

Getting more active with pain

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About me...

- **Senior Exercise Physiologist**
 - **At Canberra Injury Management Centre -**
 - A “Pain Management Clinic”
 - Located at the Canberra Olympic Pool Complex in Civic
- >> More on Canberra Injury Management Centre later...

What is an Exercise Physiologist?

- Not a very well known profession....
- Similar level of qualification as a Physiotherapist or Dietitian:
 - A university qualified-allied health professional.
 - Usually 4-5 years of full-time university study.
 - Bachelor degree.
 - Honours, Graduate Diploma or Masters degrees.

What is an Exercise Physiologist?

(continued)

- Specialise in clinical exercise prescription and health-behaviour modifications for:
 - People with chronic or complex conditions – including pain.
 - People with injuries.
 - Apparently health populations, and
 - Athletes.
- Our job is to provide safe, effective and tailored exercise and lifestyle education -
 - To assist in improving one's physical function, health and quality of life.

My experience...

- 11 years experience working with people with injuries or chronic conditions:
 - Rehabilitation at *The Canberra Hospital*.
 - Orthopaedics and head injuries at *The Epworth Hospital* in Melbourne
 - Private practice in Melbourne - *The Sports Injury Clinic*
 - *Canberra Injury Management Centre* since 2010...
- Masters of Applied Science - Clinical Exercise Practice

Why am I here today?

- Special interest in pain...
- Had significant problems with pain myself....
 - **Forearm injury** – packing shelves at Woolworths in 2002, working as a second job...
 - Probably started as a muscle strain or tendon sprain...
 - Evolved into pain when writing and typing...
 - Burning in both forearms.
 - RSI, Occupational Overuse Syndrome?
 - > Cervico-brachial neuropathic pain syndrome

My other pain problems...

- **Upper back pain –**

- On a daily basis
- Started in 2005 doing aggressive exercise from a Sports Doctor?
- Largely postural? Muscle fatigue? Stiff upper back?
- Worse with fatigue...
- Worse when I am stressed...

- **Low back pain –**

- Severe episode in 1997 doing Ju Jitsu – landed awkwardly
- Rare acute episodes since.
- Daily dull ache & generalised stiffness.
- Most effective management tool for me...
 - > Stretching, “cracking my back” and keeping fit and strong!

My journey with pain...

- **Extensive treatment** – mainly for my arm pain...
 - Physiotherapy
 - Osteopathy
 - Acupuncture
 - Reiki
 - Naturopathy, and
 - Psychology
- All provided temporary relief....
....**most benefit from exercise!**

My journey with pain...

- Sparked my interest in learning about pain, how the body works, and how exercise could help...
- Started working as a Physiotherapy Assistant at The Canberra Hospital in 2002
- In 2007, I went back to University to study Sports Science and Exercise Physiology.

I now specialise in...

- Exercise prescription for people with chronic injuries and persistent pain
- Educating and assisting my clients to :
 - Get more active
 - Improve their level function, and
 - Quality of life......despite their pain....

> Basically what this presentation is about

While I generally get pain on a daily basis...

- I understand my pain...
 - I accept that it can't be “cured”...
 - I accept that it's part of my life...
 - I am not worried about having pain...
 - I know how to manage it...
- > These things in themselves help to reduce my pain

The problem of pain...

- Pain is something that everyone experiences.
- Normal, necessary part of life...
- However, when pain become persistent – beyond the usual healing times of tissue – it becomes a problem.
- An estimated 1 in 5 people experience persistent pain.
- Poorly understood by majority of GPs and Allied Health professionals.
- For many patients with chronic pain....
 - There may be no specific treatments for the underlying cause, and
 - There may not be *entirely* effective pain relief available...

The problem of pain... (continued)

If there is no cure...

- No choice but to manage.
- We are all self-managers.
- We all manage in our own way.
- But how you manage your pain is your choice...
 - > How you manage affects your quality of life...

What is your self-management style??

“Getting more active with pain”

- Title of today’s presentation....
- Double meaning:
 1. Getting *more active* physically
 2. “Active self-management” (as opposed to using “passive strategies”)
- All treatments and approaches to managing pain fall within the spectrum....

Active - - - - - **Passive**

Taking a “passive” approach...?

- Being *reliant* on someone or something for relief –
 - “Hand’s-on” treatment – costly? *Is it* curative or just temporary relief?
 - Medication?side effects? costly?
- Waiting for *someone else* to “fix” problem....
 - General Practitioner?
 - Medical Specialists?
 - Insurance company?

Other characteristics of a “passive” approach...

- Withdrawl from activity...
 - Giving up activities that have *caused* pain in the past?
- Resting more?
- Socialising less?
- The disease becomes centre of their existence?
- Feeling helpless?
- Out of control?
- Fearful?
- Giving up?
- More suffering?

....There must be a better way?

“Active self-management”

- Being proactive in day-to-day self-management (24/7)
- Recognising, that while you may not be able to cure your pain...
 - You can control how you manage it...
 - You can control how you react to it...
- Taking responsibility...
- Feeling more in control...
- Feeling more confident...
- Living as full & active life as possible - despite the pain...

>>>....Less suffering?

Key aspects of active self-management

- **Understanding your condition** -
 - The better your understanding of pain – the better your ability to manage it effectively...
 - Reduced fear and worry...

“Knowledge is power”

Key aspects of active self-management (continued)

- **Acceptance -**

- Accepting that your pain may be chronic...
 - There may not be a quick or easy fix or cure,
 - That you may have to learn to live with it
- Usually only comes when the condition has been -
 - Thoroughly investigated, and
 - Relevant treatment options explored.
- Constantly searching for a “cure” or “fix” can lead to frustration and disappointment...
>>> can further “wind-up” the pain system....

Key aspects of active self-management (continued)

- **Setting goals of what you want to achieve -**
 - In the context of physical activity -
 - Knowing what you want to achieve make it easier to decide what exercises to do...

Key aspects of active self-management (continued)

- **Taking steps to manage your condition positively....**
 - **Keeping as active as possible !**
 - Keeping active is one of the keys to managing your pain.
 - Is a cornerstone of “active self-management”.
 - 50 years ago people with pain or injuries - or recovering from surgery - were advised to rest as much as possible
 - We know now that keeping active....
 - Promotes recovery.
 - Avoids the disuse effects of excessive rest.
 - Helps people to regain function, and
 - Causes the body to produce natural pain-relieving chemicals called Endorphins!

However...

When we have chronic pain, keeping physically active can be challenging....

- But it can be done.
- Hopefully I can give you some ideas and tips...
 - To use exercise – and other forms of physical activity- as an active self-management strategy to help you manage your pain more effectively!
- Happy to email copies of this presentation....

Very quickly....

Some other keys aspects of active self management....

- **Managing thoughts & feelings –**
 - How we think and feel has a profound affects on all aspects of our physiology...
 - When we are frustrated, angry, stressed, fearful, worried or depressed everything - including the pain - can seem worse....

...which is why....

Other key aspects of active self-management...

- **Learning to relax & control negative thoughts.**
 - A key pain management strategy!
 - For many people, **exercise** can be an effective way to:
 - Relax
 - Burn off stress hormones, and
 - Feel more positive.
 - Other active strategies –
 - Meditation
 - “Active” relaxation – such as Tai Chi, Yoga and “Breath Walking”
 - Positive self-talk *“It is your mind that creates this world”*

- *Buddha*

Other key aspects of active self-management... (continued)

- **Managing sleep** –
 - Good sleep restores and repairs the body and physically and mentally
- **Good Nutrition** –
 - What you eat has a direct and immediate affects on your hormone levels, mood and energy levels.
 - Every cell in your body is composed entirely of substances you ingested via your mouth.

Finally....

- Active self-management improves with practice - like any skill!
- Trial & error - Problem solving - trying different approaches – evaluating results – being persistent!
- Self-management does not mean going it alone – get help if you need it

Talking about chronic pain....

- **I'm going to assume you**
 - Have a reasonable understanding of the neurophysiology of chronic pain...and
 - Understand the differences between acute and chronic pain?....
- Not going to go into that today...

...Some brief points about chronic pain
in the context of
physical activity & exercise...

When you have persistent pain....

- 1) It is likely that the original tissue injury has healed, but what remains is a “sensitive” nervous system
 - Changes occur in the way pain messages are transmitted along the nervous system (brain – spinal cord - peripheral nervous system)
 - These changes can amplify the pain signals from the original site of the problem, via the spinal cord to the brain.
>>>> “Central Sensitisation”
 - It’s likely that nervous system has “amplified” or “turned up the pain volume “ as a protective mechanism – ...unhelpful!
 - Fear, worry and negative emotions also serve to “wind-up” the pain system....

When you have persistent pain... (continued)

- The pain messages that the body is producing may be out of proportion – that is, they are no longer a true reflection of the “state” of tissue .
- Essentially - the nervous system has becomes “over-protective” or “over-sensitive”.
- *In addition, the messages coming down from the brain, down the spinal cord to the tissue may not be dampening down the pain signals as they should – “descending inhibition”*
- We call this “neuropathic pain” – as opposed to “noicoceptive pain” which occurs with an acute injury.
- N.B. Neuropathic pain is different from Cancer Pain or Referred Pain.

Acute vs. Chronic Pain



What this means is...

- 1) Increases in pain do not necessarily mean that you have re-injured yourself - or caused further damage.
- 2) It actually very hard to “damage” yourself doing gentle exercise - that you commence conservatively.

In the context of physical activity or “exercise”....

...It's OK to move

...It's safe to move

...you need to move!

Recommended reading....

- ***“Manage Your Pain”*** - Dr Michael Nicholas *et al.*
 - *Self help book written by the pain management team at Royal North Shore Hospital, Sydney.*
- ***“Explain Pain”*** - Dr Lorimer Moseley & Mr David Butler:
 - Written for general public.
 - Easy to understand explanation of the neurophysiology of pain, based on current scientific evidence derived from brain imaging, immunology, psychology and cellular biology.

Different approaches to activity with pain...

Some people with persistent pain ...

- May cease many of their usual activities – hobbies, household tasks, exercise etc – because:
 - It has caused them pain in the past, or
 - They fear that they may be causing further injury or damage.
- Consequently they avoid certain activities as much as possible in an attempt to lessen their pain.

=====> The “avoidance” approach to activity

The “avoidance” approach to activity

This can create a “**cycle of avoidance**”...

....**Reduction in activity**...

- > Physical de-conditioning (reduced strength, fitness and flexibility)...

- > Reduce tolerance for activity...

- > Nervous system becomes fatigued & aggravated more quickly with less activity...

- > leads to pain

- > despair & frustration

- >**further reduction in activity**...

- And so the downward spiral continues...

- Doing less, but having more pain

....**Avoidance is not the answer**....

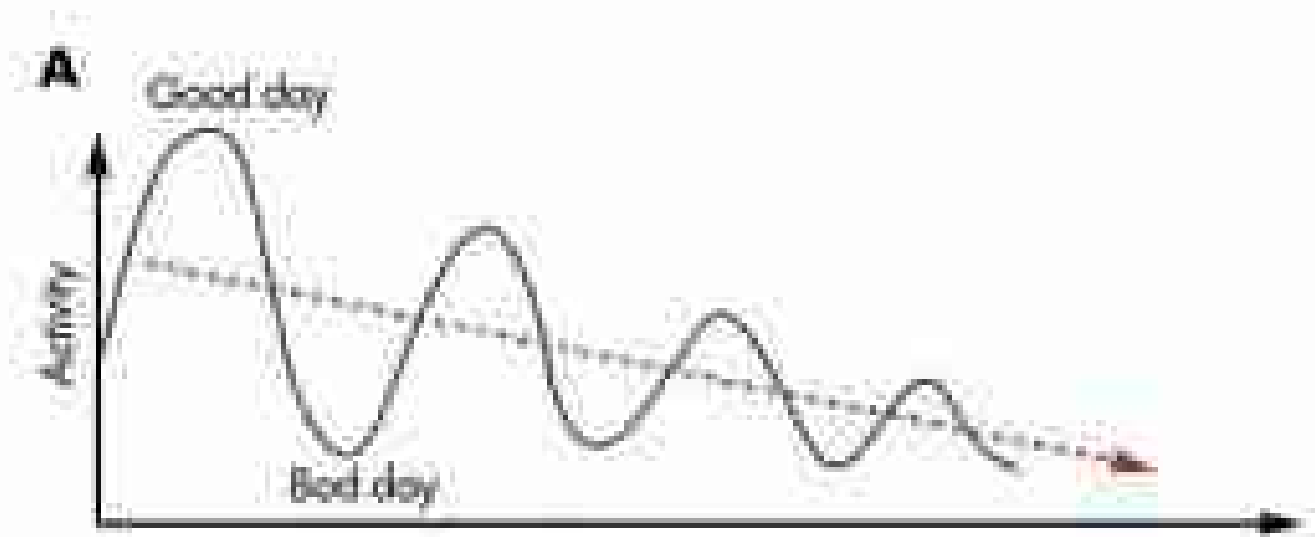
The “Pushing through” Approach

- **Some people with persistent pain....**
 - “Push through” despite the pain –
 - > “No pain, no gain”
 - Or they “overdo things” when they are having a good day... which means they get more done at the time...
 - BUT this approach tends to aggravate their pain so much that it then limits what you can do for sometime afterwards...
 - > Forced to rest until pain ease, and possibly take pain killers etc
-We call this a “Boom & Bust” cycle.**

The “Pushing through” Approach... (continued)

- “Pushing through” reinforces to the nervous system that it needs to produce strong pain to limit such stressful (and threatening) activity.
- The nervous system “learns” to respond with pain to certain activities.
- That is, the nervous system can become more sensitive, in an effort to “protect” the body.
- So then, when you next attempt the activity next time –
 - You are more likely to experience pain,
 - BUT with *less* activity....

Pushing through leads to...
An “over-activity” & “under-activity
cycle”



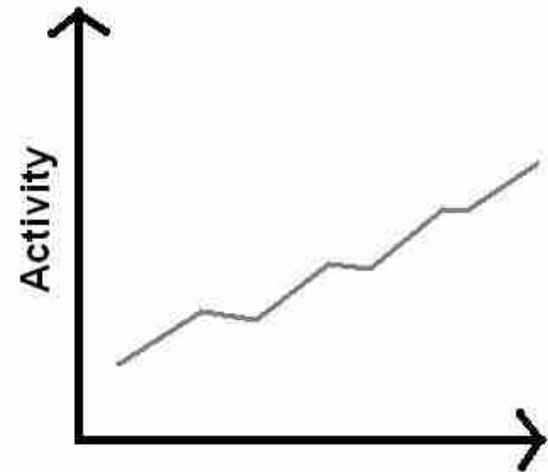
There is a better way!

- It's called “Pacing”....

Pacing means :

- Starting activity at a level you can consistently tolerate - both at the time - and after...
- Building up duration and intensity of activity gradually...

**Pacing is the best way to build your body's tolerance for activity...
- while minimising the likelihood of flare-ups!**



Getting started with pacing...

With any activity - including exercise...

- The key is to start at a level that you can tolerate – which could be as little as a 5-10 minutes or less – then gradually build up over time. ...
- First, set a baseline of activity you can tolerate consistency – for example, with walking
 - Work out what you can do on a bad day.
 - This might be 5 minutes only, 2 times per day.
 - The general rule is that you take 80% of that level and stick to that level, so you would choose 4 minutes of activity 2 times a day to start with.
 - This means that even on a bad day you will be able to do it.
 - Then create a plan, that after a period of time, perhaps a week, you will increase this by a small amount.
- In this way, hopefully you can gradually build-up to doing more activity – without making your pain worse.

Pacing... (continued)

- If you do experience a flare-ups you might not have started at a realistic level.
- It is better to start small and conservative, and build up gradually over time.
- It's important not to overdo your activities - especially on the days you feel “good” - as this may make your pain worse the following day.
- For example, if you exercise 30 minutes on a good day, and only 10 minutes on a bad day, you could try spread your activity more evenly by doing 8-10 minutes on your good day and bad days.
- You could also break up you activity into smaller intervals and accumulate activity over the course of the day –for example, 3 short walks of 5 minutes.
 - This is call “Task Variation” – can be applied to any activity

Pacing... (continued)

- Pacing is about -
 - Identifying your limitations, and
 - Working within them consistently to avoid flare-ups...
 - Realising that doing too much too soon is not going to get you to the finishing line any quicker...
- Pacing takes patience...

...but small steps - add up over time - to help us achieve our larger goals!!!

Pacing helps to create an “upward spiral”...

Doing more with less pain!

More confidence >

Reduced fear of activities >

More endurance >

Start to feel stronger & more in control >

Commence strengthening exercises >

Start walking and stretching >

Pain with minimal exertion >

Now to the dreaded “E” word!!

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“Instead of jogging, can you just set my pacemaker to beat faster for 30 minutes a day while I watch TV?”

Exercise and Pain

- **It's important to have realistic expectations:**
 - Expecting exercise to get rid of chronic pain is generally unrealistic.
 - An overall reduction in the intensity and frequency of pain is generally more realistic.
 - Improvements in pain levels and activity levels come gradually over time. They are rarely immediate.

The usefulness of exercise should not be measured simply in terms of pain relief.

The purpose of exercise in chronic pain:

- To reverse the effects of inactivity on your body.
- To help “turn the pain volume down” –
 - Exercise or physical activity can activate “descending inhibitory pathways” from the brain -
 - Release endorphins (also released with relaxation, laughter, positive thoughts).
 - Stimulates production of Serotonin – the body’s natural feel good hormone.
 - Counteract stress hormones – Adrenaline & Cortisol.
 - Re-trains the nervous system.....
 - Your nervous system learns from your actions!

The purpose of exercise in chronic pain (continued)

- To help you to do more of your normal activities, despite the pain.
- To gradually improve your tolerance for activity, thereby reducing your physical limitations.
- To help you feel better and more confident in your physical capabilities.
- To improve your ability to manage pain levels .
- To help fortify you against further injury.
- Help reduce the frequency of flare-ups .



Exercise is one of the best non-drug strategy for managing pain.

Basically, if done safely and appropriately it has no negative side-affects or downsides.

Other reasons why exercise is vital!

- **Helps you control your weight –**
 - Increases metabolic rate.
 - Improves body composition.
 - Tones muscle.
 - Helps you maintain muscle when you are trying to lose fat
 - Dieting without exercise leads loss fat AND muscle.
 - Weight loss reduces stress on joints – particularly on the
 - knees,
 - low back and
 - shoulders

More reasons....

- **Improves mood -**
 - Burns-up stress hormones – Cortisol and Adrenaline.
 - Stimulates the production of natural feel-good hormones – including Serotonin.
 - Releases “Endorphins” -
 - The body’s natural pain killer.
 - Gives a sense of exhilaration and pleasure.
 - Endorphins are addictive!
 - Proven to reduce symptoms of stress, anxiety and depression.

More reasons....

- **Make you feel better about yourself -**
 - Improves body image and self esteem.
 - Improve your sense of well-being .
- **Exercise can improve sleep quality -**
 - When we sleep better, everything is better!

More reasons...

- **Improve fitness**
 - More energy !
 - Less fatigue through the day.
- **Improved joint health –**
 - Some people think exercise will aggravate your joint pain and stiffness – but the opposite is true!
 - Movement is what joints are designed to do AND love to do.
 - Movement nourishes or “oils” joint - reduces joint stiffness.
 - Stimulate new cartilage formation in your joints.
 - Helps restore damaged tissue.
 - Strengthens muscles which supports, and reduces stress on, the joints.
 - Helps maintain and improve bone strength.

“Motion is lotion”.

More reasons...

- **Relieve pains and facilitates tissue repair –**
 - By increasing oxygen delivery to tissues.
- **Reduced risk of heart disease** (heart attack, stroke, aneurysm etc)
 - Lower blood pressure.
 - Lowers cholesterol (blood fats).
 - Improves strength of heart, and
 - Improves elasticity of blood vessels.

Other health benefits...

- **Help reduce “sugar levels” in blood**
 - Helps prevent and manage Type 2 Diabetes.
 - A modern day epidemic - 1 in 11 people in Australia have Type 2 diabetes!
 - Estimated half of these people don't know that have it!
- **Emerging evidence that exercise can:**
 - Reduce the risk of developing cancer.
 - Improves memory and brain function.
 - Reduces risk of developing Dementia and Alzheimer's disease.

More health benefits!

- **Improves life expectancy!**
 - People who are more physically active tend to live longer
- **Helps maintain or improve quality of life as we age -**
 - ...will elaborate on this when I talk about specific types of exercise....



“Movement is Medicine”

....For pain, for injuries, for general health conditions....

Benefits of physical activity is literally endless!!!!

Physical activity is *essential* to health and happiness.

When it comes to your health -
prevention is better than cure!

Physical activity vs. Exercise

- **Exercise** is
 - Planned activity –
 - Largely a creation of 20th century to compensate for the more sedentary nature of modern life.
- **Physical activity** – includes exercise – but also any other forms of activity that get the heart rate up
 - Incidental activity – walking, carrying shopping, using stairs etc
 - Gardening.
 - Housework.
 - Etc

Talking about exercise....

Please note....

- Aspects of my advice may seem basic and common sense...
- Best to keep it simple – get the basics right
- My advice is general
- It's best to get specific advice - tailored to your needs
 - Especially if haven't exercised for a while...

Opportunity or inconvenience?

- Some people may be turned off by the idea of exercise or physical activity – they see it as an inconvenience...
 - It takes too much time OR too much effort....
- **Try seeing physical activity as an opportunity – NOT an inconvenience!!!** For example....

You could say “It takes too long to walk to the shops, so I’ll just drive”

OR “If I walk to the shops, I’ll get exercise done and my shopping done at the same time”

You could say “I can’t be bothered to use the stairs, I’ll just use the lift instead”

OR “If I use the stairs, it will help make my legs stronger; improve my fitness; burn extra calories; and feel better for doing something positive for my health”.

Think of it this way....

- **Think of physical activity as contributing to your “Health Superannuation”.**
 - Many people plan their finances - including their Superannuation – but don’t take the time to look after their No 1 asset – their health!
 - Small investments over time add up to wealth later in life....
 - Investing in your health – by increasing your physical activity – should help to add up to improved health later in life....
- **Your body is your vehicle through life – physical activity is what keeps it in good working order....**
 - What happens to a car that isn’t driven regularly?
 - What happens to a human being who is unconscious in intensive care for 2 weeks?
- **Physical activity restores, maintain and protects the body!**

Incidental activity – build it into your day!

- Physical activity doesn't have to be planned or formal.
- Any movement, no matter how small, can help.
- **You should aim to get as much incidental activity as you can each day – little bits add up!**
 - Walking instead of driving
 - Parking the car further away from where you need to be and walking in
 - Climbing stairs instead of using lift
 - Getting up from your desk for 5 minutes every half hour
 - Going for a lunch time stroll
 - Mowing the lawn
 - Stand more! - Burns 20% more energy
- **Incident activity has major health benefits - but is generally not sufficient to lose significant amount of weight or increase fitness**

Formal exercise options...

4 basic types of exercise to include for all round fitness:

1) Aerobic exercise –

- Anything that elevates your heart rate, gets blood pumping and lungs working.

2) Strength training -

- Anything that puts your muscles under load.
- also called “resistance training” or “weight training”

Formal exercise options... (continued)

3) Joint mobility & flexibility –

- Includes stretching muscles, &
- Moving joints through full range of movement.

4) Balance -

- Any activity that challenges your balance!
- Like anything – it improves with practice.

Because each type of exercise results in different health benefits, it important to include each part in your program.

Emphasis depends on your goals and problems areas

1) Aerobic exercise

- Our ability to sustain activity depends on heart and lung function.
 - > The ability of body to move oxygen-rich blood to your muscles.
- Aerobic exercise has many benefits:
 - Improved heart & lung fitness
 - Lessens risk of heart attack
 - Helps control weight
 - Promotes sense of wellbeing
 - Eases depression and anxiety
 - Promotes restful sleep
 - Improves energy levels

Gardening & housework

Aerobic exercise includes:

- Gardening
- Weeding – great for knees & backs, mobility
- Mowing the lawn
- Vacuuming / sweeping / mopping – good exercise but try to move hips
- General cleaning
- But don't forget....
 - Pacing
 - Task variation

Walking

- **Always good to start with walking.....**
 - A natural, functional everyday movement!
 - Low cost - low impact - easy to fit in - low prep – just walk out front door!
 - Tremendous health benefits.
 - Best evidence for low back pain.
 - Fresh air and sunshine- Serotonin, Endorphins, burn of stress, sleep better
- Wear good shoes!
- Consider getting a Pedometer
- Walk with a friend
- Community walking groups
 - Outdoors or shopping malls – good when it's wet or cold.... Safety
- Walking becomes aerobic if you pick up the pace or add in inclines, steps or hills – “Huff and puff” has additional health benefits

Other low-impact aerobic options...

- Low-impact = easier on your joints & muscles
- **Riding a bike -**
 - Stationary bike – either upright or with back support (recumbant bike)
 - Good alternative to walking
 - Relatively gentle on hips, knees and ankles
 - Variable resistance
 - Safer than riding outside
 - Weather not an issue
 - Read a magazine or watch TV
 - Outdoor riding
- **Dancing -**
 - Fun & social
 - Excellent for improving leg strength, stamina and balance
- **Exercise in water -** Aqua aerobics - Swimming – more on this later...

Aerobic exercise -

How much? How often? How hard?

- **Duration:** Try to work your way up to 20 to 30 minutes of aerobic exercise at least 3 days a week. You can split up the 30 minutes into 10-minute blocks if that's easier on your joints.
- **Frequency:** 3-4 non-consecutive days a week is a good starting point. Most days a week is better!
- **Intensity:** start at a pace you can tolerate. For example, with walking
 - Start with easy walking, building up duration over a number of weeks...
 - Later try adding in short burst of brisk walking ...
 - Progress to continuous brisk walking (with 5 minutes easy walking as a warm up).
 - Progress to includes hills, stairs and uneven ground
- **Take the Talk Test** – if you're unable to carry on a conversation because you breathing too hard, or are too out of breath, you're working too hard.
- **Rating of Perceived Exertion** – 0 = resting, 10 = hard as you can
 - Aim for 3-6 out of 10

2) Resistance training

- **Muscles *need* to be used to maintain their strength**
 - Muscles waste away with inactivity
 - >> “use it or lose it”.
- **We also naturally lose muscle size and strength with age – “Sarcopenia”**
 - Loss of muscle is a significant contributor to disability, reduced mobility, and increased pain as we get older.
- **Regular strength or resistance training -**
 - Helps maintain and build muscle strength.
 - Is highly protective for your joints.
 - Helps restore joint strength and stability.
 - Is vital if trying to you are trying to lose weight, and
 - Reduces risk of falls in later life.

Resistance training (continued)

- **You don't have to join a gym....**
 - Cheap hand weights
 - Use objects around home – bottle of water, bag of rice.
 - Elastic resistance bands – but avoid any exercise that cause strain.
 - Group “circuit classes”.
- **Strengthening muscles depends on gradually increasing the load....**
 1. Increasing number of repetitions
 2. Increasing the number of sets
 3. Increasing the weight or resistance the muscle has to work against

>>> Keep the body adapting & growing stronger!

Resistance Training –

How much? How often? How hard?

- As with aerobic exercise –
 - Find a baseline that is comfortable and safe,
 - Build up conservatively from there...
- A good starting point is choosing a level of resistance that is moderately challenging for 1-2 sets of 8-12 repetitions
 - Progressing to 2-3 sets of 12-15 repetitions.
- Do your strengthening exercises every other day —
- But take an extra day off if your joints are painful or if you notice any swelling.

3) Stretching & joint mobility

- Flexibility is one of the most neglected aspect of physical health.
- Like strength – flexibility diminishes with age, inactivity and pain.
 - Look at elderly people – how did they get that way? Doesn't have to be that way. Regardless of age, or joint health, anyone can improve flexibility
- **Regular stretching loosens & lengthens tight structures –**
 - Not just muscles –
 - Tendons, ligaments, joint capsules, the sheath around the nerves, skin and fascia.
- **Range-of-motion exercises** involve moving your joints through their normal range of movement, such as raising your arms over your head, or turning your head side-to-side.
- Remember - motion is lotion for joints!
- Even highly arthritic joints benefit from movement!

Stretching & joint mobility (continued)

- **Why stretch? Regular stretching....**
 - Reduces muscles tightness -
 - Flushes out metabolic waste products
 - Reduces joint stiffness -
 - Less compressive stress on joints
 - Less pain with movement
 - Improved mobility with end of range movements –
 - Reach-up higher...
 - Crouch down lower...
 - Scratch back more comfortably...
 - Less chance of injury – a supple muscle will be better at tolerating physical stress

Stretching –

How much? How often? How hard?

- **The best time to stretch is when the body is warm** – e.g. after a warm shower or a walk
- **Stretching should not be painful** – only stretch to the point where mild tightness or resistance is felt
- **Stretching is not something to be rushed...** rather it should be done slowly and gently –
- **It's ideal time to incorporate relaxation breathing** – a key pain management technique -
 - With each breath-out sink slightly deeper into stretch.
 - Melt into stretch - feel the tension melting away.
 - Unclench your jaw – relax your neck and shoulder muscles .
 - Embrace silence – a powerful counterbalance to noise and frantic nature of modern work.

Stretching –

How much? How often? How hard?

- Ideally hold stretches for 20-30 seconds, 2-3 times each side.
 - Do what you can manage - and build it up over time.
- If you notice one side is tighter -
 - Aim to stretch the tighter side first and last (one extra time)
- Keep moving afterwards -
 - Reduces chance of muscle spasms.
- Ideally stretch 3 times a week – although stretching everyday has additional benefits.

4) Balance exercises

- The 4th category of exercise...
- Any activity that challenges your balance!
- For example....
 - Standing in heel-toe stance
 - Rocking back on your heels & toesperform with your back to a wall
 - Standing on one leg Perform in corner of kitchen bench
 - Close your eyes for extra challengebut be safe!

Other exercise options -Exercising in water

Great option for people with joint problems or pain!

Benefits of exercising in water:

1) Buoyancy....

- Less load on joints
- Gentle on feet, knees, hips and back
- Deeper the water= less weight thru joints

2) Resistance in all directions.

3) Exercise options for all your joints.

4) Great for improving all-round fitness:

- Muscle strength,
- Flexibility & joint mobility
- Balance, and
- Aerobic fitness.

5) Gentle, fun and relaxing.

Water exercise options...

- **Swimming**

- Excellent full-body exercise.
- It's easy to over do it - remember to pace yourself!
- Take care of your shoulders...
 - Need adequate mobility, stability & strength in shoulders
 - Common cause of flare-ups
 - Warm-up your shoulders thoroughly before swimming
 - Stroke technique important
 - Start slowly – in terms of swim speed & number of laps
- Try using a snorkel if you have neck problems.

Other water exercise options...

- **Walking in the pool**
- **Jogging in the pool**
- **Aqua aerobics**
 - Any movement in water that is not swimming!
 - Join a class?
 - Most facilities with a pool also offer group classes
 - Or exercise on your own...
- Remember – water can be deceptive – easy to overdo it!

Pool temperatures

- Most public pools are 26-29 degrees -
 - Will feel cool when you first get in...
 - But will feel better once get moving!
- Hydrotherapy pools are a better option for chronic pain
 - Skin temperature: 33-34 degrees
 - Generally group format
 - Not many hydro pools allow individual to exercise without supervision
 - See the Yellow Pages...

Other exercise options – Group exercise

Exercising in a group setting has several benefits:

- Camaraderie
- Social interaction
- Social accountability
- Group motivation
- Variation
- Supervised by an instructor
- Often inexpensive
- Scheduled time – helps to form a habit

Group exercise (...continued)

- Most gym offer classes.
- Countless groups in Canberra that offer group exercise -
 - Diabetes ACT, Arthritis ACT, Heart Support ACT , ACT Health
 - Get on the internet or chat to your GP.

Good options for chronic pain include...

- Circuit classes
- Walking groups
- Pilates
- Tai Chi
- Yoga

But remember...

With group exercise-

- Take it at your own pace -
 - The chance of injury is higher if you try to keep up with people more advanced than you!
- Give yourself permission to do 5-10 minutes only...
 - This will ensure that you go back the next time.
 - Nobody else has to deal with the consequences but you
- Chat to the instructor about your condition, concerns or physical limitations.
 - Avoid positions or exercises that can cause pain, or make you feel uneasy.

Other exercise options - *“Active relaxation”*

- As mentioned – learning to relax is a key strategy for managing pain more effectively.
- Relaxation and meditation does not have to involved sitting cross legged in silence!

There are many options....

“Active relaxation” options...

- **Tai Chi** – relaxing, improve balance & helps prevent falls.
- **Qi-Gong** – standing meditation - less chance of falling asleep!
- **Walking meditation** –
 - Involves breathing in time with steps e.g. 4 steps in, 1 step hold, 4 steps out
 - Best done outside - fresh air, sunshine, immersed in the sights, sounds and smells of nature.
- **Pilates** – great for strengthening bad back!
- **Yoga** – great for stretching bad backs!

All offer similar benefits as meditation:

Relaxation- Allow you to focus on your breathing & being in the moment –

Time out for yourself - A break from daily stressors –

Ideally not worrying about past or what may happen in the future.

Benefits of “active relaxation”

If practiced regularly and for decent periods of time:

- Reduces muscle and neural tissue tension with chronic pain
- Lower resting heart rate
- Lower blood pressure
- Better circulation
- Improved posture
- Calms the mind and the body – essential in chronic pain!
 - Reduces nervous system arousal.
 - Reduces production of stress hormones by adrenal glands.
 - Causes a rapid decrease in of stress hormones circulating in the blood stream.
 - Causes a marked decrease in stress and anxiety.

More benefits of “*active relaxation*”...

- Can strengthen the immune system
- Better sleep
- An improved sense of awareness and clarity
- Better relationships

**Scientifically proven to help reduce
intensity and frequency of pain symptoms**

Other tips when exercising...

- Try not to anticipate the pain.
- Try not to focus on it –
 “Whatever you focus on expands” – brains hone in on...
- Divert your attention - music, conversation, or watching other people etc
- Focus on enjoying being physically active –
 - Enjoying yourself releases Endorphins!
- BUT, this doesn't mean ignore the pain!

Getting started...

- Key is start small, set a realistic starting point, progress gradually and steadily (pacing), especially if you haven't exercised in a while
- Set yourself small, achievable goals.
- Start with basics -
 - Walk, stretch, home exercises...
 - Better to under do it than overdo it!
 - Consider joining a gym as feel more confident or need more challenge.
- Make a plan - write a schedule – make a start!
- Don't feel guilty if you don't achieve what you wanted to...
 - Reward or praise yourself for what you achieve!
- Confidence only comes from doing it.

Do you have any barriers to getting more active?



"What fits your busy schedule better, exercising one hour a day or being dead 24 hours a day?"

Common barriers...

- *“I don’t have enough time”*
- *“Something came up that was more important”*
- *“I’m too old”*
- *“I can’t afford it”*
- *“Exercise is boring”*
- *“ I don’t like gyms”*
- *“Exercise is painful”*

Whatever the reason or concern – there are always solutions!

For example...

Barrier:

- “*Exercise is boring*”

Possible solutions:

- What activities did you enjoy when you were younger?
- Think of ways to make it fun or add variety....
 - Music
 - Exercise in front of TV or read a magazine
 - Exercise with a friend
 - Group exercise
 - Social sports – Golf, Lawn Bowls etc
- > You are more likely to stick to activities you enjoy.

What to expect once you start....

It's important to have realistic expectations:

- It is normal to be a little fearful of an increase in pain – or of doing more damage.
- It's normal to feel muscle and sometimes joint pain -
 - When attempting a new activity –or
 - One you haven't done in a while – including exercise
- It is important to try to discriminate between
 - A "flare-up" and
 - Normal muscle soreness

What to expect once you start...

- **Try not to get discouraged....**
 - Little set-backs will happen...
 - Interruptions will happen...
 - Every day is a new opportunity to “get back on the horse”
 - The key is perseverance – not avoidance!
 - Give your exercise plan a chance to succeed!

If you do have a flare-up...

- **Reassure yourself that flare-ups are normal - and temporary!**
 - Try not to think the worst (catastrophizing)
 - Distinguish hurt from harm
 - It is very hard to actually cause new “damage”.
 - Challenge unhelpful or negative thoughts.....
 - Flare-ups do settle...

If you do have a flare-up... (continued)

- **Use flare-ups as a learning experience -**
 - Try to identify the cause...
 - Did I overdo it?
 - Is my technique correct?
 - Is the exercise not appropriate for me just yet?
 - Sometimes it may be stress-related rather than mechanical or activity related...
 - Sometimes flare-ups can be for no apparent reason...

If you do have a flare-up... (continued)

- **Avoid stopping the activity all together...**
 - Focus on “Relative Rest”
 - Reducing activity but keeping moving...
 - NOT “Excessive Rest”
 - Lying in bed for 3 days...

If you do have a flare-up... (continued)

- **Instead, modify your activity levels for a brief period – e.g.**
 - Increase variation of activities.
 - Decreased duration or intensity of the activity.
 - Increase frequency and duration of rest breaks
 - Prioritise what's important – and plan your tasks to avoid aggravation.
 - Re-focus on gentle stretches, non-specific exercises, relaxation etc???

If you do have a flare-up... (continued)

- **When you feel better -**
 - Resume your program, but at a lower, more gentle level.
 - Then gradually upgrade to pre-flare-up level.

Other tools for managing flare-ups...

- **Brief increase in medications -**
 - Ideally time contingent (e.g. Panadol every 4 hours) rather than as needed.
- **Passive therapies** (physio, massage etc) -
 - Should only be short term (1-3 consultations)
- **Focus on active-self management -**
 - Heat packs
 - Keeping moving
 - Meditation and active relaxation
 - Self massage
- **Eat well, drink lots of water, and allow time for sleep.**

“Red flags” to be aware of...

Signs to stop exercising – and consult a doctor:

- Pain, tightness or pressure in the chest, jaw, arms, neck or back?
- Unusual or extreme shortness of breath, particularly if it persists more than 10 minutes after exercise?
- Irregular heart beat (palpations)?
- Light-headedness, dizziness, nausea, fainting, cold sweat, or confusion?
- Excessive fatigue after exercise – especially if you’re still tired 24 hours after exercise?
- Significant worsening of usual symptoms?
- Anything else that is usual or doesn’t feel right...

If in doubt, call 000.

> It’s better to have a false alarm than be dead!

Before starting an exercise program....

- **It's best to get specific advice tailored to your needs**
 - especially if haven't exercised for a while...
- **Appropriate health care professionals to talk to about exercise include:**
 - Physiotherapists,
 - Your GP, or
 - An Exercise Physiologist
- **Ideally, they should:**
 - Be highly skilled and knowledgeable about chronic pain, and
 - Understand Central Nervous System Sensitisation.
- **Remember - It is best to get this kind of help earlier rather than later.**

What an Exercise Physiologist can provide...

- Specialist knowledge to do with chronic disease, injuries & pain.
- Thorough assessment - postural concerns, tight muscles, weak muscles, muscular imbalance & dysfunction.
- Tailored exercise advice specific to your needs, preferences & lifestyle.
- Help you to make appropriate exercise choices – that are low risk and high benefit.
- Ensure correct and safe technique.
- Modify and progress your exercise program as appropriate.
- Provide reassurance and support – and enhance motivation.
- Reduce fear and worry.
- Advice regarding exercise precautions relevant to your condition.

What about Physiotherapist?

- Specialise in “acute” (new) injuries -
 - “Hands on” treatment.
 - Exercise for acute injuries.
- Research suggests that “hands-on” treatment is
 - Unlikely to be curative for chronic pain...
 - Mainly only provides temporary symptom relief...and
 - Can create dependency.
- Many physios do not fully understand chronic pain.
- Most physios tend to focus on “structural” explanations for pain:
 - Out of alignment? Disc bulge on MRI - may have been there anyway....may not be causing the pain
- Same applies to Osteopathy & Chiropractic.

What about personal trainers?

- Anyone can call them self a Personal Trainer.
 - Only need as little as 4 days training to become qualified.
 - 6 week courses widely available
 - Sometimes 1 year certificate course
 - In general:
 - Inadequate knowledge of anatomy, physiology, disease and injury pathology
 - “Don’t know what they don’t know”.
- >>>> Potentially dangerous....



Exercise Physiologists...

Not as well known as personal trainers –
but much more qualified.

Exercise Physiologists are the most qualified
health professions to prescribe exercise
to people with chronic pain.

Exercise Physiologist work with...

- Chronic muscle & joint injuries.
- Chronic pain –
 - Specific areas - low back, shoulder, knees, necks, arms,
 - Osteoarthritis Arthritis
 - Fibromyalgia
 - Neuropathic pain syndromes – including RSI / OOS
 - Complex regional pain syndromes
- All kinds of chronic conditions – including cardiovascular, metabolic and respiratory conditions.
- Sports people and other healthy populations.

Canberra Injury Management Centre

- Complete, expert treatment for injuries and pain
- From **acute injuries** to **chronic pain**,
- **Individual services in:**
 - **Physiotherapy**
 - **Exercise Physiology**
 - **Hydrotherapy**
 - **Pain Management Education** – understanding - essential
 - **Dr Garth Eaton** – Occupational Physician and Pain Specialist
 - **Psychology**
 - Pain is not a psychological problem – but we are all human.
 - Assisting people adjust to their injuries and the impact on their life.
 - Introduce effective pain self-management strategies.

Canberra Injury Management Centre

- **Integrated multi-disciplinary programmes**
 - The best ways to settle down the nervous system is to
 - 1) understand pain,
 - 2) have a range of movement strategies (e.g walking, breathing, sunlight, relaxed movement),
 - 3) Psychological strats, aim to decrease focus or vigilance
 - 4) Appropriate medication

Canberra Injury Management Centre

We offer:

- Medicare rebates available with a GP referral
- Health Fund rebates available
- Mental Health Plans for Psychology

Centrally located –

- Canberra Olympic Pool Complex in Civic.
- Consulting rooms, gymnasium and 30 degree heated pool.
- Also offer regular sessions to 34 deg Hydrotherapy Pool in Hughes.
- Walking distance from Civic bus interchange.

Key points to remember...

- Try to see physical activity as an opportunity not an inconvenience.
- Hurt doesn't equal harm.
- Building up activity gradually is the key (pacing)
- Make physical activity fun – don't see it a chore
- Make a start!
- Get help if you need it
- It doesn't matter what you do for exercise - as long as you enjoy yourself – and do it regularly!
 - Exercise is only as effective as how consistently you do it!
- If you fall off horse – start again, and keep going!

Key points to remember...

(continued)

- By getting more active –
 - You are giving yourself the chance of managing your pain more effectively, and
 - Having a better quality of life.
- You are the best person to make decisions about your health.
- You have the greatest role to play in the management of your health and your pain.

Any Questions??

My contact details ...

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