

MODULE 4: EFFECTIVE EXERCISE & MOVEMENT

How to exercise smarter for a longer, happier life

EXERCISING ON WORK DAYS



Just a quick reminder, that exercising (in the right dose) is the greatest thing on the planet for boosting your endorphins, mood, mental health & emotional stability.

There is also plenty of research supporting the fact that people who exercise on work days are more productive, happier and suffer less stress than on non-exercise days.

✔ EXERCISE ✔	✘ EXERCISE ✘
Managed workload better (74% of people)	Less Calm
Improved Motivation (41% of people)	47% more likely to suffer depression
Significant Mood increase (nearly everyone!)	Mood stays about the same
Improved mental & interpersonal performance (79% of people)	
Improved time management (72% of people)	

HOW MUCH ARE YOU SITTING?

Studies have found that sitting longer than 8hrs a day can actually increase the risk of early death by 15%. Many people are sitting at work for more than 6.5 hours each day, add this to other moments of sitting & it's a BIG number - but don't stress, it's easy to change!!

NON' ACTIVITY	SITTING TIME
SITTING @ DESK	6.5 HOURS
TOILET BREAKS	10-15 MINS
LUNCH & DINNER	1 HOUR MINIMUM
RELAXING @ HOME BEFORE BED	1 HOUR MINIMUM
TOTAL	8 HOURS & 45 MINS/DAY
MORE TIME SITTING THAN SLEEPING Based on an 8 hour working day, where a lot of time is spent at a desk.	

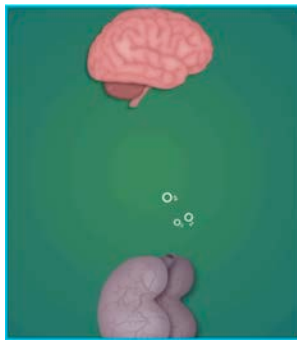
THE PROBLEMS WITH SITTING TOO MUCH!

You have more than **360** joints and over **700** muscles in your body and you were not designed to sit for long periods throughout the day. If you're sitting for more than 1/2 the time that you're awake, it can contribute to some serious health and well-being challenges, including:-

- **LOSS OF FLEXIBILITY & MOBILITY**

When you are sitting vs standing, the muscles in your lower body can turn off & when this happens up to **90%** pressure is applied to your lower back, which then creates a ripple effect in to surrounding areas.

In an attempt to help share that extra load, things eventually shorten & tighten up, and you lose flexibility & functional mobility. When this happens, the activities you once loved & found easy to do, start to become more difficult & so you end up replacing them with more sedentary activities & now you are back to sitting around more again!



- **LACK OF OXYGENATION TO THE BRAIN:**

With the extra load on our lower backs that is experienced when sitting vs standing, we usually have a hunched upper backed & rounded shoulders too. This compromises the function of your rib cage & diaphragm, lessening your ability to breathe deeply & as effectively. This lessens the oxygenation to the brain and you might find yourself experiencing foggy thinking, headaches, being more easily **distracted** and it can even lower your mood.

- **AGITATED NERVES, PAIN & SWELLING IN BLOOD VESSELS**

When you're sitting, parts of your legs are obviously compressed. Internally your blood vessels & nerves can also become compressed after a while, **restricting blood flow** and nerve signalling & this can lead to agitated nerves & irregular pain.



- **METABOLISM MAY SLOW DOWN BY UP TO 90% !!**

There is a special enzyme that breaks down fat in your blood & it is momentarily deactivated through lack of movement. Fat stores build up & can even create blockages. If you don't want to add to your fat stores building up....**MOVE MORE!!**



- **GOOD CHOLESTEROL DROPS by 20% (after 2 hours of sitting)**

One of the many things good cholesterol does is to bind with bad cholesterol & take it to your liver to be excreted. If your good cholesterol drops too low it may help the bad cholesterol to build, which is not good for heart health.

THE PROBLEMS WITH OUR HEAD POSTURE

When looking at our computers or devices, a lot of us have very poor head/neck positioning. The load going through the neck muscles when viewing screens at a poor angle can increase by **up to 6 TIMES!!** This often contributes to neck pain commonly referred to as 'tech neck', and in time, can also lead to a negative change in your overall posture & pain in more areas.



0 degrees | 10 - 12 lbs | 4.5 - 5.5 kgs

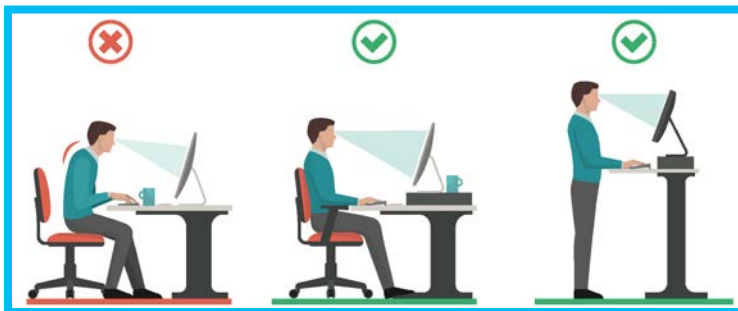
15 degrees | 27 lbs | 12.2 kgs

30 degrees | 40 lbs | 18 kgs

45 degrees | 49 lbs | 22.2 kgs

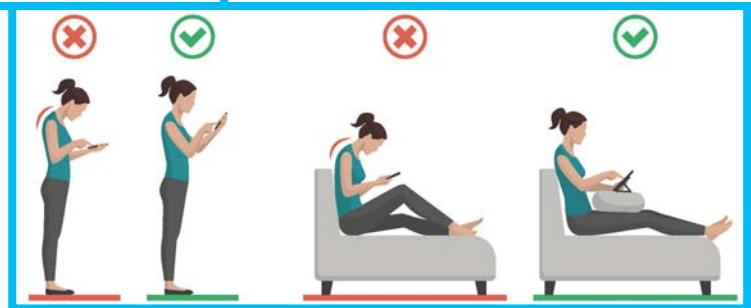
60 degrees | 60 lbs | 27.2 kgs

The best thing you can immediately do to take better care of your neck mobility & flexibility is to be more mindful of your postural position when looking at your computer or devices.



**AT
WORK**

**ON
DEVICES**



THE SOLUTION

The solution to sitting too much is really quite easy, it becomes enjoyable & you'll soon feel how beneficial it is for your mind & body!! You need to be getting up & **moving** every **30-60** minutes for just **3-5** minutes, & you can watch those 'sitting disease' niggles disappear!!

Doing intervals at a standing-desk is definitely a step in the right direction, but you can't just stand there, you need to **move!** You can sway, walk, run on the spot, dance, juggle, go take some stairs, air squats, lunges, **anything** to get your joints moving and blood flowing through your muscles **especially** your legs and butt as they disengage during longer sits.

Remember, the less your blood flows - the less your **brain flows**. Researchers at Stanford University found that 5-16 minutes of walking vs sitting heightened creative output by around 60%, so when you're feeling mentally stuck, movement is the key again!



BUT WHAT TYPE OF MOVEMENT?

NAM BALDWIN

Truly there is no right or wrong here, the main thing is just to be doing it - consistently!! Sometimes your movement intervals will be taken care of by a trip to the bathroom & grabbing a glass of water, checking the mail or walking around the office or outside whilst having a snack etc.

At other times give my **short movement routines** (check your follow-up resources) a go as they:

- Are full body, with big focus on the areas that lock up or lose blood flow the most.
- Include a little breath work to boost oxygenation to your brain & calm your nervous system.
- Include a combination of loosening, mobility & stretching to create freedom of movement through your joints, tendons, ligaments & muscles with less chance of injury, all which helps to minimise any niggles caused by a lack of movement & too much sitting.
- Draw your attention to 3 particular areas of your body that are typically most helpful in helping you to consciously release tension & therefore help to calm your brain.

They are the **HANDS, EYES & FEET**.



*** YOU REALLY CAN MOVE ANY WAY YOU LIKE ***



Remember to set a timer for your 30-60 minute sitting intervals, as you will be constantly surprised @ how quickly the time goes!!

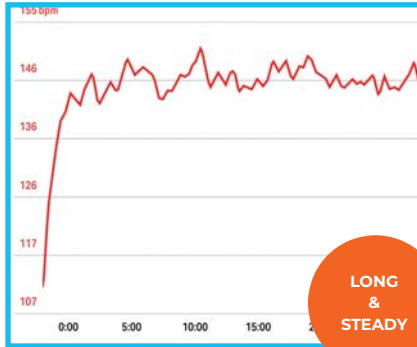
PACE TRAINING

					
Short, invigorating & science based		Dramatically improve health of heart, lungs & brain		Lose weight & gain lean muscle	

PACE is an interval style of exercising that really helps to optimise your heart, lung & brain health for longevity. PACE programs can also help you to lose weight quickly & gain lean muscle. The programs are time efficient, short & invigorating & therefore easier to incorporate in to a busy schedule. If you ever lose your exercise 'mojo', (we all do!), you will find that these programs are a great way to get it back & get moving again.

WHY IS PACE EXTRA GOOD FOR YOU

HEART & LUNGS?



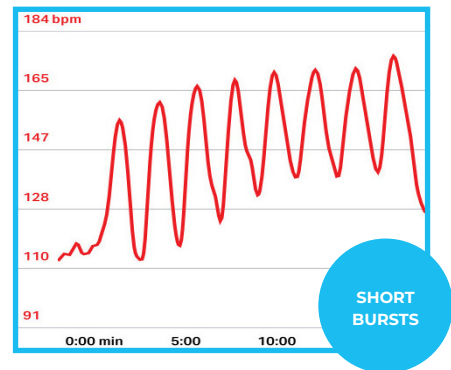
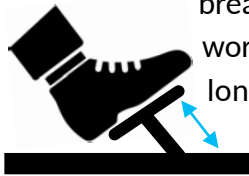
The heart rate pattern produced during **LONG STEADY STATE sessions** often mirrors a regular work day, there's that initial spike in heart rate when you first get going and then you're on-the-go for the rest of the time at a pretty consistent pace.

The challenge with having the way you exercise only ever mirroring your average day (or even not exercising at all!) is that **YOUR HEART IS A MUSCLE** & along with your lungs &

blood vessels it can gradually down size to become more efficient over that longer time frame or distance. As an example, just think of the physique of a distance runner vs a sprinter.

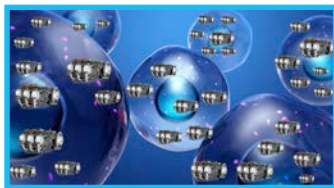
PLEASE NOTE: I'm not saying not to do longer steady state cardio/weights sessions, they too have great benefits for the body & mind however, I would highly encourage you to factor in some PACE training to strengthen your cardiovascular system further!

When you do **PACE INTERVAL training** with adequate rest breaks between each interval, you're able to work at higher intensities than if you did a long, non-stop session because the time frames of an interval effort are much shorter. This allows you to maximise the output capacity of your heart & lungs, and builds your hearts **RESERVE CAPACITY**.



You can then deal with going from your normal daily mode of operation in to stress, & then come back out & go back to your normal cruising speed - far, far better. PACE training is not only great for cardiovascular health & healthy weight management, it can also help you to deal with stress (which is inevitable) better.

BUILDING YOUR ENERGY RESERVES



In your cells you have what's known as **MITOCHONDRIA**, they are like little engines, taking in nutrients from food & oxygen, breaking them down & creating energy rich molecules that your cells can then use for living, growing & repairing.

When you are not moving or exercising much, you place little demand on your mitochondria & they **DROP** in number. Your capacity to generate energy drops too & you feel sluggish, unenthusiastic, you are more vulnerable to health challenges & you can even have difficulty sleeping (because you require energy overnight for repair & recovery to take place).

ALL forms of regular physical training places greater demands on your mitochondria so they **INCREASE** in both number & size, and therefore you are able to generate more energy and faster. More mitochondria means daily life is not so taxing, and they help you to recover from stress and illness quicker as this also takes a lot of energy. It's not just stronger muscles & greater heart health that makes life easier, it's your mitochondria count too!

CARDIO SESSION - PACE(2) PROGRAM				NAM BALDWIN
TARGET:	Heart Strength, Cardiovascular Fitness, Fat Loss, Muscle Tone, Improve Blood Pressure			
EQUIPMENT or LOCATION	Bike, Treadmill, Elliptical, Rower, Mini-tramp, Skipping, Stair Climber, Grassy Park, Beach, Hill Walking, Boxing, Swimming etc			
WHAT	TIME	INTENSITY	FOCUS	
WARM UP	4-5 MINUTES	EASY build to MODERATE	NOSE BREATHING ONLY. Gradually increasing your heart rate & speed.	
INTERVAL (mins, secs)	INTENSITY	SUSTAINABLE EFFORT	REST	
2 MINUTES	MODERATE	60%	2 MINS VERY EASY	
1:30 MINUTES	MODERATE	70%	2 MINS VERY EASY	
1:00 MINUTES	MODERATE to HARD	80%	2 MINS VERY EASY	
40 SECONDS	HARD	90%	2 MINS VERY EASY	
30 SECONDS	HARDER	95%	2 MINS VERY EASY	
20 SECONDS	HARDEST	100%	2 MINS VERY EASY	
2 MINUTES	MODERATE building to HARD	100%	COOL DOWN	
WHAT	TIME	INTENSITY	FOCUS	
COOLDOWN	2 MINUTES	VERY EASY	Slowing your breathing & lowering your heart rate	
	1 MINUTE	SITTING	Lowering the heart rate as much as possible	
STRETCHING	Focus on areas of tension. Use physio roller as required			
RECOVERY	The Switch Audio ASAP lying down with headphones			
KEY	VERY EASY	You are almost stationary, doing just enough activity to minimise lactic build up or seizing up.		
	EASY	Doing activity at a pace / speed / resistance that you could carry on with for a long time. Breathing only gets a little challenging towards the end.		
	MODERATE	You're working harder now, sweating & puffing, the interval is challenging but you have another gear.		
	HARD-EST	You really have to push yourself here. You may hit your max' heart rate for a short period. You'd be pushed to hold for more than 20-30 seconds.		



THE WARM UP: Focus on using **NOSE BREATHING ONLY**, helping you to release a chemical called Nitric Oxide, which opens up your blood vessels, so that the oxygen in your blood can flow more freely through your body during the session.

We also know that nose breathing helps you to connect better to your big diaphragm muscle, so it's a great warm-up for your respiratory system too.

REST BREAKS: Focus on your breathing to lower your heart rate as much as possible, whilst moving just enough to stop lactic acid building & your muscles stiffening up. Rest breaks should be long enough to ensure you are not breaking down your hard earned muscle tissue.

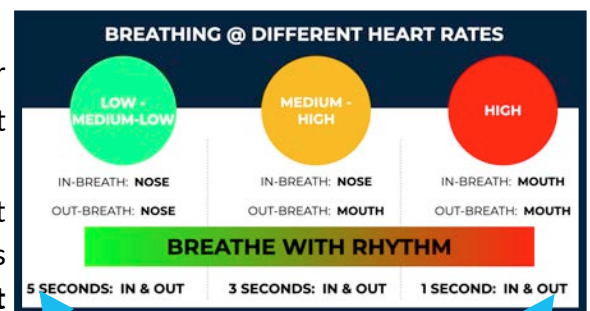


INTERVAL TIME vs INTENSITY

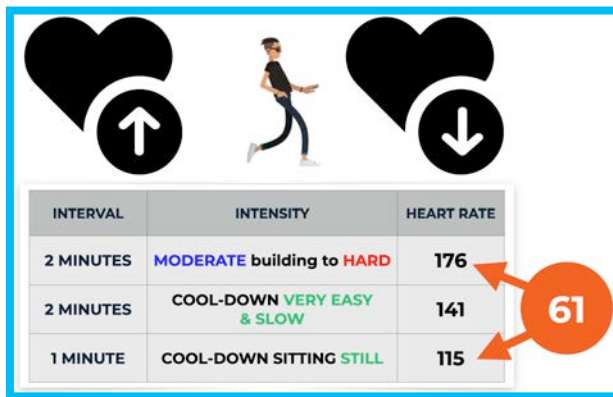
The **SHORTER** the interval = the **HARDER** you go, but your effort should be '**SUSTAINABLE**', meaning that you are looking to go at a speed & effort that remains **CONSTANT** for the entire duration of that interval i.e not starting too hard & then having to slow right down.

No matter how fast/slow your heart rate is, remember to **BREATHE with RHYTHM**, taking the same amount of time to breathe in & out.

This *significantly* impacts the rhythm of your heart beat & sends signals to your brain that are less stressed. **If you want to be calmer at higher heart rates, breathe with rhythm.**



*Figures are examples only



THE COOL-DOWN: A calming phase, so you are not racing from 1 high stress activity straight to the next! It's also a great time to measure how your heart is building its **CAPACITY**.

1. Record your heart rate after the last interval.
2. Keep moving very slowly for 2 minutes & focus on breathing to lower your heart rate.
3. Sit down for 1 more minute, again focusing on breathing to lower your heart rate as much as possible, whilst relaxing any areas of tension.

4. Record your heart rate again and work out the total drop between your peak heart rate & now. The answer gives you an indication of your heart's ability to return to it's normal rate after physical activity (or a stress) and is a good indicator of your fitness & heart health (its capacity).



HEART RATE DROPS



Amazing! Your heart is very fit & you have built an abundance of mitochondria (cell engines). Your immune system will be stronger than normal, & your ability to become calm after any form of stress is excellent!

Well done!! Your hearts capacity to recover is healthy & your whole system has a far greater capacity to cope with any form of stress AND bounce back faster.

Best to keep going with your programs. **Getting to a 50+ drop is a great goal for everyone**, reducing your risk of heart disease and improving longevity and overall health.

This is not a healthy drop and it needs to improve immediately as currently your ability to cope with stress is being minimised.

3 FACTORS AFFECTING HEART RATE

The bigger the drop in heart rate (in 3 mins) after exercise, the better your fitness & ability to cope with stress. You're more able to become calm after stress & you have more mitochondria providing energy. BUT there are a couple of factors to be aware of that can influence your heart rate when exercising & how quickly it recovers afterwards:



1. HYDRATION.

The more dehydrated you are, the thicker your blood becomes and therefore the heart must pump faster to help move your blood around your body.



2. HEAT.

For every degree change in your body temperature there is roughly a 7 beat change in heart rate. It's very likely to be higher when training in the heat & this may also slow your recovery down too.



3. YOUR CYCLE (Ladies Only)

Just be mindful that there are times in your monthly cycle where your heart rate will generally be higher than usual.

HEALTHY HABIT CHALLENGE #1

1. DO the PACE(2) program 1-2 times before our next session. Schedule it in the calendar!
2. In the boxes below, RECORD your heart rate drop after the 3 minute cool-down (2 mins moving slowly + 1 min sitting).

	MON	TUES	WED	THURS	FRI	SAT	SUN
Week 1							
Week 2							
Week 3							
Week 4							

DATE	H/RATE PEAK	H/RATE AFTER 3 MINS	H/RATE TOTAL DROP
20/11/21	189	123	(189-123) = 66

HEART RATE CALCULATIONS

THE IMPORTANCE OF RECOVERY AFTER EXERCISE or STRESS

To maximise your gains after training, place extra focus on your recovery. This doesn't just take care of how your muscles feel, it also takes care of your **NERVOUS SYSTEM**, that amazing network of nerves & cells carrying all the messages to & from the brain which DRIVES your muscles to work in the first place.

The cells in your nervous system 'can' take up to **SEVEN (7)** times longer to recover than muscle cells, so if you begin to exercise & have nothing in the tank, it's possible you haven't given your nervous system enough time to recover yet, which can be influenced by how much total stress you're under at the time.

ANY kind of stress can exhaust your nervous system, so extra focus on your recovery and using the **SWITCH** audio is an effective way to lower your stress hormones, drop your heart rate and replenish your energy stores.

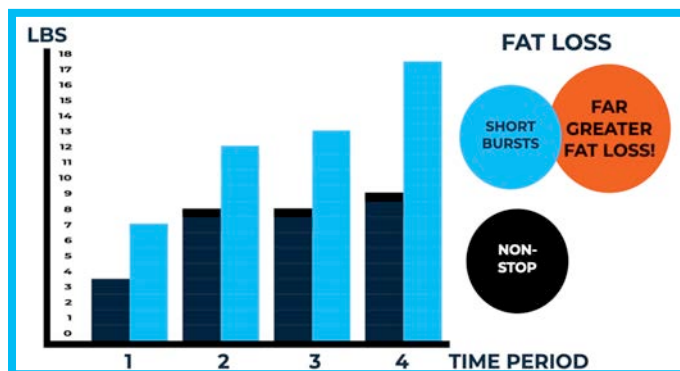
This is also important for your **MENTAL** health as it's hard to feel happy, motivated and enthusiastic when you are tired & exhausted.

SWITCH AUDIO

NERVOUS SYSTEM

- FIRES @360+ km/hr
- COVERS 72 kms
- RECOVERY up to 7x longer than muscles

FAT LOSS & LEAN MUSCLE GAIN



In regards to weight loss, it's important to understand that you cannot judge the value of a session by only looking at the calories you burnt between the start & finish time of the session, you need to consider the impact over a much bigger time period.

Short bursts of high intensity exercise with adequate recovery breaks, burn muscle sugars (glycogen) and stimulates your metabolism to break down fat as a replacement **LONG AFTER** your training sessions finish.

In regards to building lean muscle mass & toning, simply think of the muscular effort you are able to put in when doing shorter intervals vs a longer steady state session. You can go harder in the shorter intervals, using bigger arm or leg movements, so there's way more muscle activation & therefore it's better for building muscle than a slower steady state session.

HEALTHY HABIT #2

AS ALWAYS, BE KIND, COMPASSIONATE & GIVING and PAY IT FORWARD.

Everyone could do with a mood boost or a bit more energy, so during this next week, PLEASE choose 1 thing from today's session or in the follow-up resources to share with others. When you find something that has a positive impact on your life, talk about it, share it & inspire others to do the same!



FOLLOW - UP RESOURCES

Shared *AFTER* this session

▶ **PODCAST - AUDIO**

Summarising the main points covered, so that you can refresh on the details as often as you like.

▶ **MOVEMENT ROUTINES**

Short 3-5 minute routines to help break up your time spent sitting

▶ **PACE PROGRAMS**

PDF programs to print plus Footage explaining 'How To' do each program.

▶ **'NAMS NOTE' - FOOTAGE**

Short encouraging recording between your virtual sessions.