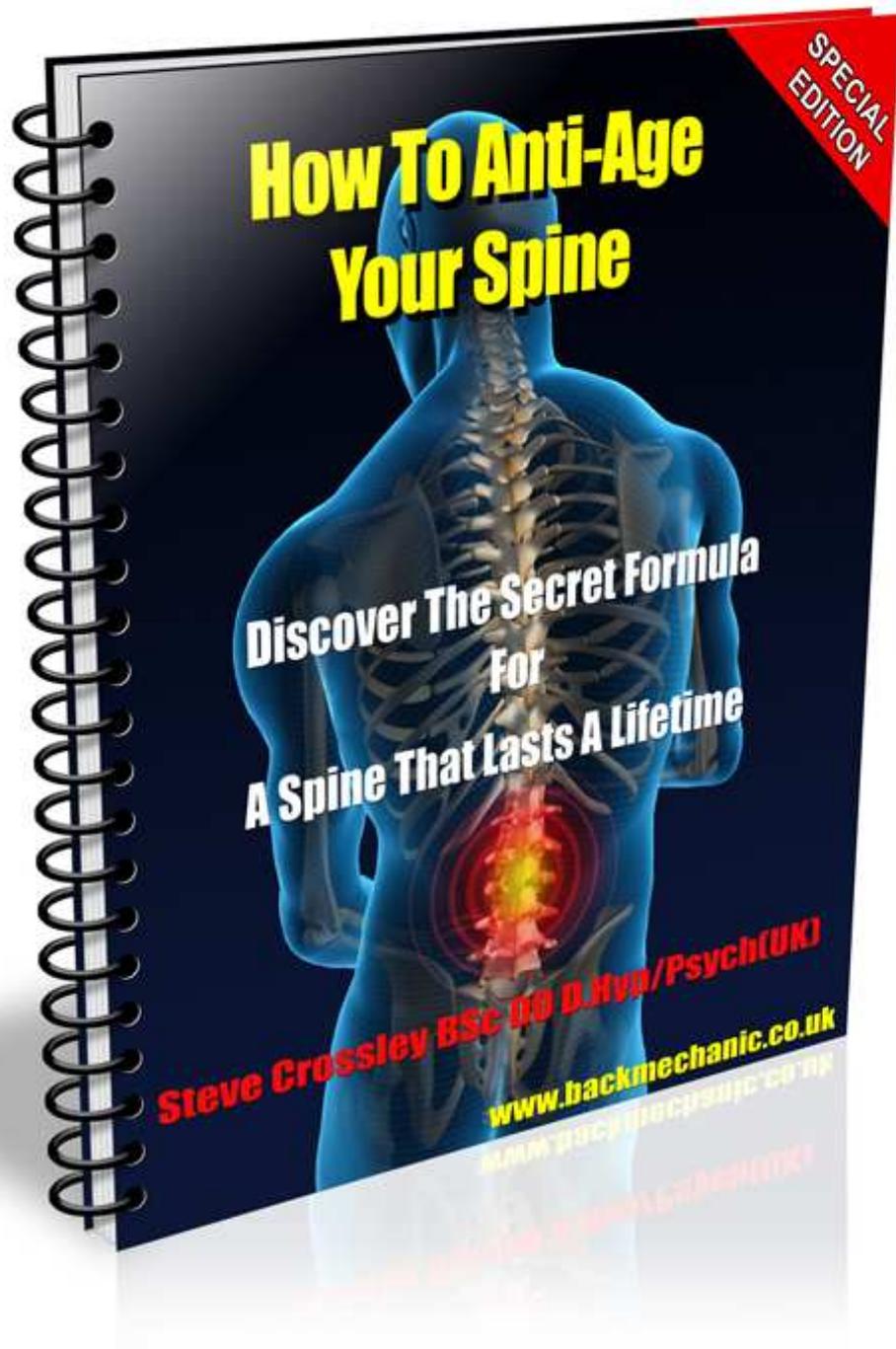


How To Anti-Age Your Spine



By

Steve Crossley BSc DO D.Hyp/Psych(UK)

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Introduction

Back pain is not a new concept and according to historical information has been around for thousands of years. However, as a general trend it appears that back pain in its many forms and manifestations has become a problem of epidemic proportions in more recent times. Statistics suggest that around 80% of the population are affected by it at some time in their lives.

If we consider the changes in lifestyle and environment that have evolved over just the last 50 years or so, it is not difficult to imagine why the prevalence of back pain seems to be growing at an alarming rate. Despite advances in healthcare, medical diagnostics and human physiology, for the average back owner, the structure, function and maintenance of this essential piece of equipment remains shrouded by mystery, myths and misconceptions.

The fact that the modern medical profession largely restricts its therapeutic toolbox to the application of drugs and surgery for the treatment of back pain doesn't help the vast majority of sufferers who find themselves caught between a rock and a hard place. Pain killers and anti-inflammatories may give some relief but are primarily designed to suppress symptoms, often allowing the patient to continue the same exacerbating activities. Surgery is usually the last resort, carries certain

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risks, and in most cases is not guaranteed to correct the underlying cause.

I wonder how many back pain sufferers there are who have been given the impression that their pain and dysfunction is down to age related wear and tear and there is nothing that can be done to help them? So, what can they do?... Put up with the pain and struggle on? Dose themselves with symptom relieving drugs? Take a chance on a surgical operation that may or may not be the answer, or try one of the many alternative potions, pills, remedies, supports or treatments out there? Perhaps the biggest dilemma that many back pain sufferers are faced with is that their lives are severely compromised by a problem that they don't understand and no-one seems to have the answer to. The reality is that they may not benefit from either drugs or surgery and there is such a wide range of alternative treatments and remedies that they don't know what works or who to turn to for the solution to their problem and they end up just feeling hopeless and confused.

Well, I'm here to tell you that it doesn't have to be that way. I want to help you uncover the mystery of your back pain and clear up all the myths and misconceptions surrounding this all too common condition.

Over a period of more than 20 years, I have dedicated myself to the study of physical therapy, health, exercise and the

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structure, function and mechanics of the human body. In this short publication I have outlined some of the beliefs, values and philosophies that have evolved over this period of time along with other concepts that have resonated and made logical sense to me. This combined with the experience gained from working with hundreds of individuals using the skills and knowledge I have accumulated has enabled me to provide what I consider to be a thoroughly comprehensive and “holistic” perspective, resulting in a systematic approach to solving back pain that is solution focused, logical and effective.

If you have ever suffered with back pain, know someone who has suffered, or are open minded and interested enough to consider alternative solutions, then I think and hope you’ll find the following information thought provoking and enlightening. In my opinion, it’s neither rocket science nor new age thinking, but rather is founded upon basic laws and principles of natural healing and human evolution. In this respect I believe that there are many simple truths that have perhaps been forgotten along the way and that we would benefit greatly if we were to simply reconnect with our innate human intelligence and understanding of how we function as mind, body and spirit.

I don’t claim to have all the answers but I do hope you find this information interesting and helpful. Please feel free to share this with anyone you think might benefit.

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The human mind is like a parachute – It works best when it's open!

1. Value Your Spine

Our physical health is for most of us our most valuable possession and yet it is all too easy to take it for granted, abuse or neglect it. I believe this is because for the fortunate majority of us, we've had it since birth, didn't have to pay for it and because of the amazing power of natural healing and regeneration, it is largely self-maintaining. Therefore, we hardly ever have to think about it or do very much to be able to carry on our day to day lives.

Looking at physical health as a big picture jigsaw made up of many interconnecting pieces, I believe that of all the different organs and systems of the body, the spine is arguably the most valuable and important piece of the jigsaw and here's why...

The stack of bones we know as the spinal column houses and protects the spinal cord, the body's power station. Every tissue, organ and cell in your body has a power supply that originates from some part of the spinal cord. For example, the arms and hands are supplied by the part of the spinal cord that is housed within the column of neck bones known as the cervical spine. The legs and feet get their nerve supply from your lower back, otherwise known as the lumbar spine. Some of your most vital organs, such as the heart and lungs are supplied by nerves that start in the middle of your back, the

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thoracic spine. We are all aware of the potential severity of paralysis through damage to the spinal cord, but did you know that even a slight misalignment of the spine or damage to intervertebral discs can put pressure on the spinal cord, peripheral nerve roots and important blood vessels causing dysfunction in any of the organs, joints and muscles that they supply? One common example of this is a severely debilitating condition such as sciatica, which can lead to symptoms such as severe back and leg pain, numbness, pins and needles and muscle weakness.

When the spine is aligned and supported correctly, this amazing structure allows us to carry our own bodyweight efficiently and with minimum energy requirement, it allows incredible mobility and flexibility for physical functions (just think what gymnasts and acrobats can do with their bodies!)

However, when the spine is out of alignment or unstable for any reason, or for any length of time, the sensitive nerve roots which supply power and communication to the muscles, joints, organs and other tissues are likely to become irritated, inflamed and even permanently damaged. This type of scenario can cause pain and dysfunction in the short term, but more importantly is what leads to disease and degeneration in the longer term if not corrected.

Because medical investigations such as X- Rays and MRI scans don't show the short term inflammation, pain and dysfunction,

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these factors are often ignored and considered to be self correcting. Furthermore, the usual conventional medical treatment only gives you the choice of drugs or surgery as a solution to your back pain.

So, whether you're an athlete, a tradesman or you sit at a desk for a living, ask yourself what value you would give to your spine and how are you going to make sure it lasts a lifetime? Perhaps, more importantly, what would it cost you if you couldn't carry out your job or other responsibilities due to a spinal injury or dysfunction?

2. Anti-Age Your Spine

From time to time I'll see a patient in my clinic whose spine has been given an "age" by a medical specialist. For example, it might be a 50 year old man with degenerative changes on an X-ray or MRI scan who's told... "You have the spine of a 70 year old man". Another time it could be a fit and active 70 year old with "the spine of a 50 year old". Now, you might think this is a strange and mysterious thing. After all, how can two different spines age at such a different rate? It's all too common to hear that a person's state of physical health and degeneration is "just your age", but should we just accept that age-related weakness, degeneration

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and disease is only to be expected, or should we all be looking for ways of optimising our natural anti-aging mechanisms? Well, in case you don't already know about it, we all have a very effective and natural anti-aging system operating in our bodies if we know how to support it. It's known as the healing mechanism and it operates for the whole lifespan. (I've just read a newspaper report about a British man whose skull completely regrew 50 years after having part of it removed and replaced with a titanium plate). In other words, all the time we are living and breathing regeneration is possible. If you think about it, our skin, hair and nails continue to renew even as we get older. If we get a cut or graze, it heals automatically, our organs regenerate and our gastro- intestinal tract renews itself every 72 hours. As a matter of fact, it is said that our whole body is renewed every 7 years. We still age as we get older of course, but isn't it interesting how we all seem to age differently and at different rates to each other. This is because aging occurs when our bodies are degenerating at a faster rate than they are re-generating. The important point here is that we have much more control and influence over how much and how quickly we age than we realise and once we begin to understand how to optimise our renewal and regeneration mechanism, we can apply it to our structural health as well as our general health.

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So, the message in this chapter is to believe in the natural healing mechanism and know that you can improve your spinal health whatever your age or current condition.

3. Get An MOT

Have you ever purchased an expensive piece of equipment that comes with an owner's manual? Usually, the more expensive and sophisticated the item, the more important it is to either have an expert help you maintain it, or you learn how to use and look after it yourself. If it doesn't come with an owner's manual, you don't have much choice but to rely on a specialist when it comes to servicing, repairs or customer support.

When you stop to consider the capabilities and complexity of the human body and in particular the "neuro-musculo-skeletal system" you may start to realise just what an impressive piece of equipment it is, but did you get your owner's manual to go with it? Unless, like me you've dedicated your whole career to learning how the human body functions, it is unlikely that you have much idea about how it all works and how to use, maintain and care for this amazing piece of biological engineering.

So, if you don't have the owner's manual and have not learnt all about how your body works, then you'll need to find a good

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specialist in the mechanics of the human body if it ever needs attention or breaks down!

Here in the UK we are used to having to take our cars to the garage for an annual Ministry Of Transport test which ensures that it's in a fit state to be driven safely. How long could you expect your car to keep going if you never got it checked and tuned? Would you keep driving it with a flat tyre and a bent chassis without realising that it only causes further damage, wear and tear and poor performance? Most car owners will happily spend hundreds of pounds each year to maintain their beloved form of transport and most of us would feel literally immobilised if we weren't able to just jump in and drive off to work or to the shops when we needed to.

But...what if your back "broke down" and left you immobile due to neglect and abuse. How would you feel about spending a few hundred pounds to get it fixed? In my experience, many people give less value to their physical health than their vehicles and are often reluctant to spend money on maintaining the vehicle that is most valuable to them, their physical body or "life-vehicle". After all, if you have a really bad back, you'll struggle to even get into the car, let alone drive it to work.

So the message here is: Be smart! Don't let your body deteriorate through neglect; get an MOT for your spine. A regular check up and maintenance treatment with your

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therapist is a great way to prevent serious problems and maintain your bio-mechanical function to keep you on the road.

4. Use It or Lose It

Did you know that astronauts lose bone density and muscle mass in space? Yes that's right, the human body is so dynamically adaptive to its environment and usage that when they get back to earth it's as if they had aged many years resulting in weaker bones and muscles. Once they're back on terra firma and under the influence of the earth's gravitational field though, they soon start to get stronger again due to the muscle and bone loading effect of their body weight under gravity.

Let's look at another extreme; say a bodybuilder who wants to be continuously building bigger and stronger muscles. He undergoes the same principles of adaptation but in reverse. He spends his time increasing the effects of gravity on his muscles and joints by adding weight to every conceivable movement pattern he can manage. The body's response to increased physical demand is to make it fitter and stronger in preparation for the same thing next time. That's the basic principle of any athletic training programme and is known as the SAID principle. Specific Adaptation under Imposed Demand. By the way, weightlifters have been found to have far superior bone

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density and ligamentous strength in the spine than non weightlifters.

The human body likes to conserve energy wherever it can, and will sacrifice muscle tissue and bone density if there isn't a demand for it, so if you don't use it you lose it. Like the astronauts who become weightless in space, if we just sit around all day and don't use our muscles regularly, we start to lose the strength and ability to support ourselves effectively. The danger here though is that we may not notice our decline as the loss of muscle is often hidden by a relative increase in fat, so that we weigh the same on the scales and suddenly find we have a problem when we need to lift that heavy box or run for the bus.

The human body evolved to be athletic and active. Movement is life and life is movement. It is well proven that weight bearing exercise such as lifting weights strengthens the bones and soft tissues more than other forms of exercise. This is particularly relevant to the lumbar spine, hips and pelvis. If you're concerned about osteoporosis and a weak spine, get some professional advice and training on how to strengthen your spinal structures safely and effectively with resistance training.

So, don't let your physical fitness decline through lack of use. Go to the gym, lift weights, practice yoga, dance, walk regularly, swim, use the stairs and carry the shopping...take

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advantage of the body's adaptation response – Build yourself a stronger spine - Use It or Lose It!

5. Decompress For Success

Probably the factor that puts the biggest and most persistent stress on our spines throughout our lives is the force of gravity. We are subject to it from the day we are born until the day we die and it seems to be a constant battle although we are not always consciously aware of it.

Think about the postural changes we see in elderly people as they become weaker and less active. They usually lose considerable height due to the loss of intervertebral disc thickness and they become more and more hunched over as their bodies continue to lose the fight against gravity.

The more we sit and the less we stretch and decompress our spines, the more our muscles shorten and weaken causing compression of our joints and more degenerative wear and tear. The human skeleton evolved as we became more upright and began to walk and run on two legs rather than four. However, if we do nothing about it, as we age the cumulative effects of gravity, wear and tear and increasing weakness combine to cause more pain and dysfunction in our muscles and joints. It has been said that backache is the price humans

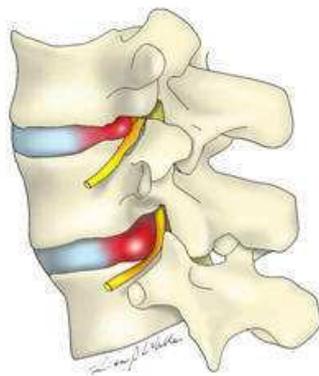
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pay for the combination of erect posture and advanced age, both very recent in terms of human evolution.

Although it is sometimes argued that the human spine has not evolved sufficiently to withstand being bipedal, what is more certain is that we were not designed to sit in chairs all day and lead the type of sedentary lives that the vast majority of us do.

If we can manage to reduce the effects of gravity even periodically by stretching, keeping better posture and strengthening our supportive muscles, then we are at least doing something about the problem and increasing our chances of going into old age taller, stronger and healthier.

So what do I recommend to decompress the spine? Try yoga, massage, swimming, stretching, strengthening exercises and sitting less.



Compressed and Bulging Discs

6. Sit On A Ball

In the last chapter I recommended spending less time sitting on chairs. However, I do realise that most of us these days, don't have much choice other than to spend most of our time sitting, whether it be in the car, on public transport, at the office or in front of the TV.

After 20 years of rehabilitating people's back problems, I'm absolutely convinced that the main reason for what has become something of an epidemic dilemma is that we do too much of what the human structure is not designed to do. The sitting position does two negative things that are guaranteed to age the spine and move one nearer to having a serious back problem...

1. Sitting reduces and flattens the normal lumbar curve otherwise known as the lumbar lordosis.
2. Sitting puts more compressive force through the lumbar spine and especially the discs. This is because the muscles that we normally use to maintain our correct lordosis are inactive in the conventional sitting position.

In the diagram above, you can see the effect of these two types of stress on the spine. Flattening of the lumbar curve causes the discs to bulge posteriorly where combined with increased downward compressive force it can result in a prolapse or herniation which is likely to impinge on the

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sensitive nerve roots that exit the spine between each vertebrae. This type of nerve entrapment is the cause of painful conditions like sciatica.

If this type of scenario continues unchecked for long enough, it eventually leads to long term degenerative conditions such as prolapsed discs, permanent nerve damage, spinal stenosis and arthritis.

One cheap, simple and practical piece of equipment I recommend to most of my patients for stretching and strengthening the muscles in a functionally useful way is the Swiss Ball. If you have a bad back and struggle with the most basic exercises, then just sitting on the Swiss Ball is a great start and I often recommend it to be used in place of a conventional chair.

Because sitting on a ball creates an unstable base of support, it causes the body to control and support its own centre of gravity, thereby maintaining the normal lumbar lordosis and forcing the supporting muscles to work posturally to maintain balance.

The ball also tends to be constantly moving as we use our upper limbs to carry out whatever it is we are doing at the time. These small and frequent movements exercise all the little muscles around the spine as well as our core stabilising abdominal muscles. These movements also create a pumping

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effect that draws fluid in and out of the discs which keeps them hydrated and healthy.

But what if a Swiss ball is just not practical for your working environment, and you need to use an office chair, I hear you saying. Well, in my opinion, the next best thing would be to sit on what is known as a stability disc which you can place on top of an office or kitchen type chair. It has almost the same effect as sitting on a ball, but takes up very little space. It can also be moved from one chair to another so is often more practical.

7. Make More Of Your Core

As I mentioned in the previous chapter, one of the benefits of sitting on an unstable base of support like a Swiss ball is that it engages the core muscles, where on the other hand, relaxed sitting doesn't.

The core muscles are the body's natural "corset" and their main purpose is to provide strength and stability to the middle of the body. The mid-section is the bridge or link between the upper and lower body and therefore needs to be functioning efficiently to enable us to use the power in our legs and arms.

Think of athletes such as wrestlers and rugby players...

They do a lot of vigorous work with their arms and legs and are usually very strong as they need to push, pull, bend, twist and lift against resistance. Without great core strength and

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stability, they would not last long in a match as they would not be able to transfer whatever strength they have in their limbs through the rest of their body and onto their opponent. Not only that, but more importantly, they would stand a much higher chance of sustaining a serious injury without having the ability to control the position of the lumbar spine during dynamic movements.

Consider the power and speed generated by the legs of a sprinter running at full pace. With an understanding of core stability, it's easy to see how important that bridge between the upper and lower body is for optimum performance and avoidance of injury. You will notice that although the arms and legs of a sprinter are moving very rapidly, his head and trunk are very stable in comparison and this is because his core muscles are very strong and efficient.

I liken this concept to the analogy of a racing car...

If you were to put the engine of a racing car into the chassis of an old banger with a weak frame, rust here and there and with loose wheels, what do you think would happen if you tried to race it?

I would expect it to fall apart at the first bend, as the power in the engine would be far greater than the strength and stability of the cars structure to hold and support it.

So, if you have a back problem, have had a back problem or are concerned that you might become a victim of back pain,

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there's a good chance that your core stability isn't as good as it should be. There are some simple tests that your practitioner can carry out to assess this, so why not ask about that at your next treatment or check up.

8. You Are What You Eat

What happens if you feed some cats a poor diet with hardly any nutritional value and then you breed those cats and feed their offspring the same poor diet for several years before repeating the same process for each new generation?

Well, the answer to that question was revealed in the famous "Pottenger's Cats" experiment, which resulted in each generation of cats becoming weaker and sicker until they eventually weren't fit enough to reproduce and they died out.

It stands to reason that unhealthy food will produce unhealthy animals which can only produce unhealthy offspring. What do we see happening in western society right now? Childhood obesity, diabetes, attention deficit disorders and other health problems are increasing at an alarming rate. I think we all instinctively know that the primary reason for this is a poor diet, devoid of nutrients yet at the same time, full of toxic chemicals.

Amongst the wise words of Hippocrates, the ancient Greek physician (still known as the father of medicine), were...

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“Let food be your medicine and medicine be your food.”

Your bones, discs, ligaments, tendons and muscles are all made out of the available nutrients in the food you eat, so if what you eat is of poor quality, then so are your body tissues likely to be. Protein is the most vital nutrient for tissue repair, and fats have an essential role in the structure of cell membranes and in hormone production.

The best way to ensure that you get the highest quality materials for building your body's supporting structures and tissues is to eat plenty of good quality foods that are high in proteins, fats, enzymes, vitamins and minerals. There isn't space here for a full lesson in nutrition, but if you follow the simple guidelines below, you'll go a long way towards optimizing your rate and quality of joint regeneration and avoiding premature arthritis, weakness and injury.

Organic sources of meats, eggs and dairy contain much higher ratios of good quality proteins, fats, enzymes, vitamins and minerals than non organic foods. I believe this is especially important with respect to meat, eggs and dairy because of modern commercial farming practices. If an animal hasn't been raised in its natural environment and on its natural diet it is likely to be a sick and unhappy animal, most likely treated with drugs and consequently will not be strong and healthy. Try the chicken leg test! If you compare the strength and integrity of the cartilage, ligaments and tendons in an organic

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chicken's knee joints compared to those of a non organic chicken I'm sure you'll find that it is much easier to dislocate and pull apart the joints of the non organic chicken, simply because it is not made of strong and healthy tissues.

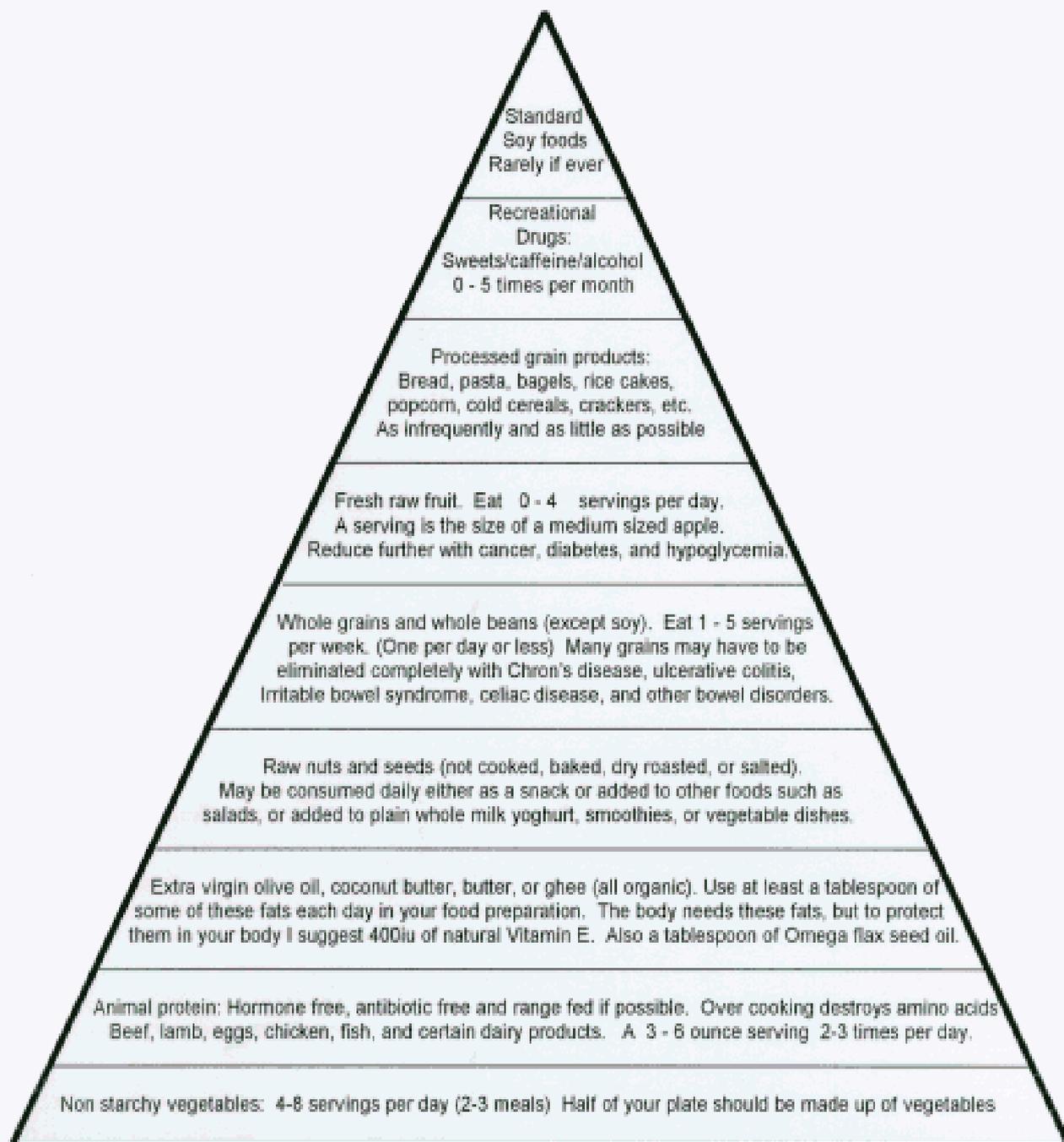
This concept applies to the spinal joints just as much, if not more than the other joints in the body because of the amount of repetitive loading and movement patterns the average spine is subjected to. Ask yourself - what is the quality of your spinal joint tissues? If you don't eat good quality proteins from organic sources, they probably aren't as strong and healthy as you would hope. If you suffer from joint problems, you would certainly benefit from having better quality nutrients available for tissue repair throughout your body.

According to David Getoff the functional nutrition expert, the food "pyramid" should follow the guidelines below and you can see that its foundation is vegetables and proteins, followed by a broad spectrum of the essential fatty acids.

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David Getoff's Food Pyramid

Allergies and food sensitivities are a completely separate issue. If a food gives you ANY undesirable symptom, then you should not eat it. This pyramid may be reproduced if full credit is given to David Getoff.



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9. Optimize Your Digestive System

Not a lot of people know this but...

"A poorly functioning digestive system can lead to a bad back"...

Most people wouldn't associate their digestive system function with back pain but it's a fact that a digestive tract that is not functioning optimally will weaken and inhibit the important spinal stabilizing muscles, leading to instability and vulnerability of the lower back. This situation is called "reflex inhibition of the abdominal wall" and it is much more common than you would imagine. Anyone who understands or is trained in applied kinesiology will know that any muscle group in the body can be weakened if it is exposed to anything that doesn't support optimal health.

You see, the gastro-intestinal tract and the lower abdominals are on the same neurological loop, which in simple terms means that they share the same nerve supply. Now, you may be asking yourself why is that important?

It's important because of another one of the body's important reflex systems which is the viscerosomatic reflex. Viscero pertains to the organs and somatic refers to the physical body. The viscerosomatic reflex is part of a system of continuous communication between the organs and the rest of the body via the nervous system. The human nervous system is like a 3

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dimensional holographic network of communication pathways that works in the same way as an electrical wiring circuit. I think it would be fair to say that we don't yet have the technology to be able to fully understand just how complex and far reaching this system really is, but I wouldn't be at all surprised if one day it is discovered that each and every cell in the human body communicates with every other cell.

I find it amazing just how clever the body is at looking after us through self regulating balancing mechanisms. If we're exposed to a cold draught for example, the temperature receptors in the skin will report that information to the autonomic part of the nervous system, which will increase muscle activity in that area in an attempt to maintain equilibrium. The physical signs of this occurring could range from goose bumps to muscle tremors and shaking.

So, the important question is how do we optimize the digestive system and what types of foods help or hinder its function? The digestive system and its function is worthy of a whole book on its own, so I won't go into much detail here. My basic advice to minimize reflex inhibition and to improve the stability of your spine is to avoid common irritants like alcohol, caffeine, sugars and grains and to eat plenty of living, organic and unprocessed foods.

10. Hydration Is Salvation

(Dilution is The Solution)

Would you like to know about a cost free way to reduce pain, look and feel younger, think faster, and perform better?...

Yes, I'm sure we all would and the simple solution is dilution, or to be more precise...

Drink More Water!

I can't emphasise this enough because I believe that the vast majority of the population is chronically dehydrated. If there was one lifestyle change that would make the biggest difference to the largest number of people suffering from today's common ailments including back pain, then I would guess that the simple act of maintaining adequate hydration in the body would be the most helpful.

According to scientific studies, the human body is around 90% water at birth and decreases to about 70% by adulthood. By the time we get into old age, the average persons water content drops further to somewhere in the region of 50% which speaks volumes about some of the major biomarkers of aging and the importance of water. Just to clarify this point, are you aware that the muscles consist of about 70% water and the brain 75%? (So, if you want anti-aging therapy without it costing a fortune, keep your hydration levels up).

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The Intervertebral discs rely on water content for their shock absorbing properties and elasticity and a healthy intervertebral disc contains a great amount of water in its centre known as the *nucleus pulposus*. This water content provides a spongy property to the disc, which allows it to function as a dynamic shock absorber with a universal joint type action.

We lose an average of 1.5 litres of water every 24 hours, so depending on body size, we should be replacing at least that much on a daily basis. One way to work out how much water you should drink is to use the following formula:

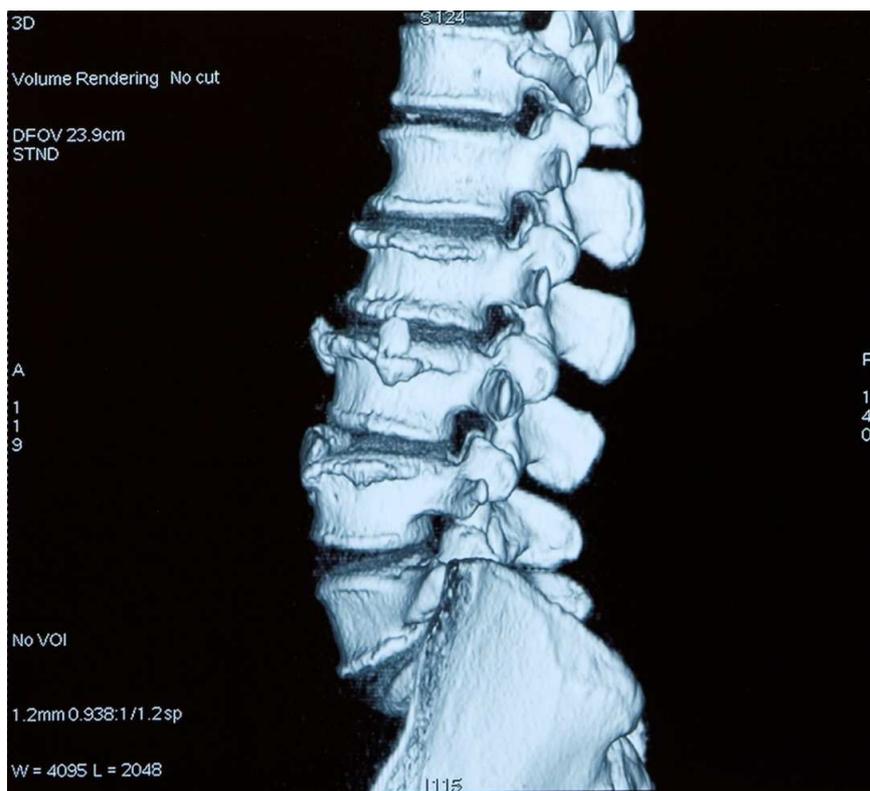
Take your body weight in lbs divided by 2 = how many fluid ounces of water to drink each day. Here's an example...

200lbs divided by 2 = 100 fluid ounces = 10 x half-pint glasses

It's a good idea to drink a big glass of water when you first get up in the morning as this is when we are usually most dehydrated. I recommend drinking frequently throughout the day, but not with meals as this dilutes the digestive juices thereby reducing digestive efficiency. For best results, drink up to 30 minutes before eating and then at least an hour after eating.

See the CT Scan below for an illustration of what happens to the spine and discs with dehydration and degeneration.

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CT Scan of Degenerative Spine

11. Variety For Longevity

If you happen to be left handed, I'm sure you will have noticed that we live in a rather right handed world. From door handles and writing pads to sports equipment and musical instruments, lefties can have a hard time fitting in.

There are, however, some advantages to being a left hander. Apart from supposedly having a more active right cerebral hemisphere (the artistic, creative and physical side of the brain), left handers tend to be somewhat more dextrous in their activities and balanced in their physical symmetry.

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This generally means that they are often more able to carry out the various daily physical tasks using both sides of their body and this reduces the chances of repetitive strain, muscle weakness and injury.

These days many of us are suffering muscle imbalances due to postural and occupational repetitive strain. The human body evolved in an environment which called for a wide variety of physical activities just to survive and thrive. If our hunter-gatherer ancestors weren't able to go out and find and prepare food, clothing and shelter as well as raise their children and look after their elders, they wouldn't have survived and we wouldn't be here today.

If you sit at a desk, drive a car, use tools or operate machinery for a living (which probably covers most of the population), then you most likely repeat the same postures and movement patterns all day long, every day and have been doing so for years.

Think about how that affects your physical structure for a moment...

Even if you don't currently suffer any physical symptoms from the imbalances created by repetitive and postural strain, I can guarantee that it has a degenerative effect on the body and will eventually lead to some form of dysfunction.

One of the most common and helpful pieces of advice that I regularly give my patients is to switch their computer mouse

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over to the opposite side to reduce repetitive strain of the shoulder. Of all the joints in the body, the shoulder joint has the largest range of movement, yet most of us hardly use it.

After lower back pain, neck and shoulder pain is the next most common problem people seek my help for. The strain caused by the repetitive micro-movements of prolonged mousing or keyboarding creates painful trigger points in muscles that were designed for much bigger movement patterns. These trigger points are associated with muscle weakness and fibrositis, which can lead to chronic pain and dysfunction if not treated and corrected.

And, ladies...if you like to carry your handbag on the same shoulder that you use to write with and use a computer mouse with, then if I'm not already treating you, I expect to be seeing you sometime soon ;-)

Seriously though...try switching sides for a while with anything that has become a repetitive postural habit and you'll be reducing the strain on your body. I changed the side I use the mouse on after I realised that it was causing me shoulder strain and things improved quickly. Yes it felt a little awkward at first but within a few hours I was used to it, and today it feels completely natural.

Don't forget that by training the opposite side of the body, you are also developing new neural networks by engaging the

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opposite side of the brain, therefore becoming more neurologically intelligent!

Did Cavemen Have Low Back Pain?

As I mentioned above, our ancestors evolved in an environment where they had to be physically fit and athletic in order to survive. They didn't have cars, desks, chairs or computers and they didn't use washing machines, cookers, and vacuum cleaners. Even 100 years ago we had a much more physically active life. Considering that it takes the human genome 100,000 years to show an evolutionary change of 0.1 percent, we are much more suited to the active and vigorous lifestyle of our ancestors.

One of the most influential teachers of spinal rehabilitation, Paul Chek, has termed the phrase "Primal Pattern Movements" for what he has identified as the seven basic movement patterns required by our primitive ancestors for survival. If all of these movements are practiced regularly and correctly it can help tremendously in the prevention and rehabilitation of orthopaedic injury and back pain.

1. Twist	2. Lunge
3. Pull	4. Squat

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5. Bend	6. Push
7. Gait	

In my clinic I often find that my patients initially struggle to perform these movement patterns efficiently due to weakness and loss of flexibility. The good news is that their symptoms often improve as their strength, flexibility and coordination respond to a combination of treatment and corrective exercise.

N.B. These movements should be assessed by a specialist in corrective exercise because if they are not performed correctly, the resulting faulty movement patterns can become established and lead to injury. *(It can take between 300 – 500 repetitions of a movement for our nervous system to be able learn it and to perform it unconsciously, but it takes 3000 – 5000 repetitions to unlearn a faulty movement pattern)*

So to recap... in this chapter my spinal anti-aging tip is to bring more variety into the way you work and exercise by switching sides for repetitive tasks. I also encourage you to learn and incorporate as many of the primal pattern movements into your routine as you can.

12. Manage Your Emotions

Have you ever noticed how things like stress, tiredness and sickness have an effect on the amount of pain and discomfort you experience?

I have noticed many times over the years that these factors are often the elements that push a person over the edge and into an acute episode of back pain.

Stress is not easy to define as it is such a subjective experience for each individual and is not tangible in that it cannot be measured or put in a box. However, when the nervous system is under more stress than normal, whether the source of that stress is physical, emotional, mental or chemical, the systems alertness and activity is up-regulated to activate the body's primitive survival reflexes.

Subsequently, like the last straw that broke the camel's back, it is quite common for an emotionally stressful situation or experience to trigger the weakest link in the chain to break down and catapult someone over the threshold for painful symptoms. When this happens, the connection between the stress and the pain or injury is not usually consciously recognised and is often disregarded in any medical diagnosis.

The human nervous system is incredibly sensitive and is on guard around the clock, working to protect and ensure our continued survival. In fact, without us consciously knowing

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about it, there is often an increase in nervous system activity around the parts of the spine that are close to an area of weakness and instability. A good example of this type of scenario is the new mum who is still recovering from giving birth and has not yet recovered her core stability and postural balance after months of being in hyperlordosis. (This is where the lumbar curve is exaggerated and the pelvis is tilting forward). At the same time she will be subject to stretched and weakened abdominal muscles along with the ligamentous laxity that is produced by the hormonal system to allow the baby to squeeze through the narrow birth canal of the pelvis. New mums or mums to be are also likely to be suffering from tiredness and emotional strain, so it's not surprising that so many of them experience back pain before, during and after childbirth.

These conditions lead to instability of the spine and pelvis and like a crooked stack of building blocks, make for a wobbly foundation for the structure of the body. The peripheral nervous system connects the limbs and organs to the central nervous system and there is a two-way flow of communication between them. This means that any sense of instability is picked up by receptors in the muscles that send a message to the central nervous system to respond by compensating with other muscles to try to provide more stability and therefore safety. So, the whole nervous system is like a complex set of alarms and security measures that generally do an excellent

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job of protecting us from harm or injury without us being consciously aware of them so that we can get on with our lives.

Stress, anxiety, depression, anger, frustration and any other negative emotional state you can think of will always have the effect of increasing the likelihood of an individual suffering more dysfunction and pain. As I mentioned above in the chapter on digestive system function, reflex inhibition of spinal stabilizing muscles is very common and even thoughts and emotions, if they are unhealthy, will affect the nervous system in a negative way. If you combine that with a system which is "on guard" for any reason, the result is likely to be a breakdown at any weak link in the spinal chain.

To finish off this chapter, I highly recommend that you consider your emotional state and its potential effect on your nervous system. If you think your mental state is having a negative effect on your physical condition, then it might be appropriate to seek some help and advice about how you can learn to manage these factors in a way that promotes relaxation, optimism and health.

13. Treat Your Self

Something many of my patients have said to me over the years goes something like this...

"If I ever win the lottery, I'll have a treatment like this every week".

Well, I wonder what my good friend Hippocrates would have thought about this idea? Known as the father of modern medicine, Hippocrates was a big fan of massage and this is what he said about it...

'The physician must be experienced in many things, but assuredly also in rubbing; for things that have the same name have not always the same effects. For rubbing can bind a joint that is too loose and loosen a joint that is too rigid ... Rubbing can bind and loosen; can make flesh [here Hippocrates believes that massage can help build muscle tissue] and cause parts to waste. Hard rubbing binds; soft rubbing loosens; much rubbing causes parts to waste; moderate rubbing makes them grow.'

There are so many positive benefits of massage that I won't go into them all here, but I am convinced that we would all be happier, healthier and more productive if we had a massage on a regular basis. By regular I mean at least once per month and preferably once per week. I have patients who have been coming to me for regular massage treatments for about 20 years and they still find it therapeutically beneficial. (I guess they would have given up long ago if it wasn't).

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Healing through the laying on of hands by whatever technique or profession undoubtedly has a much more powerful effect than most of us are aware of. In many cultures, physical contact is still very much a part of daily life. Babies are massaged by their mothers and children grow up with a natural appreciation and respect for this age-old art as they see their families and friends connecting and caring for each other through touch.

So, as my final recommendation for anti-aging your spine, I highly recommend that you treat yourself to a relaxing or therapeutic massage on a regular basis. If you've never tried a massage based treatment before, give it a try sometime, you might be pleased you did! It's an investment in your health and your-self that you'll never regret. Get the massage? 😊

Conclusion

Well, there you have it... 13 Chapters of Spinal Anti-Aging Tips, which, if added together and given due consideration can help you improve the function of your spine in a powerfully synergistic way. The human body is the most complex and efficient organism with amazing potential for creativity, healing and performance. By paying attention to our environment, both internal and external and to the many factors involved in

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how we use our minds and bodies, we can achieve results that are far greater than the sum of the parts.

About The Author

Steve Crossley is an osteopath, health coach, fitness instructor and psychotherapist based in Eastbourne in the UK. He has more than 20 years experience in working with individuals from all backgrounds who want to improve their physical and mental health and performance.

Steve has practiced and enjoyed many sports and physical activities over the years including running half-marathons, windsurfing and golf. Through his passion and commitment in training the body to a high level of performance, he has also been a champion competitive bodybuilder.

His fascination for the human mind as the conductor of the physical orchestra has also taken him in the direction of hypnotherapy, psychology and personal development which he integrates with his skills in physical therapy to help his clients get the maximum results from their time with him.

If you would like to know more about how to improve your health, mental and physical performance with time-tested and proven natural methods, please pay a visit to my website at: <http://www.backmechanic.co.uk>, where you can get even more great information and subscribe to my regular newsletters for

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valuable health tips, special offers, recommendations and even ask me your most burning health and fitness related questions.

Thanks for reading this report. I hope you found it interesting and helpful.

All the best,

Steve Crossley

“We sow our thoughts and we reap our actions, we sow our actions and we reap our habits, we sow our habits and we reap our characters, we sow our characters and we reap our destiny.” - Desiderius Gerhard Erasmus

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