



HEALTH RESULTS
EXPLORE, MEASURE & IMPROVE your inner *(metabolic)* health

Exercise for Longevity



“If I could give every individual the right amount of nourishment and exercise, not too little and not too much, we would have found the safest way to health.”

- Hippocrates

Here, we discuss the basics of exercise: how we humans are designed to benefit from movement, lifting heavy things, and appropriate aerobics, but also how our obsession over the past 50 years with endurance sports **may have caused havoc for some**.

When it comes to exercise, we need to stop worrying about our **chronological age and instead focus on our biological age**. Our chronological age is just a number. We disagree when we hear someone claiming, ‘**I’m too old to exercise**’. To us, the term ‘old’ should be permanently replaced with ‘older’. **We’re never old: we’re only ever older**. People in remote villages around the world (where they live into their 120s) might have earned the right to claim they are old, but for the rest of us, we should just consider ourselves older. Unless someone has a disability, much of the following advice applies to everyone, regardless of age.

Here are the two most important and most fundamental principles of healthy living:

1. We must eat what we are designed to eat: a human diet.
2. We must exercise in a way that’s as close to ancestral daily life as possible.

What The Experts Say:
Dr Aseem Malhotra



“A colleague and friend of mine, a truly inspirational man called Dr Tim Noakes, a professor of sports science, says that if you need to exercise to keep your weight down, your diet is wrong. And, the point is, you can’t outrun a bad diet. You can’t outrun your fork! I was involved in exposing this in an article I co-authored in the *British Journal of Sports Medicine* in 2015, where I wrote that it was time to bust the myth of physical inactivity and obesity: you cannot outrun a bad diet.”

Our approach to fitness can be easily remembered with the acronym MARS, which stands for **Move More, Aerobic, Resistance, Stance.** Our approach mirrors the UK government advice, with just a few tweaks here and there:

Move More Simply move your body in some way for 1-2 minutes every 1-2 hours, but not so much that you are out of breath.

Aerobic Devote approximately 150 minutes each week to physical activity that increases your breathing. Ideally, this is spread throughout the week. We recommend focusing on exercises where you are exercising at between 70 to 80% of your maximum heart rate. For some that might mean taking a brisk walk while for others that might mean jogging.

Resistance Challenge your big muscles once or twice a week – just adding a few minutes of resistance training is hugely beneficial.

Stance Balance, co-ordination, and posture.

Physical activity for adults and older adults

Benefits health	Reduces your chance of	Type II Diabetes -40%
Improves sleep		Cardiovascular disease -35%
Maintains healthy weight		Falls, depression etc. -30%
Manages stress		Joint and back pain -25%
Improves quality of life		Cancers (colon and breast) -20%

Some is good, more is better	Make a start today: it's never too late	Every minute counts
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Be active

at least

150

minutes moderate intensity per week

increased breathing able to talk

OR

or a combination of both

at least

75

minutes vigorous intensity per week

breathing fast difficulty talking

to keep muscles, bones and joints strong

Build strength

on at least **2** days a week

Minimise sedentary time

Break up periods of inactivity

For older adults, to reduce the chance of frailty and falls

Improve balance

2 days a week



The principle behind our **MARS** approach and our exercise routines is to emulate what our primal ancestors did during daylight hours. It is about lifting heavy rocks (or in our case, weights), moving more, and doing light aerobics. It is not about spending gruelling hours on a treadmill or exercise bike, nor about attending the latest craze in fitness classes. Cavemen didn't jog for hours on end, nor did they take part in endurance cycle events. After all, the wheel hadn't been invented throughout most of human evolution!

What we desire is to be fit, but not at the expense of our health. What do we mean by that? Well, there are lots of athletic people who put their body through hell on the running and cycling track, which in the short term might make them look fit, but in the long term potentially leads to an onslaught of health problems.

Research carried out by Dr James O'Keefe at the Mid America Heart Institute at St. Luke's Hospital suggests that people who exercise regularly live seven years longer than those who are physically inactive. No surprise there. However, his research from 2012 revealed something that will most likely astonish you: **'Those individuals who participated in extreme endurance sports experienced significant heart damage.'**¹

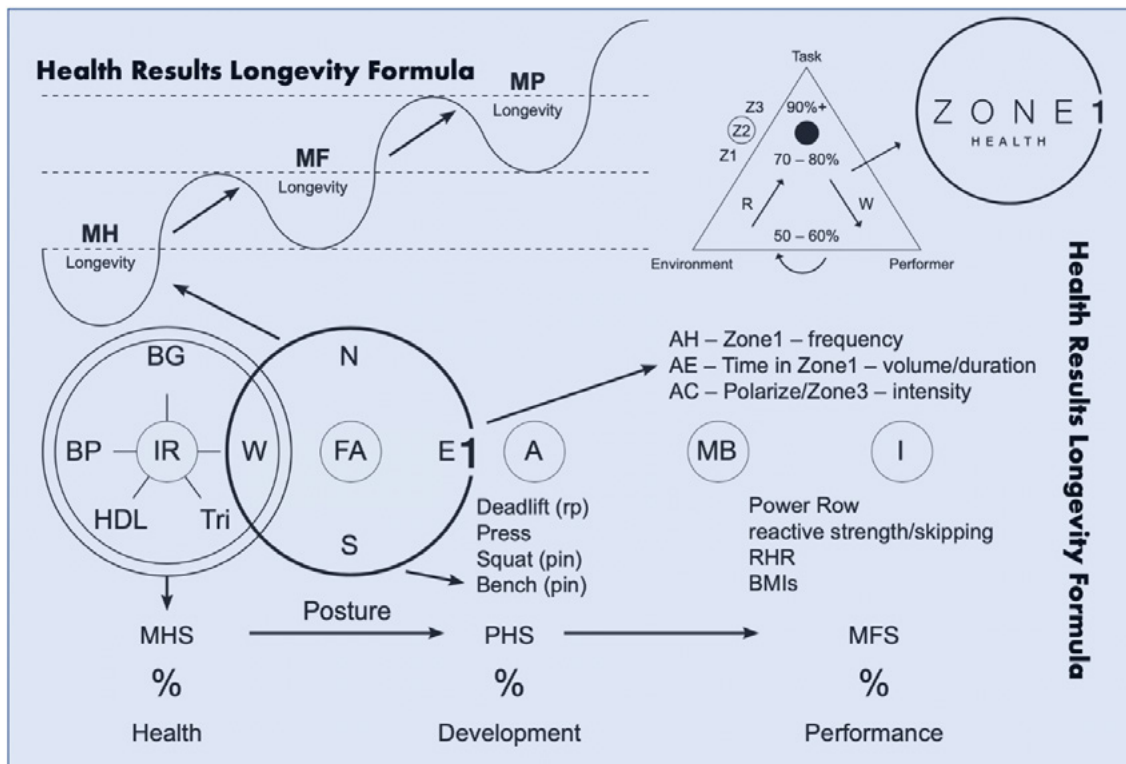
While this article provides an adequate overview to our approach on movement and exercise, we encourage you to look at our other articles, especially around MARS and training in something called Zone1.



Throughout this topic, we will demonstrate how MARS and Zone1 training is the **safest and most reliable way to achieve healthy longevity**, and that endurance sports and over-exercising (or ‘under-recovery’, as James Cracknell refers to it) are not healthy in the long run.



We agree with the government guideline that getting started is the most important step you’ll take to improving your physical health and that doing something is better than nothing. However, as well as starting your fitness programme, we are also concerned with how to develop an **optimum longevity exercise plan**, which is what our experts have helped us develop: suitable for those just starting out to professional athletes, those suffering from chronic illness and to those wanting to improve their personal best figures in various exercises.



Don't worry if this graphic means nothing to you, but we thought you'd like to see what our Health Results Approved Personal Trainers use to measure improvements in metabolic health, metabolic fitness, and metabolic performance.

Here is a little more detail on MARS:

Move More

Caveman didn't jump in a car and sit in a two-hour traffic jam on the way to an office, where he sat for seven hours before going home to slump in front of the TV. Put simply, in Great Britain, we don't move enough. Steve Bennett says, *'Even 40 years ago, I can remember my mother carrying half a dozen heavy grocery bags in each hand, the handles cutting into her fingers, half a mile from the nearest shop. Today, what do we do? Just so we don't have to push the shopping trolley too far, we drive around the supermarket car park multiple times trying to find a space as close to the entrance as possible! It's terrible to think how inactive we have become.'*

If you are overweight or obese and just beginning to live more healthily, it is important to pay attention to that old saying, **'don't run before you can walk'**.

In the **Move More** phase, it's crucial for our health, especially if currently you live a very sedentary lifestyle, that you start to move about more on your feet. Get outdoors in the fresh air: walking, gardening, hiking, rowing. It really doesn't matter what it is, **just get moving!** Get involved with a swimming class or bowls or anything that gets you moving, but not so much that you're out of breath.

Even 2000 years ago, Hippocrates - the father of Western medicine - told us, **'Walking is man's best medicine'**. If you live a couple of miles from work, try to walk there occasionally. If you live too far away, then park a mile or so from your destination and walk the last part. You will be amazed by how you feel.

What The Experts Say: Dr Shan Hussain



“One foot in front of the other. A study presented at the European Society of Cardiology Congress in 2015 showed that 25 minutes of brisk walking a day could add up to seven years to your life and halve the risk of dying from a heart attack.”

Aerobic

While much of our advice on aerobic and resistance training complements the NHS exercise guideline for adults, we mainly follow a ground-breaking approach to exercise for longevity called **Zone1**.

Let us start by introducing you to a highly relevant scientific concept: hormesis. It's a geeky word summarising the saying, 'A little of what doesn't kill you makes you stronger.' An example of hormesis would be a vaccination: we are injected with a small dose of the very thing the vaccination is trying to protect against. Stress is another example of hormesis. A small amount of stress is a good thing, while a large amount can kill you. Too much chronic stress is linked to all sorts of horrible diseases, including cardiovascular and cancer. But a small amount of acute stress (as in the type caused by sprinting or by weightlifting) is a good thing. However, it is important to be aware that endurance sports or over-training can sometimes cause unhealthy, damaging levels of stress. Our **MARS** and **Zone1** exercise principles are geared around hormesis.

Now, this may be the first time you have heard about our **Zone1 Training**, but it is a method that works brilliantly for building your aerobic resilience and is targeted at both longevity and health-span. What fascinates most people is that it works equally well for those who are metabolically unfit, right through to professional athletes. The methodology has been developed by **Christian Dailly**, who has been coaching it for over a decade and has helped people recover from all sorts of injuries and metabolic conditions. He has also coached people from their sofa to become marathon and national winners in their event!



The principle is to train at approximately **75% of your maximum heart rate for a period of 20 to 30 minutes**. This involves first knowing (or estimating) what your maximum heart rate is, and then fast walking, slow running, rowing or cycling at that intensity. This is an intensity that is **not too demanding on the body**. This is an intensity that promotes good health, longevity and mitochondria biogenesis (creation of new energy organelle within our cells). This is **real** aerobics. Let's say you were cycling. At the end of your session, measure the distance you covered (or on some bikes the watts you generated). Then, over the weeks, as you improve your diet, sleep etc., repeat the exercise at the same heart rate and see if your output has increased.

This is an efficient way of measuring your physical metabolic health and accurately tracking your progress. It will also tell you if you are over-training or reveal if you had a heavy night the day before! This is possibly your best outward metabolic performance indicator.

As you continue to train in **Zone1**, your resting heart rate should become lower (a good thing) and you are more likely to keep your maximum heart rate up (which usually slows down as we age) or even increase it (mine has gone up 3 bpm in the past month). A greater range between your resting and maximum heart rates normally equates to a **better level of metabolic fitness**.



Resistance

While we genuinely believe that 80% of our health is shaped in the kitchen and only 10% in the gym (with the other 10% being made up of a combination of such things as sleep, stress, and sunshine), we believe that, for numerous reasons, it is essential to look after our muscles.

To understand why resistance training is important, we need to go back and look at our distant ancestors' daily activities. After a successful hunt, to get their catch back to their dwelling, they would carry small animals across their shoulders, or drag heavier ones by their hooves. While out gathering, they would hack down trees and move heavy rocks (without modern tools) looking for mushrooms and other fungi. These activities wouldn't have required hours and hours of weightlifting, but our ancestors must have been able to muster great strength whenever required. Therefore, **our body is designed and programmed to do occasional bouts of heavy lifting.**

While there is some advice below, the key thing to remember is to **do something. Anything is better than nothing.** If currently you don't exercise, even just getting up and down from the chair as often as you can would be a good start. If you feel you can do some beginner level exercises, these are ideal for getting started:

- Stand facing a wall with your arms out at shoulder height; put your hands on the walls so that your arms are straight. Lean towards the wall without moving your feet and then push back upright. You are performing what we call a 'standing press up'. Repeat as many times as you can until you physically can't do any more. Don't worry if that is only one or two.
- Put one can of food in each hand and move them from your work surface to a shelf above head height and then slowly back down. This works your shoulder muscles. If you repeat this until your muscles ache, this is exercise.

If you look at our free app, you will find further simple '**starting out**' exercises by **James Cracknell**. But the key thing is to just get started.

Once you've made some progress with the exercises for beginners, don't rush out and start lifting heavy weights. You should invest some time in learning what a safe and appropriate workout should look like. To start, we need to understand the concept of **homeostasis**. Every cell and system in our body relies on a stable environment to function. Homeostasis refers to the internal balance the body must maintain to ensure health. When we exercise, we break down our muscles (catabolic process) and then ask our body to rebuild them (anabolic process) stronger and bigger than before.



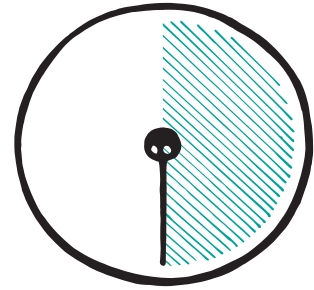
Unless we lift heavy things at regular intervals, our body no longer engages in any meaningful level of catabolism. The balance between muscle breakdown and rebuilding needed to be perfect for our ancestors. They had to expend energy to catch and gather their food (catabolic), then a natural rest period followed when they feasted on their kill, allowing their body time to rebuild its muscles (anabolic). If the only exercise we do is opening the door to the grocery delivery person or Deliveroo cyclist, then our homeostasis is going to be well out of whack. **Here's five reasons (medically, there are many more) why everyone benefits from maintaining or building muscle:**

- 1. It burns more energy than body fat.**
- 2. It supports our joints and bones.**
- 3. It reduces the risk of injury.**
- 4. It soaks up sugar without the need to increase insulin (therefore reduces insulin resistance).**
- 5. It helps maintain homeostasis.**



How Often Should I Do Resistance Training?

The good news is we are not talking about training every day, and each session need **not take more than 30 minutes**. When we exercise too frequently, our muscles may actually shrink (atrophy) rather than grow (hypertrophy).



30 MIN

We are all built differently. Our age, sex and current fitness level all play a big part in how quickly our muscles recover between sessions, and therefore what our recovery period should be. Quality of sleep, diet, alcohol consumption, dehydration and even how stressed we are can all play a big part in determining how quickly our muscles recover from exercise. In addition, remember that all movement and exercise is accumulative. If we resistance train on a Monday and then take in a game of golf or a yoga class on Tuesday or Wednesday, we might find we are not feeling ready for the next gym session for an extra day or two.

Our approach is that as long as each week you do at least one or two resistance training sessions and walk plenty of miles, then the rest of the time, just listen to your body.

Age also plays a part in training frequency. In our late 30s or early 40s, we start to lose skeletal muscle (known as sarcopenia). If we don't exercise, we lose as much as 5% of muscle every decade. Sarcopenia increases the older we get, and by our 70s it really shifts into top gear. As we age, we often can't quite lift the same big weights as we did in our youth: consequently, we need to increase the frequency of our exercise sessions. But once again, we can't emphasise enough that we are all built differently and that we should use the above as guidelines while always listening to our body for when to hit the gym.

One last thought about exercising as we age – **in reality, we should see more 70-year-olds bench pressing in the gym than we do those in their 20s!** In his book *Science and Development of Muscle Hypertrophy*, Brad Schoenfeld says, *'After age 40, the body loses progressively more muscle mass each year. Regular resistance training can reduce this loss. Although the elderly do have a diminished hypertrophic response, they can gain muscle mass; however, a greater weekly training dose appears necessary to maintain the gains.'*

Time Under Tension

Okay, so now we have a guideline on how often to hit the gym, let's state something obvious: **do everything you can to avoid injury**. We say this because we constantly meet people who injure themselves training and spend as much time laid-up as they do in the gym. Certainly, the older we get, we really need to make avoiding injury a top priority.

Our recommendation is that everyone starts out with our simple '**Broomstick Posture Routines**'. You can find this in other articles and on our free [Health Results app](#). It is a way to learn the correct posture to perform the major muscles exercises, but without loading any weights. Just a broomstick - no weights! Even some professional athletes we work with still use it daily, as a warm up routine.



Once you progress from our broomstick exercises, our preferred method of exercise (which is also one of the safest) isn't to swing huge weights using momentum, but to **keep each repetition nice and strict: really focusing the mind on the muscles we want to work on**. Without the ability to isolate which muscle we want to work on, the approach we are going to discuss will not prove as effective as it otherwise could be.

This might sound a little vain, but stand in front of a mirror and pose like a bodybuilder on stage. Try first without any weights to tense the muscle you intend to work on. This will send a signal to the brain and help focus its attention. Let's say we want to work our biceps. **We should be able to tense them for about a minute and really feel a burning sensation without lifting any weights at all.** This heightened awareness (known as kinaesthesia – pronounced 'kenes-teez-ya') increases our ability to better target the muscle we want to exercise.

This method might sound a little strange to some readers at first, but we assure you, regardless of age, it works. Before you even lift your first weights, we would recommend that you [take some measurements and record them on your phone or in a logbook - or better still on our free Health Results app](#). Once you have got all your vital statistics noted, it's time to head off to the gym.

Let us now explain what we mean by Time Under Tension. We are going to slowly and deliberately carry out each and every repetition (one complete motion of the exercise), whether it be a press-up, a pull-down or deadlift. These deliberately unhurried repetitions should take between 6 and 20 seconds, depending both on our preference and the actual exercise we are doing. Our aim is to keep going until we reach complete failure. This is where we just can't move the weight any further without cheating. Once we hit this point, there are great gains to be made by not putting the weight down but continuing to hold to the max for around 10 more seconds.

This phase of exercise, without the weights even moving, is called '**isometric training**' or '**static contraction**'. As we hold the position for just a final few seconds, we should, in most exercises, find our muscles twitching or whole parts of our body shaking. **Don't panic: hang in there.** At this point, and this point only, do we conclude that we have reached **Max Out**. Unless we **Max Out**, we will still have spare glycogen in our muscles and will most likely limit our muscle growth.



Pushing our ability to our true max means we inflict more microtrauma on our muscles (at a cellular level), and combining this with sufficient rest time determines our success.

We want to explain a little further about what's happening inside our muscles as we exercise by using the analogy of a sponge. If we **Max Out** correctly, we are effectively wringing out the sponge so that there is no water (or energy, in our muscle's case) left inside. Once our glycogen has gone, our sponge will soak up everything it possibly can to replace it. Our muscles will quickly grab any sugars floating around the body before insulin has a chance to hand these sugars over to our fat stores. What's more, we will be producing far less insulin as well, as our muscles will be hungry for any sugars and will temporarily make insulin semi-redundant. It's also why, when we eat straight after a training session, our muscles are said to grow.

Let's get back to Maxing Out. At the point when the movement has stopped and you have held the position for roughly 10 seconds more, note down the time. For most exercises, we are targeting the total time from starting to Max Out to be between 45 and 120 seconds. **The total time is what we refer to as Time Under Tension.** If we didn't manage to last 45 seconds, then in our next session, we must decrease the weight. If we managed to do more than 120 seconds, then in our next session, we will add more weight. Remember, **'we can't manage what we can't measure'**. What we are looking for over a period of a few months is to be able to slowly increase the weight and still last for between 45 to 120 seconds. Once we start to increase the heaviness, we will have proven, beyond doubt, that we have become stronger.



Resistance Tips

1. Record your measurements and rep counts in your phone, a logbook or the [Health Results app](#). It will help you measure your sessions and also motivate you to push just that little bit harder next time.
2. Remember that with some exercises, great things can be achieved by ditching the weights and just performing static contraction (just holding the muscle tense without movement).
3. To ensure you [Max Out](#), it is not possible to aim for a precise time or a nice round number of repetitions – we finish only when we have maxed out!
4. Make sure not to hold your breath: breathe out during the most challenging part of each repetition.
5. We should remember that our resistance sessions probably take up less than 1% of our week, but these short sessions are only effective if we are genuinely pushing our body hard.

Other Benefits Of Maxing Out

1. By lifting weights and [Maxing Out](#), we increase our bone density.
2. We increase insulin sensitivity.
3. We become more metabolically efficient.
4. We limit inflammation, certainly when compared to endurance athletes.
5. When we [Max Out](#), we get both a hormonal rush and heaps of mental stimulation that slows down the ageing process.

Stance

Our stance plays an important role in our functional ability, which is our ability to move and perform tasks throughout our day. [Posture is important for our musculoskeletal system to help prevent or reduce aches and pains.](#) Balance, co-ordination, and flexibility can improve our quality of life, as well as support our functional movement ability.

What are the benefits of looking after our stance? Our musculoskeletal system is a chain of connected parts. Our bones meet at joints. Our muscles connect to our bones via tendons. We have a type of tissue called fascia that runs in tracts, or pathways, connecting muscles throughout our body - for example connecting our right leg to our left arm. Our stance keeps us functionally fit and reduces musculoskeletal aches and pains.

Our body is made to support itself and meet our daily movement needs. Historically, our daily life would have involved a variety of movements and positions throughout the day. Regular movement and change would mean we would not spend prolonged periods in one position. Many people now spend large amounts of time sitting, in relatively stationary positions, such as at a desk, in a car or watching television.

There are three core elements we can work on to improve our stance: balance, co-ordination, and posture. All three are extremely low impact and ideal for any level of fitness.

Balance

There are countless exercises you can find online, but, as always, we like the simplest ones:

- **Heel-to-toe walk:** stand upright and place your right heel directly in front of your left toe and then repeat with your left heel in front of your right toe (so you are walking in a straight line). Make sure you look forward the whole time. If you find you're extremely wobbly to start with, walk next to a wall and place your fingers against the wall as you walk. As your balance improves, you will be able to remove your fingers from the wall. Try to see if you can complete 5 steps.

- **Step-up:** slightly reminiscent from those 1980s fitness videos, but extremely effective. Use a step in your house, or aerobic step if you have one. As above, you might find you need to use a wall for support to begin with. Place your right leg on the step and then bring your left leg up to join it before returning your right leg and then your left leg to the floor, before repeating to a total of 5 steps per leg. You might find one side is wobblier than the other!



Remember that exercises like lunges and squats are also great for your balance. If your current exercise routine includes lunging with weights, but you find this puts you off-balance, just do the lunges without the weights. [It's more important to get your balance right first.](#)

Co-ordination

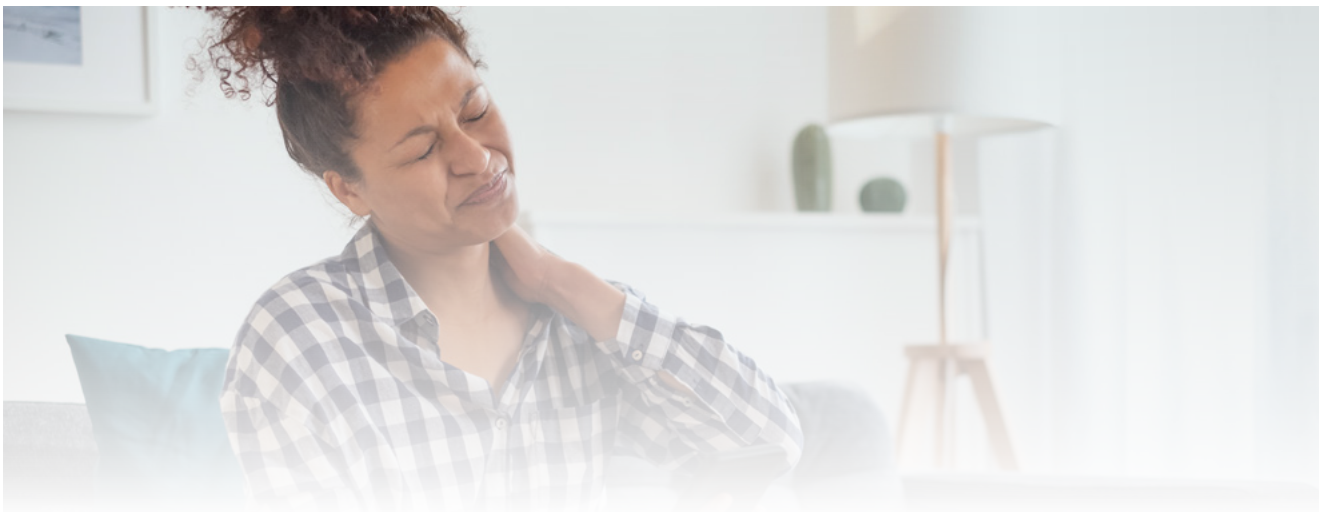
This is all about training different parts of our body to work at the same time to complete a task. As well as improving your technique during exercise, improving your co-ordination will also have a positive impact on your daily life, especially the older you get.

The balance exercises above require a level of co-ordination, but seeing as we use hand-eye co-ordination every day, it makes sense to detail some of those:

- **Go back to throwing a ball!** Whether it's tossing a ball up in the air for you to catch or playing catch with your children or grandchildren.
- Throw a ball or something light into something. You could draw or mark out a line on the ground or garden and throw a ball over the line or throw a ball into a bucket.
- **Close your eyes.** Try closing your eyes the next time you do a stationary exercise, such as your **Time Under Tension** movement. This will help you pay more attention to which parts of your body are moving (similar to identifying a particular muscle before we start resistance training).

Posture

While there is not necessarily such a thing as 'good' vs 'bad' posture, the majority of us spend too much time in one position, which is when the pain can start. One position we're all guilty of is being hunched over, because of the amount of time we spend on our phones and devices. The next time you are on the high street, take a good look to see how many faces you can actually see, or whether you are mainly looking at the crown of people's heads, as they spend their time looking at their phone, even while walking! The amount of time we spend at a computer can't always be helped because of work, but the more time we spend in a particular position, the harder it is to get into the habit of becoming more mobile.



The most common complaint related to a constant slouching position is muscle tension ('text neck'), which can also cause tension headaches, back pain and other complaints. Pain and other problems as a result of not moving position enough can easily be resolved by paying more attention to how you feel. [While slouching in your chair, do your shoulders or neck hurt? Are your shoulders creeping up towards your ears, rather than relaxed?](#)

If you find you need to adjust your posture, but you're not sure how, try adopting these the next time you feel some muscle tension or the start of a tension headache:

- When standing, imagine a piece of string pulling your head towards the ceiling, stand with your feet shoulder width apart and try to stand as though you are between 2 sheets of glass. Your bottom and stomach should be tucked in slightly, and your ears should stand over your shoulders.
- If you're likely to be sitting down for a long time (at work), make sure you're doing it properly. Your chair height should ensure your feet can touch the floor, with your knees level or slightly higher than your hips, and the back of the chair should be supporting your spine.

Above all, when it comes to stance, the changes you can make are so subtle, that the most important part is paying attention to how you are moving, standing and sitting. That way, the more you start to correct yourself, the more the 'new' (correct!) way of moving will become the norm. It all links back to the first part of [MARS – Move More](#). Your body was designed to move and adopt a variety of positions, so most importantly of all, try to stick to that idea of moving or changing your position for a couple of minutes each hour.

Sprinting

Sprinting is something we don't cover in MARS, but it can be a really useful addition once you get into good shape. When predators chased our ancestors, they needed to sprint. That means it's something we are designed to do! **So, once you get in good shape we recommend that MARS becomes MARSS!**

[See our separate article on sprinting. Click here →](#)

Endurance Sports Aren't All That Healthy (an opinion by Steve Bennett)



“I was a regular jogger for many years. I had completed three full marathons and several half marathons all in respectable times. But throughout the entire period, **I was overweight and continuously injuring myself.** It wasn't until I read a book with the head-turning title *Eat Bacon, Don't Jog* by Grant Peterson that I realised how unnecessary - and harmful to my wellbeing - all those painful miles I had accumulated had been. Grant writes, *‘Your body responds to too much running by releasing cortisol, a stress hormone. Cortisol triggers a*

process called gluconeogenesis, in which your muscles (made up of protein) break down into glucose.’ Grant then goes on to dig the knife in deeper to the committed jogger who suffers pain in the belief they are doing themselves good by revealing, *‘Jogging doesn't build strength or fitness – it just trains muscles to tolerate more jogging, and in the real world that's close to useless.’*

In *Beyond Training*, America's top Personal Trainer, Ben Greenfield, cites lots of research detailing the long-term dangers awaiting those who undertake too many endurance sessions. For example, he writes, *‘The heart generally returns to normal within a week after completing a tough endurance workout or race. But for those who frequently compete in such events, the results can be repetitive cardiac injury over days, months, even years.’* He describes a whole list of detrimental health conditions that can develop from undertaking endurance exercises, such as jogging and long-distance cycling.

Back in 1968, Dr Cooper published *Aerobics*: a book centred on the importance of vigorous exercise for preventing, and even curing, many ailments. An interview with Dr Cooper in *Texas Monthly* sums up the significance of this publication: *‘The book was revolutionary, shaking up the sedentary sixties. Before its release, only 100,000 eccentrics called themselves joggers, but by late 1968, the nation's trails were overflowing, and now more than 34 million people run regularly... and Aerobics brought instant fame to the unassuming Cooper – here and around the world. To this day, Brazilians call aerobic workouts “coopering”.’*²

But here is the game-changer. In that same interview in 1995, Dr Cooper revealed, *‘At the time, I knew scientific evidence had established that regular exercise was essential to good health and an effective life. But I erroneously assumed that more was better – that the longer you ran, cycled or swam, the healthier you would be.’* He shares statistics about thousands of his clients – many of whom were rich and famous and even included President George Bush. He talked at length about how many Olympians had prematurely died of cancer and heart disease and goes on to speak about the effects of free radicals in our cells. Dr Cooper concludes, *‘Too much exercise can kill you.’* Today, The Cooper Institute for Aerobic Research instead recommends a new approach to aerobics for cardiovascular fitness that centres around strength training, muscle mass, and increasing our flexibility. Yes, you read that correctly - **the father of modern jogging now believes it is dangerous and that instead we should lift weights and walk more!**

If you are a committed cyclist or runner, I am not suggesting you give up completely, but would recommended adopting our Zone1 principle: ensuring you slow your pace down for most of your training to around **70 to 80% of your heart rate maximum.”**

What The Experts Say: Dr Aseem Malhotra (Cardiologist)



“Steve and I were both avid, obsessive exercisers. And a lot of people still think that if you do loads of exercise, you won’t develop heart disease, and it’s completely false. In fact, one study published in 2017 showed that people who did seven and a half hours per week of quite moderate to intense exercise (and there are still lots of people that do that) are more likely to develop heart disease than people who just did moderate exercise, such as say just two and a half hours per week.

In fact, to maximise cardiovascular fitness, doing light aerobic [zone1] exercise for 30 minutes, say five times a week, is perfect. It also has the best evidence base when it comes to how exercise can impact on reducing heart disease and cancer, and increase longevity. We are not talking heavy exercise, but where your heart rate is around 70 to 80% of your maximum heart rate.



They did a large observational study of ex-Olympic athletes, and they found that elite athletes don't live any longer than golfers or cricketers. **So, what I say is a little goes a long way and know why you are exercising and listen to your body.**

I have many friends who are orthopaedic surgeons, and one of the problems with jogging, is that they are seeing more and more people in their 30s and 40s having knee and even hip replacements. One told me that it is because they are jogging on the road and that nobody should be jogging on the road. But there is this kind of mentality driven by, I don't know, maybe seeing it on the TV, and as you know, it's not the best way to get cardio anyway. It's much better to do high-intensity interval training and use compound movements. **The question is, can you get cardio without damaging your joints?** I think people need to think about that. Some people get properly crippled in older age because they have been doing lots of marathons, and now, they can't walk, and that's not nice. I used to run 5k, slam it, every morning. Up at 6am, get on the treadmill, take a shower, straight into the operating theatre for ten hours or whatever, but then it started affecting my knees, so I stopped a few years ago. Now I do occasional sprints, very short sprints, but I don't do the long treadmill stuff anymore.”

It's Under Three Per Cent

We can become extremely strong and fit by just spending **under 3% of our life exercising**. Swap your participation in endurance sports for a daily brisk walk or slow aerobic activity (70 to 80% of max heart rate) and be sure to move hourly. Finally, add in a few resistance sessions and combined everything needn't consume more than 3% of our week. **This equates to less than 5 hours a week - that's 1 hour of exercise 5 days a week!**

Exercise Highlights

- **MARS** – Move More, Aerobic, Resistance Stance (and maybe Sprint when ready).
- Research from the European Society of Cardiology Congress in 2015 suggests that just 25 minutes of brisk walking a day is associated with adding up to seven years to your life and halving the risk of dying from a heart attack.³
- Follow **Zone1** training: aim to do aerobic exercise at just 70 to 80% of your maximum heart rate.
- A large observational study of ex-Olympic athletes found that elite athletes don't live any longer than golfers or cricketers.
- By lifting weights, we increase our bone density and help increase our natural growth hormone.
- Lifting weights increases both insulin sensitivity and metabolic efficiency.

References

1. Mayo Clinic Proceedings - <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3538475/>
2. Texas Monthly - <https://www.texasmonthly.com/news-politics/walk-dont-run/>
3. See Dr Shan's quote on page 7.