

Health Mentor Programme –

Exercise part 1

MENTOR SESSION 28

IN THIS SESSION:

- There's more to exercise than what meets the eye!
- Time to enhance your brain!

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Bring on a culture of movement!

Society has become convenience-obsessed!

We're parking as close as possible to the shops at shopping centres, we're shopping from our cars and we can have many services and products delivered right to our doorsteps! We have everything at arms length and not much energy is expended to perform daily tasks, like when grandma used to walk in 50cm of snow to fetch the 4-litre milk bucket from the cow shed 1km away...get the picture?!

The problem is that this general inactivity is costing us and it's costing us big!

Prof. Graham Colditz of the Harvard School of Public Health has found that the cost of inactivity per year in the USA is at **\$24 billion!**



Bring back the culture of movement!

Look at the scoreboard!

The following studies are all population-based and have proven without any doubt that exercise protects the human body against heart disease, stroke, diabetes and various other diseases. They are:

- The Honolulu Heart Program (2678 participants)¹
- The National Health Interview Survey (2896 participants)²
- The Harvard Alumni Health Study (12 516 participants)³
- The Women's Health Study (39 372 participants)⁴
- The Health Professionals Follow-up Study (44 452 participants)⁵
- The Nurses' Health Study (70 102 participants)^{6,7}
- The Women's Health Initiative (73 373 participants)⁸

The total people involved: **245 389!**



No more argument here - exercise is good for you!

Exercise rocks and this is why...

In this first session about exercise we'll be profiling the amazing benefits that exercise has on the different systems of the human body. Then in the next sessions we'll get more practical...

Neurological system

Studies have shown that exercise provides protection for the neurological system against various conditions including:⁹

Chronic distress (which causes brain damage), brain ischemia (decreased blood flow to the brain), brain trauma, and the risk for neurodegenerative diseases such as Alzheimer's (especially for the aged).

Exercise also reduces the occurrence of headaches. These exercises should be done in conjunction with a physiotherapist.¹⁰



The stuff babies are made of...

Ever heard of exercise-induced neurogenesis?

This basically means that people who exercise have more new neurons that are formed in their brain! This is the same process that's particularly active in babies.

So yes, you can improve your memory if you exercise more regularly!¹¹

Them bones...

The time bomb:

Osteoporosis and associated fractures are regarded as one of the major public health problems in the westernised world.

Currently osteoporosis affects up to 1 in 2 women and 1 in 5 men over the age of 50 years and it's expected that the number of osteoporotic fractures will double over the next 50 years.^{12,13} This is a grave problem especially if you consider the high costs involved with the treatment of these fractures. A time bomb indeed!



In a recent World Health Organisation Bulletin¹² about osteoporosis and exercise it was stated that:

- It is advisable to start exercising at a young age to maximise mineral density in bones,
- Exercise should preferably not be interrupted into old age to maintain the bone density,
- While exercising to maintain bone density there are many other benefits like muscular strength, increased coordination, balance and flexibility and increased overall health.

The WHO recommendation is supported by literature especially with studies that have shown how post-menopausal women who make exercise a lifestyle from their peri-menopausal years have fewer bone fractures.¹⁴

The point is clear - exercise increases bone density!

Cardiovascular system

Exercise is, needless to say, **VERY** beneficial for the cardiovascular system and research is clear that exercise protects you against heart disease, period!^{4,5,7}

Fat check:

Exercise improves your blood lipid profile which simply means that:¹⁵

- It reduces total cholesterol level,
- It lowers LDL cholesterol (so-called ‘bad’ cholesterol),
- It increases HDL cholesterol (so-called ‘good’ cholesterol) – This is one of the very few ways in which you can increase HDL cholesterol and - take note here - HDL cholesterol is associated with longevity!
- It reduces circulating levels of triglycerides, which is another blood fat that should never be too high.



Stronger heart:

Exercise lowers your resting heart rate because the heart muscle becomes stronger and can thus do the same job with fewer beats. Your heart is thus not working as hard when you are at rest. People with healthy, strong hearts can do much more activity and won’t tire so easily!

Blood pressure control:¹⁶

I’ve seen this on more than one occasion... A severely hypertensive patient on blood pressure medication will control their blood pressure **MUCH** better if they exercise regularly! If you already have blood pressure problems and you’re on medication then I advise that you start an exercise regimen with the help of your doctor and/or biokineticist.

Endocrine system

Exercise is a powerful way to prevent diabetes!

When it comes to issues like diabetes then the literature can’t be more clear that exercise increases insulin sensitivity and helps diabetics to control their blood glucose.

Exercise also prevents diabetes!^{1,2,3,4,5,6,7,8,17}



**Give your pancreas a break!
Go for a ride!**

Muscular

Yes, it helps to have stronger muscles! Besides the obvious benefit of all your movements being less laboured, regular exercise improves the body's ability to maximally uptake oxygen and deliver oxygen to working muscles (defined as your VO2 max).

Exercise and pain:

In a novel study that was done to see if focused exercise can reduce neck muscle pain in 180 women the results were quite clear that the exercise programme definitely did reduce pain in general, including pressure pain sensitivity. The study furthermore found that the pressure pain threshold may be useful to measure the efficacy of a neck muscle training programme.¹⁸

The same group of researchers followed the initial group of 180 women for three years and they came to the fascinating conclusion that if you follow a focused exercise plan and strengthen your neck muscles for a year then you will probably feel the benefit for the rest of your life even if you don't exercise that intensively anymore!¹⁹

Consult your physiotherapist and/or biokineticist for more guidance this regard.



Pump it!
(Tattoos not compulsory...)

Immune system

It's an accepted fact that following a regular exercise routine is definitely beneficial to one's general health.

How to avoid having sick days!

In one survey that was done with data from 175 850 people in the USA²⁰ it was found that the following groups of people have more unhealthy days in their year. They are:

- People who don't exercise at all,
- People who exercise less than 3 days per week,
- People who exercise 7 days a week,
- People who exercise less than 20 minutes per session irrespective of how many days per week,
- People who do strenuous exercise lasting more than 90 minutes per session irrespective of how many days per week.

The ideal here is to do more than 20 minutes but less than 90 minutes of moderate exercise on 5-6 days of the week.



HIV and other chronic diseases:

Even in people suffering from chronic diseases like HIV the effects of exercise remain the same and improved quality of life can be expected!²¹

Cancer protection:

Studies have also shown that regular exercise can help prevent the formation of cancer in the human body.

Studies in mice have shown:²²

- that tumor growth is slowed down by exercise,
- that some tumors actually regress due to exercise.

Psychological

Psychological

Stress that leads to anxiety remains one of the most dangerous enemies to a person’s health and can lead to numerous diseases like stroke and heart disease.

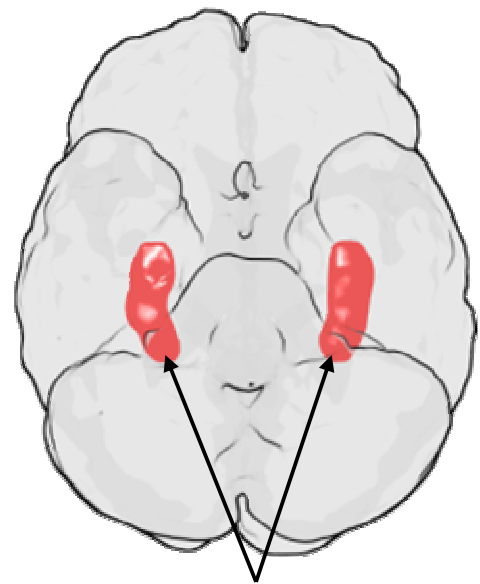
The effects of prolonged stress on the brain are also a problem and research has shown how stress can cause:

- Brain cell aging,
- Brain cell damage,
- Destruction of brain cells in areas of the brain like the hippocampus. (The hippocampus plays an important part in memory and spatial navigation and is one of the first regions of the brain that suffers in Alzheimer’s disease.)

Enter exercise!

Exercise is a proven way to relieve stress and bring calmness into your life²³ and the beauty of it is that it helps to **reverse** the negative effects of prolonged stress on the brain!

Other conditions that are also controlled better with a healthy regimen of exercise are depression and ADD (Attention Deficit and Hyperactivity disorder).^{24,25}



The hippocampus likes exercise and your memory needs the hippocampus!



Not part of the crowd...

We live in a society where crowding is part of our daily routine. Studies on rats have shown that crowding causes the rats to spontaneously consume more alcohol if they have access to it! The point I’m trying to make is that you need to get out as much as possible to overcome the negative effects of crowding and exercise is a great excuse to do so!²⁶

Sexual

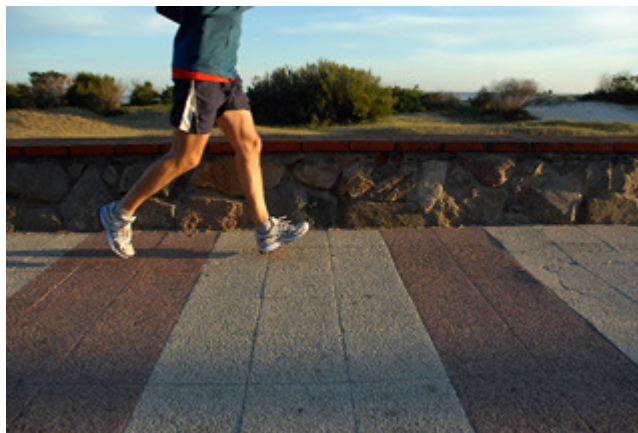
Studies have shown that exercise should be considered a first-line approach when treating men with erectile dysfunction, even before medication is used. This would include general cardiovascular training and specific pelvic floor exercises as prescribed by physiotherapists.²⁷

I trust that you are beginning to get excited about all the amazing benefits of exercise. In the next session we’ll make things more practical and start looking at the how, the what and the how much.

‘Exercise ferments the humors, casts them into their proper channels, throws off redundancies, and helps nature in those secret distributions, without which the body cannot subsist in its vigor, nor the soul act with cheerfulness.’

Joseph Addison (1672 - 1719), The Spectator, July 12, 1711

Wrap your mind around this!



I want to ask you a hypothetical question.

What percentage of your muscle mass do you think you're going to lose by the time you reach 80?

Is it 10%?

Maybe 20%?

Well the shocking answer is that people lose anything from **20—40%** if they remain sedentary!!

The absolutely brilliant news!

Researchers from Pittsburgh in the USA published the findings of a landmark study in 2011. They discovered that if people keep on training regularly (4-5 times per week) between the ages of 40—80 they lose virtually **NO** muscle mass!!²⁸

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About Dr Anton



Dr Anton Janse van Rensburg is a practising medical doctor who has devoted himself to the study of unique, scientifically sound solutions to modern diseases. He is also a qualified metal toxicologist, has a master's degree in Applied Human Nutrition and is the South African programme director for the Robertson Wellness Brain Chemistry Optimisation Programme.

He has written on a variety of wellness topics for numerous South African magazines and newspapers and in 2009 co-authored the book 'Diamonds in the Dust – crafting your future landscape'.

Besides being a wellness coach to company executives Dr Anton is an established public speaker and no stranger to radio and television. He has provided guidance to scores of audiences with his passion for wellness education.

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