

Exercise is medicine: Heart disease and exercise

By Dr Melissa Janse van Vuren

On any given day, in almost all countries, cultures and age groups, if an individual is approached and asked whether they think exercise is good for you, practically all would say, "Yes."

I asked my sister and a friend to ask their kids the following questions, and they sent me voicenotes in reply. Here they are:

1. What is exercise?
 - Ester (5): "Running or walking"
 - Adon (6): "It's like where you do push-ups... and jumping jacks and like pull-ups and push-ups, oh wait I already said that."
 - Jasper (7): "You become fit, like when you jog or walk."
 - Luia (8): "Exercise is where you try to be healthy and try to get fit I think?"
2. What is the best type of exercise?
 - Ester: "Running and walking"
 - Adon: "Boxing"
 - Jasper: "Jogging"
 - Luia: "Planking"
3. Is exercise good for you?
 - Ester: "Yes"
 - Adon: "Yes!"
 - Jasper: "Yes"
 - Luia: "Um, jip"
4. Why is exercise good for you?
 - Ester: "So that you can run and climb mountains and jump over rocks"
 - Adon: "To get strong and fit"

- Jasper: "To make you fit to climb over rocks"
 - Luia: "It is good for your health"
5. How frequently should you exercise?
 - Ester: "If you want sometimes or all the time."
 - Adon: "Everyday"
 - Jasper: "Everyday"
 - Luia: "Mondays and Fridays"

This is by no means a large enough population group to draw any Noble prize-winning conclusions but please bear with me as I point out a few things.

Our perception of exercise depends a lot on the environment we are exposed to. Adon and Luia are brother and sister and are raised in the same household, and Ester and Jasper are siblings and are raised in the same household. Adon and Luia both referred to high intensity cardio type of exercise where the other two both said running and walking are the best type of exercise.

All of them replied unanimously yes when asked if exercise is good for you.

When it came to why it is good for you, many of them took a long pause before they could come up with an answer.

Interestingly enough the boys said you should exercise everyday while the girls were much more lenient with Luia decisively only saying "Mondays and Fridays."

So what am I trying to illustrate? Exercise is for everyone, but what many people fail to realize that exercise is diverse and there is form of

exercise out there for everyone. It's not only running, going to gym or rugby, but also Badminton, dancing, yoga, skateboarding, water aerobics etc. the list is nearly endless.

Exercise is good for you. However, very few people currently don't view exercise or physical activity as an essential part of their day. The need to earn an income, raise a family and meet social needs often seem to overshadow the importance of exercise. I think a lot of this reasoning behind this is linked to a well-known saying, "Knowledge is power." As the children's answers showed and which is not really related to age, but many think exercise is good for you because it just is. I hope to empower you with some facts regarding the 'why its so good for you' part.

According to the Centre of Disease Control in South Africa, cardiovascular diseases as a whole takes up the 3rd, 6th and 9th positions on the top 10 causes of death in South Africa. The 1st and 2nd places where taken by Tuberculosis and Diabetes.^[1] The burden of cardiovascular disease on the economy and health care system is astronomical, and it takes its toll on numerous families as well.

How can exercise or physical activity help?

There are many cardiovascular benefits that come with exercise.

We also know the saying that "Prevention is better than cure." Exercise helps with blood pressure control, by lowering your body's blood pressure "set-point" in your brain. It helps to lower your cholesterol levels by removing some of the excess fats drifting in around in your blood which contribute to atherosclerotic disease and it even improves your body's sensitivity to insulin.^[2] All of these factors influence your risk for developing cardiovascular disease and cardiovascular mortality.

Generally, as you exercise regularly and get fitter, your heart starts to adapt. It becomes more efficient and can contain and pump larger volumes of blood out to your exercising limbs. This is one of the reasons why your heart rate also starts to decrease as you become fitter, your heart can pump less frequently to supply your body with the blood it needs.

How can exercise help if I already have heart disease?

As mentioned before, blood pressure regulation becomes easier so if you are hypertensive then your blood pressure control should become easier and in some cases blood pressure medication may even have to be reduced or even stopped under the direction of your doctor.

Even with established disease, exercise can still help stabilize and even reverse factors such as high cholesterol and weight control that contribute to the atherosclerotic process. Studies show that even with patients that have had heart attacks or heart failure benefit from exercise rehabilitation and can decrease the total amount of time spent in the hospital and improves quality of life

So how do I exercise?

If you do not have any symptoms or known diseases, but wish to decrease your risk of developing disease, start with low intensity exercises and gradually increase as you gain fitness, while listening to your body. Generally, you do not need to be cleared by a doctor unless you have had unexplained chest pain, fainting episodes, palpitations or out of proportion fatigue or shortness of breath with exercise. If you have a history of cardiac disease in your family such as someone who suddenly passed away due to a heart problem, then it is also advised rather to go see a doctor before starting moderate to high intensity exercise.

Low intensity exercise such as walking, is a good place to start for all cardiac patients. The trick is here to especially start low and go slow, and to gradually build up your level of fitness and tolerance to exercise while listening to your body. If you want to do more intense forms of exercise for instance levels of exercise where you can't exercise and talk full sentences then it is rather advised to be screened by a doctor. Allow the doctor to suggest different forms of exercise and levels of intensity according to your fitness level and type of disease. Check in with them regularly till your condition has stabilized and you have adjusted to the exercise.

Aim to work yourself toward the World Health Organization recommended levels of exercise as quoted from their website:^[3]

- *Adults aged 18–64 should do at least 150 minutes of moderate-intensity aerobic physical activity throughout the week or do at least 75 minutes of vigorous-intensity aerobic physical activity throughout the week or an*

equivalent combination of moderate- and vigorous-intensity activity.

- *Aerobic activity should be performed in bouts of at least 10 minutes duration.*
- *For additional health benefits, adults should increase their moderate-intensity aerobic physical activity to 300 minutes per week, or engage in 150 minutes of vigorous-intensity aerobic physical activity per week, or an equivalent combination of moderate- and vigorous-intensity activity.*
- *Muscle-strengthening activities should be done involving major muscle groups on 2 or more days a week.*

Reading a list like that may seem overwhelming and impossible but remember even with minimal exercise the body and heart benefit. Doing a little of something is far better than doing a lot of nothing. Its also important to find an activity that you enjoy. If you hate running don't punish yourself to 150 minutes of running a week, rather be open to suggestions and thinking outside the box for instance Zumba classes or Ulimite Frizbee. The world is out there and meant to be enjoyed.

References

1. CDC(2020) *Global Health*[website] Available at <https://www.cdc.gov/globalhealth/countries/southafrica/default.htm> [Accessed on 21/05/2020]
2. Sharma, S., Merghani, A. and Mont, L., 2015. Exercise and the heart: the good, the bad, and the ugly. *European Heart Journal*, 36(23), pp.1445-1453.
3. World Health Organization(2020) *Global Strategy on Diet, Physical Activity and Health* [Article] Available at https://www.who.int/dietphysicalactivity/factsheet_adults/en/ [Accessed on 21/05/2020)