender or what their fitness goals may be. It is good for long-term health and assists with the management of chronic disease such as type 2 diabetes, osteoporosis and cancer.

Exercises associated with resistance training are completed by resisting an external force. The equipment required includes weights, bodyweight and elastic bands, all of which are available to you in your own home.

The process of ageing results in a natural decrease in function and structural deterioration. Osteoarthritis is an example of this. These age related physiological changes have a big impact on the ability to perform activities of daily living (ADL) and maintain independence.[1] Muscle mass, bone density and metabolic rate all decrease with age.

SARCOPAENIA

One of these age related changes in function comes from a loss of muscle strength and mass, also known as sarcopaenia. From the age of 50 we lose between 1% and 5% of muscle mass each year.[2] A decrease in muscle mass is associated with a reduction in muscular power, strength and endurance. This has a significant impact on walking mechanics, falls risk and the ability to undertake ADL such as climbing stairs. Numerous studies have provided strong evidence that older muscles can adapt to resistance training, thus minimising the effects of sarcopaenia.[1]



BONE DENSITY

Bone density peaks during the mid to late 20s. By the age of 40, our bone density declines by 0.5% per year. It is more accelerated in post-menopausal women, who lose approximately 2-3% per year. This becomes a major risk factor for the development of osteoporosis. It has now been suggested that almost one out of every two women will be affected by osteoporosis during their lifetime.[3] According to the American College of Sports Medicine (ACSM), multiple studies have reported the positive effects resistance training has had on bone density.[1] One such study found a 1.96% increase in bone density without any change to the body

Resistance training for long term health cont...

weight of women undertaking resistance training compared to women who did little physical activity.[4]

METABOLIC RISK

Ageing has an effect on the metabolic system and therefore affects our metabolic rate, glucose tolerance and insulin action. This leads to an increased risk of type 2 diabetes and a higher risk of obesity. Metabolic rate, or metabolism, is the amount of energy needed to sustain bodily function and ADL. When more energy is consumed in the form of food compared to energy expended, there is an energy surplus which is ultimately stored in the body in adipose tissue (fat cells). This results in weight gain. As we age it becomes easier to store surplus energy, particularly if our diet does not adjust.[3] This decrease in metabolic rate is in part due to sarcopaenia. Some investigations have reported increases of 7–9% in metabolic rate after 12–26 weeks of resistance exercise.[1]

Glucose tolerance is the ability for the body to move glucose or 'sugar' from the blood stream into the muscles for storage and then use. This process diminishes with age, resulting in an elevated level of glucose floating around the blood stream. This results in potential damage to the heart, blood vessels, kidneys and eyes.[3] Part of this diminished capacity is that insulin is not able to effectively transport glucose into the muscle as it had done previously, and a reduction in muscle mass means that there is less storage capacity. The mechanisms by which insulin transports glucose into the muscle is complex. One benefit of resistance training is that it creates a separate pathway for glucose to be transported into the muscle for storage.[2,3] This reduces the pressure placed on the pancreas to constantly produce insulin as a response to elevated blood glucose levels. Reducing the effects of sarcopaenia through a resistance training program allows for a greater storage capacity within muscles reducing the amount of glucose floating around the blood stream.[1]

RECOMMENDATION

ACSM recommends adults participate in resistance training two to four days per week depending on experience levels. The main focus should be on building muscular strength and endurance. To achieve this the aim should be to complete two to three sets of 8 - 15 repetitions for each exercise. It is also important to rest between sets (90-120 seconds) to get the full benefit from resistance training.[5]

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“I was not entirely sure how our journey would pan out”

Baby Riley By Stephanie Kums

(Malvern Director and Senior Exercise Physiologist)

In November 2014, my husband and I were ecstatic to find out that we were pregnant with our first child. This was a great delight as we got married in June the previous year, and we were very keen to be parents. At the time I was heavily involved with the Malvern PACE clinic, managing the clinic and seeing a full time load of clients. With the work comes many early mornings and late nights, although I love my job, I knew this would bring great changes and adjustments to our life; however I was not entirely sure how our journey would pan out.

It was the date for our 20 week scan and we were both so happy and excited to see our new little baby. Everything looked great on the scan, the baby was sucking its thumb and kicking around quite energetically. The sonographer asked if we wanted her to look at anything else, at the time she was around the baby’s face and I asked her to look at its lip. My husband has what I called a “dodgy lip”. We had never spoken about it before this scan and I am still not quite sure why I asked, but I am so glad I did. At that moment we found out our baby had a cleft lip and possibly a cleft palate which was similar to his fathers. At the time I felt fine as I knew we had a baby with a low chance of any other complications. We actually had a little laugh as we could clearly blame his condition on his father, same side and all.

Then I did the worst thing possible in the car on the way home, I googled cleft lips and palates and all these horrific photos appeared! It was then that I felt saddened for our little baby who I knew was going to be different. Was our baby going to look ok? Was it going to have speech problems? All these questions raced through my mind and I found myself apologising to my baby. So I had my little motherly moment, but over the next few weeks I learnt so much about cleft palates. We had met with our surgeon Andrew Greensmith and I joined Cleft Palate Victoria support group along with the cleft Palate co-ordinator from the Royal Children’s Hospital (RCH). I met with other mums who had experienced first hand the challenges with cleft palate babies. So by about 30 weeks we had our team in place to help us and our little baby.

I had taken 4 weeks off work prior to our due date (8th August), and by my second week at home I had cleaned out every room in the house, and was missing work immensely... lucky for us my waters broke on 30th July, and after a 20 hour labour we met our baby boy, Riley.

At the first sight I was a little shocked with his unilateral cleft lip as it was larger than I thought (around 2.6cm) and we were told he also had a large gap in his hard and soft palate. We were not sure how Riley was going to feed, but he adapted well from a special Huberman bottle. Riley surprised all the midwifes and nurses with his feeding which can be the biggest challenge with cleft babies as they don’t have enough strength or suction to feed. But Riley got it straight away. We did have funny moments of feeding while trying to avoid milk coming out of his nose.

By the second day Riley was feeding every 3 hours and sleeping for 3 hours straight. What more could we ask for from a new born. My husband was gorgeous, he was so proud of his son

and the cleft palate never bothered him. Whereas I on the other hand took a little more time to come to terms with it.

We met the surgeon one week after Riley was born to discuss our options. He suggested a NAM (Nasoalvelar Molding) which is a craniofacial treatment performed by a specialist paediatric orthodontist at the RCH. This treatment required Riley to wear a moulded plate 24 hours a day to move the gum and palate closer together, this then enabled the surgeon to minimise the amount of invasive repair work and create a better shape nose. This plate was attached with external tape and elastic bands. Riley and I visited the RCH every Friday to have adjustments which would help close the cleft gum and palate. We were astounded with the fast progress, by the first week the gum had closed by 4mm.

Each week we ventured into the RCH and we met many other sick children and mums, it was a very eye opening experience for me and made us realise how lucky we were to just be dealing with a cleft lip and palate.

After 4 months of treatment and weekly visits to the RCH Riley’s gum was touching, and we got a call to inform us we had a surgery date scheduled for the 4th February. Things were moving ahead and we were very excited to have our little boy’s lip fixed. Riley underwent a 6 hour surgery to repair his hard and soft palate and reconstruct his nose. I will never forget the first time I saw him after surgery. I held him in my arms while he woke up from the anaesthetic and he smiled in pain with a beautiful nose and lips. This was our new boy! After 4 days we were discharged from hospital with our handsome new boy who looked amazing with his new lips and a symmetrical nose.

He is the most wonderful boy and has taken all of this in his stride. We are so lucky to have a fun and happy little boy in our lives. He is now free of all orthodontic plates and fascial taping until he is one, and then we will undertake his second operation.

Resistance training for adolescents

When is it appropriate for children to perform strength training?

Resistance training at any age is a highly effective way to improve sporting performance, reduce injury risk, improve quality of life and decrease risk of chronic disease.

Strength/resistance training in children and adolescents has been unfairly treated in the past, largely due to misinformation surrounding its effectiveness and safety.

So is weight training safe for my child to perform? Is there any real benefit to be gained? Will it stunt their growth or increase their risk of injury?

A common concern people have with resistance training for youths is the risk of injury and stunting growth. It is a common myth that children shouldn't start lifting weights until they are fully matured as it stunts their growth due to damaging the growth (epiphyseal) plates, which are responsible for creating growth of the long bones. These growth plates are highly resistant to shearing forces, which are the kind of forces put through the bones during activity. Research has identified that injury rates in youths performing resistance training are lower than injury rates in competitive sports. When we look at injury rates in competitive sports, it is also documented that injury rates are lower in the youths who complete resistance training, compared to their non-trained counterparts. That is to say, adolescents completing resistance-based training are less likely to be injured in the gym than in sport, and less likely to be injured in their chosen sport if they regularly complete resistance training at the gym.

So why are these injury rates reduced?

When resistance training is performed correctly, including proper technique and coaching, appropriate exercise selection, suitable load and repetitions, rest periods and tempo (speed of movement), it will create specific adaptations to the athlete's body and more importantly neural system. The main improvement we aim to achieve in coaching youths is improved development of motor control/patterns. By improving how they move, we can achieve greater strength, speed and power, which can be translated to the sporting realm. This improved movement pattern also means the young athlete is better at jumping, landing, running, etc in a safe and effective manner. That is to say they more effectively disperse the load between working muscles, opposed to over working muscles, or incorrectly loading joints. Appropriately designed and well-supervised resistance training programs actively prevent injury by increasing the strength of supportive tissues (muscles, tendons, ligaments) as well as improving movement patterns such as running, jumping and landing.

"You can't teach an old dog new tricks", an age-old adage that couldn't hold more truth. An adolescent athlete has a greater ability to learn and perfect new skills than their adult equivalent. Why? Our capacity to learn and adapt is greatest at a young age, particularly during adolescence.

This occurs through a concept known as neural plasticity, referring to the brain's ability to adapt, learn and take on new skills such as learning a language. It is at its highest during adolescence, hence our capacity to learn so fruitfully during this period of development.

For this reason it's important to lay the foundations of correct movement at a young age, particularly fundamental movement patterns. An adolescent athlete that engages in resistance training and learns complex movement patterns, such as squatting, will be far more efficient and resistant to injury than their non-trained counterparts.

Becoming more efficient opens up an athletes potential to be stronger, run faster, jump higher and work (train) for longer periods, the building blocks of athletic performance.

There are long lasting benefits of completing resistance training at a young age, including a protective effect against osteoporosis through increased bone mineral density at a developmental age, as well as a protective risk factor against obesity later in life, due to increased lean muscle mass.

Resistance/weight training can also significantly improve self-esteem, confidence and social interaction. Emotional health can be a serious issue during adolescence so anything that positively influences their self-image and sense of identity throughout development is invaluable and will have flow on effects to all aspects of their life.

The focus of any good adolescent resistance training program won't be lifting heavy weights, rather on continually challenging and developing their motor control & coordination, mainly controlling their own body weight.

It's important the individual learns to move efficiently and feels confident before adding any weight or loading.

PACE specialises in developing individualised programs, across all ages and sports, to minimise the risk of injury and give our athletes that competitive edge we're all after. For more information contact us at info@pacehm.com.au

SHOE REVIEWS 2015

Written by sports podiatrists Paul Karak and Andrew Apolloni

2015 brings the year of change in sporting footwear, with shoe companies releasing updates in cushioning, stability and breathable uppers in many of their models. You cannot now assume that the previous model in a particular brand will provide you with the same correction or performance as its predecessor. Lately, we have seen the opposite, where a particular model of shoe in the current year is worse in support or cushioning than the previous model. Walking into a shoe store now is a difficult and often mind blowing task. With the cost of shoes today, the choice needs to be right. A shoe assessment with one of our sports podiatrist can reduce this angst and provide you with the correct shoe for your particular sporting event, avoiding injuries and the need to change your footwear too soon.

Here is a summary of some our favourite shoes for 2015. It will provide you with a basic insight into footwear technology, however the correct shoe entirley depends on the individuals weight, sporting and biomechanical needs.

WALKERS

Brooks Addiction Walker
Category : CONTROL
Mens : 7-15, Width 2E-4E | Womens: 6-12, Width B-2E
RRP $230.00

The Brooks Addiction Walker is built on a support running shoe midsole and is designed to provide maximum stability for the foot. This shoe suits people who have a tendency to roll in excessively and are on their feet for long periods of time. Built with Brooks' famous Bio Mogo foam, the shoe provides excellent cushioning without compromising on the support. The Addiction Walker comes with lace fixation or velcro.

Brooks Dyad Walker
Category : NEUTRAL
Mens size 8-15 Width 2E | Womens size 6-12 Width B-D
RRP $220.00

The Dyad Walker is a perfect walking shoe for neutral foot types or mild pronators with orthotics. Built with a straight last, the shoe has excellent stability and is able to accommodate an orthotic easily. Constructed with Brooks Bio Mogo foam the shoe provides excellent cushioning. The Dyad Walker is constructed with Leather uppers.

ASICS-180TR (Cross Trainer)
Category : CONTROL
Mens size 7-16 Width 2E to 4E | Womens size 6-13 Width D-2E
RRP $160.00

The Asics-180 TR is a great cross trainer again built on a running shoe midsole. Like the Asics high end running shoes the 180 TR is constructed with Duo Max foam for additional mid-foot support. This is a great shoe for those with orthotics or if long periods of time are spent standing at work. This season the shoe comes in both leather and mesh upper options. Its outsole suits both a walker or cross training individual.

BROOKS LIBERTY 8
Category : NEUTRAL
Mens 7-15 | Womens 6-12
RRP $140.00

The Brooks Liberty is an excellent cross over shoe for activities like walking, tennis and gym. Its light weight mesh upper breathes well and provides excellent comfort yet maintaining support. Its midsole is well cushioned and its outsole caters for tennis, indoor sports, and walking. It accommodates orthoses well and is ideal for a neutral or slightly pronated foot type with an orthoses.

RUNNERS

ASICS GT 1000 V3
Category : CONTROL
Mens 7-17, Width D, 2E, 4E | Womens 6-12 Width B
RRP $160.00

The Asics 1000, although not their flagship control shoe is a work horse. It provides excellent stability, and cushioning, has a great outsole for traction, and accommodates for varying foot widths. Its upper breathes well and it accommodates an orthotic comfortably. Its dual density posting is positioned more posteriorly extending through the mid foot, making it perfect for the heel to mid foot striker. The 1000 maintains its consistency across models and provides no great surprises.

BROOKS VAPOR 2
Category :CONTROL
Mens 7-15 Width D | Women's 6-12, Width B
RRP $179.95

The Brooks Vapor again is not top of their control shoe range, however it provides a great mix of stability, cushioning and durability. It is a little more shallow than the 1000 making a orthotic harder to fit, however with the positioning and durometer of the dual density midsole it makes an excellent control shoe. The upper breathes well and the outsole performs well in dry and wet conditions.

MIZUNO INSPIRE
Category : CONTROL
Mens 8-14 Width Standard | Womens 6-11 Width Standard
RRP $199.00

The Mizuno Inspire is a very light running shoe coming in at 270g (mens) and 230g (womens) respectively. This is around 50–60 g lighter than most shoes in this category. However it still manages to maintain stability and a smooth, quicker transition from contact to toe off. Much of this is due to its double fan wave plate technology. It has a comfortable upper and fits an orthotic well. It is suitable for the moderate pronator with an orthoses, or mild pronator without. A consistent shoe year to year.

MIZUNO ENIGMA
Category : NEUTRAL
Mens 8-14 Width D | Womens 6-11 Width B
RRP $ 239.95

Mizuno Enigma although a little bulky provides excellent cushioning both for rear foot and midfoot strikers. Its wave plate and deep flex grooves in the midsole provide a great platform to translate load smoothly through to propulsion. It can accommodate an orthoses and its upper holds well to support the foot on the midsole. A very durable running shoe with plenty of cushioning.

BROOKS DEFYANCE 7 AND 8
Category : NEUTRAL
Mens 7-13, 14, 15 Width D | Womens 6-13 Width B
RRP $199.95

The Brooks Defyance is one of the most stabile neutral shoes on the market. It provides the ideal firm platform for long distance running, without compromising too much on cushioning. It is durable and fits well, with excellent outsole traction. The Defyance 8 is softer than its predecessor which is not preferable, unless you are willing to compromise some stability for cushioning (foot type dependant). Both are still available, however the 7 may need to be ordered in. The Defyance fits an orthotic well, and suits a neutral foot type or mild pronator with an orthoses. It may feel a little "slappy" to begin with, however it moulds in well and softens after a few runs.

KARAK & WILSON
PODIATRY GROUP

For further information or bookings please contact **Stonnington Podiatry** on 9576 0467 or **Karak and Wilson Podiatry Group** on the Mornington Peninsula at 9776 5576.

Interview with **Loma Tilders**

1. HOW LONG HAVE YOU BEEN COMING TO PACE FOR?

   I have been attending PACE in Mornington for 2 years now, which I can't believe how quickly the time has passed.

2. HOW DID YOU COME TO BE REFERRED OR ATTEND PACE?

   I had a total hip replacement in 2013 and was referred to PACE for specific rehabilitation. I have been working with Sam Buchanan from day one and throughout this journey and I could not be happier with my progress.

3. HOW HAS YOUR HEALTH IMPROVED SINCE ATTENDING PACE?

   I have seen my mobility improve 100% as this was my greatest barrier prior to my hip surgery. In addition, I have seen improvements in my functional strength and stability which make my normal everyday activities easier and more efficient. As an artist, I was also getting some upper back pain and discomfort, however since my treatment at PACE I have greater posture and less pain.

4. WHY WOULD YOU RECOMMEND SOMEBODY TO PACE?

   I was, and am, continually impressed by the level of knowledge and professionalism the staff at PACE have. Day 1 of my rehabilitation I had full confidence in Sam in knowing that he was giving me the best and correct treatment for my hip.

   As a 'non-exerciser' I would not be able to be in the position I am now with my health if it wasn't for the guidance of the staff at PACE. The atmosphere at PACE Mornington is friendly and vibrant and makes it very enjoyable.

5. WHAT ARE YOUR FUTURE HEALTH GOALS?

   To simply maintain my mobility and the improvements that I have been able to achieve. I believe I still have my best years to come and has only been enhanced with my time at PACE.

Secret Chocolate Procover Smoothie Bowl

SERVES 2

Ingredients:

2 bananas
½ punnet strawberries
1 celery stick
1 cup kale
1 tbs Procover
½ tbs cocao
1 cup ice
6 tbs heaped greek yoghurt

Topping suggestions:

strawberries
kiwi fruit
coconut flakes
homemade muesli

– – –

Method:

Throw all ingredients in a blender and blend until smooth. Pour into a bowl and top with suggested or favourite toppings and Enjoy!

Coconut & Banana Oatcakes

SERVES 2-3

Ingredients:

1 ripe banana
1 egg
1/2 cup milk
1 tbsp greek yoghurt
1 tsp vanilla
1 1/2 cups rolled oats
1/3 cup almond meal
1/3 cup shredded coconut
2 tsp cinnamon

– – –

Method:

Mash the banana in a medium bowl, add the egg, milk, yoghurt and vanilla, whisking well after each ingredient. Add the dry ingredients and mix well. Allow to sit for 15-30mins to thicken. Once thickened, in a non-stick frying pan, press out 3-4 (3 if serving 3, 4 if serving 2) and cook for a few minutes. Carefully flip and brown. Serve with yoghurt and berries. Enjoy!

Recipes supplied by Pro4mance Sports Nutrition
www.pro4mance.com.au

Pro4mance is an Australian owned sports nutrition company that specialise in manufacturing products specifically for endurance sports. Their highly experienced research and development team has formulated products specifically for before, during and after. Based on world leading sports nutrition research, all of their products are simple to use and guarantee athletes absorb the appropriate types and amounts of nutrients/fluids to optimise their performance.

Head to www.pro4mance.com.au/shop and use PACE20 promo code in your shop cart to receive a 20% discount on all Pro4mance products.

Interview Andrew Semetas

“

After nearly 20 years of labouring, constructing landscaping and paving projects in my business, and even longer with my passion of surfing, I have sacrificed my body, specifically my back in the process. You could say that a lot of the damage was caused by not knowing how important core stability and strength are for someone in my line of work.

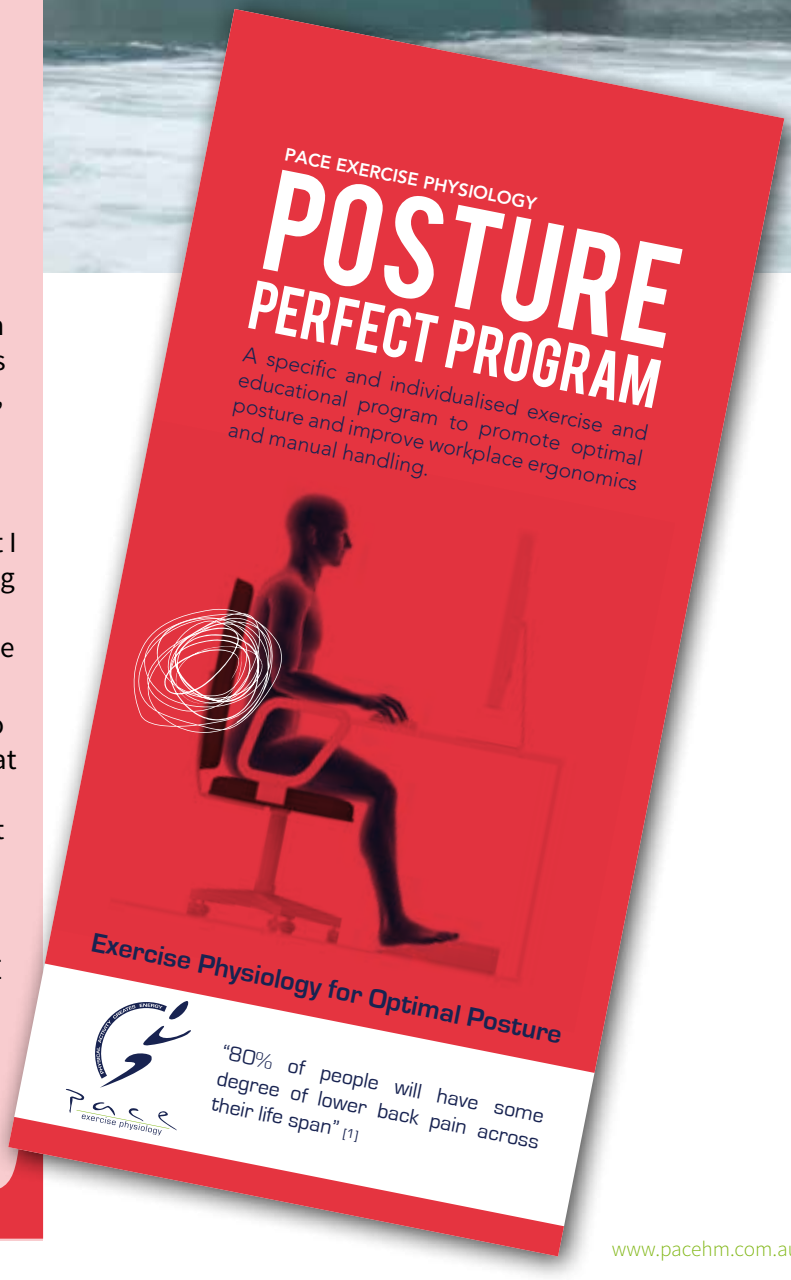
On the 19th February 2014, I underwent a 6.5 hour back operation called Transforaminal Lumbar Interbody Fusion or “TLIF”. The procedure involved the removal of the dissolving and damaged disc between lumbar L5 and sacrum S1 (very common problem in people constantly bending and lifting in long term labouring jobs). A carbon fibre disc was replaced and titanium screws and plates have fused the levels of my spine together instantly.

I was referred to Ryan Poole at PACE Frankston just prior to my op, and was booked in 4 weeks post-surgery, to begin my new training regime, and life style learning to activate my core and build supportive muscles including glutes, abdominals, quads etc.

At my initial consultation I reminded Ryan that I needed to be surf fit and ready for an upcoming surfing trip to Indonesia by mid-August. And even surfing a couple weeks prior to going, if he felt I was ready.

With a combination of technique, focus, cardio and positive attitude Ryan and his loyal team at PACE Frankston got me over the line, and into the “line up” in plenty of time! One of the most fun and challenging activities are exercise’s on the “Indo Trainer Boards”. These boards focus on balance and are fantastic in developing core strength (fantastic for surfing skills). PACE has developed my unique training program, in which I still attend two group sessions per week, along with swimming, surfing and of course landscaping.

Thanks PACE!!



PHYSICAL ACTIVITY CREATES ENERGY

Pace exercise physiology

PACE STUDIO LOCATIONS

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2 FRANKSTON - LIFECARE
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Ph: 9770 2343 Fax: 9770 2276

3 MORNINGTON
Rear 103 Main St, Mornington 3931
Ph: 5973 6109 Fax: 5973 6178

4 MT MARTHA
Suite 5, 34-38 Lochiel Ave, Mt Martha 3934
Ph: 5974 3147 Fax: 5974 3193

5 ROSEBUD PHYSIOTHERAPY CLINIC
40 Boneo Road, Rosebud 3186
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6 MALVERN
73-75 Station St, Malvern 3144
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7 SELECT MEDICAL GROUP
440 Frankston Dandenong Rd, Dandenong Sth 3175
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8 ENDEAVOUR HILLS MEDICAL CENTRE
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9 LANGWARRIN SPORTS MEDICINE CENTRE
83-85 Cranbourne Rd, Langwarrin 3910
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