



WHAT DO THE NUMBERS MEAN IN YOUR ASSESSMENT?

By Kathleen Mc Quaide (Sports Scientist, Strategic, Marketing & Relationship Manager @ SSISA)

How did you measure up health-wise in your assessment? Many parameters we measure can help you to assess whether you are at risk of suffering from certain lifestyle-related diseases (also known as chronic diseases of lifestyle). These include heart disease, certain types of cancer (notably colon cancer), adult-onset diabetes, depression, osteoporosis, obesity. Here's a bit more info for you!

BLOOD PRESSURE (BP)

BP indicates the force with which the heart has to pump to overcome the resistance offered by the blood vessels. The top reading (systolic BP) is the pressure in the blood vessels when the heart is contracting and the bottom reading (diastolic BP), is the pressure when the heart is relaxed. It is expressed as a fraction e.g. 125/75. High BP (hypertension), is defined as a systolic pressure of greater than 140mmHg and/or a diastolic pressure of greater than 90mmHg. It's also known as the silent killer, since it's not immediately apparent. Initially, one might suffer from minor headaches and dizziness, but these are often ignored since they seem so minor. If hypertension is undetected and untreated, it can lead to stroke, heart failure, heart attack and kidney disease. Hypotension (low BP) is defined as a systolic pressure lower than 100mmHg and/or a diastolic pressure less than 70mmHg. It is not considered to be a medical problem. Some guidelines to avoid high BP are:

- Do not smoke
- Exercise regularly
- Lose weight if you are overweight
- Eat a healthy diet, low in salt & caffeine, high in wholegrain products, fruits & vegies.
- If you drink alcohol, do so in moderation
- Manage stress effectively

CHOLESTEROL

An initial **screening** of your total blood cholesterol is what we do. If this reading is high according to age-related norms – it is recommended that you visit your doctor for a fasting lipogram. Basically a lipogram is an analysis of all of the fats (lipids) in your blood. Cholesterol, is actually not all bad! It is carried in the bloodstream in various forms, bound to different “packages” called lipoproteins.

High Density Lipoprotein (HDL) cholesterol is known as “good” cholesterol, because it removes cholesterol deposited in artery walls preventing them from becoming clogged up. The cholesterol is transported to the liver where it is broken down and removed from the body. Low Density Lipoproteins (LDL) cholesterol is the “bad” cholesterol and the one to avoid at all costs! It is responsible for depositing cholesterol in the artery walls thereby clogging them up and causing them to become narrower in diameter. This process is known as atherosclerosis and can lead to a heart attack or stroke. Regular exercise can increase HDL by as much as 20% and lower LDL by 3 - 8%.

The chart below indicates the risks associated with different cholesterol values.

	Desirable (mmol/L)	Borderline (mmol/L)	Danger (mmol/L)
Total cholesterol	Less than 5.2	5.2 – 6.2	6.2 or higher
HDL	0.9 or higher	-	Less than 0.9
LDL	Less than 3.4	3.4 – 4.1	4.1 or higher

BODY MASS INDEX (BMI)

BMI is a simple index and it is calculated by taking your mass (in kgs) and dividing it by your height (in metres squared). Using this formula, a 1.7m person weighing 70kg will have a BMI of 24.2. Risk of suffering from some of the chronic disease of lifestyle such as high blood pressure and diabetes is associated with a BMI of over 30. A BMI of less than 17 is considered unhealthy. The guidelines given below are general and unfortunately can't take into consideration a person's percentage body fat and leanness. Regular exercise and weight loss can help decrease an elevated BMI.

BMI	Low	19 – 25
	Moderately overweight	25 – 30
	Obese	>30

WAIST MEASUREMENT

This gives an indication of fat distribution. If an individual carries fat predominantly in the abdominal (waist) region, they are described as “apple-shaped” and their waist measurement is likely to be high. Those who carry most of their fat femorally, (around the hips and thighs), are described as “pear-shaped”. The “apple-shape” fat distribution is associated with an increased risk of high blood pressure, heart disease and diabetes. The good news is that “dangerous” abdominal fat is easier to lose than fat around hips and thighs. Regular exercise can help decrease your waist measurement.

	Average risk	Increase risk	Substantial Risk
Men	<94cm	94.0-101.9cm	>102.0cm
Women	<80cm	80.0-87.9cm	>88cm

FAMILY HISTORY OF HEART DISEASE

Individuals are at increased risk of suffering from early heart disease if they have close relatives who have documented heart disease, prior to the age of 55. Unfortunately, the greater the number of relatives with heart disease, the higher the risk.

PHYSICAL ACTIVITY LEVELS

Whilst the benefits of exercise are well-documented, approximately 80% of South Africans do not exercise regularly. Regular exercise plays an essential role in prevention and treatment of chronic diseases of lifestyle. Any activity is better than none at all and the benefits start immediately. Many individuals think that their risk factors will preclude them from exercising - this is not so. However, a doctor's consent is essential before engaging in regular exercise. The recommended exercise guidelines are to accumulate 30 minutes of moderate intensity exercise most days of the week, do two 20 minute strength training sessions a week and activate each day by using stairs, walking to the shops, mowing the lawn and gardening.

RISK	Activity Level
Low	Moderate to vigorous activity 3 or more times per week
Moderate	Moderate to vigorous activity less than 3 times per week 25 – 30
High	No moderate to vigorous activity

FITNESS ASSESSMENT (measures VO₂ max) -12 minute motion test

The 12 minute motion test estimates your maximal aerobic power or what is known as your VO₂ max, by means of a gender-specific model. This gives us an indication of your fitness level when compared to norms for your gender and age. We will repeat this test at the end of the programme.

Here is an explanation of the terminology on your results sheet

VO₂ max is an estimation your body's ability to utilize oxygen for energy; measured by the volume of oxygen per body weight per time (mL/kg/min).

Score of your VO₂ max can also give you an idea of how you compare to your population. 50 is the mean score.

Category rating of your VO₂ max can be, "Excellent", "Good", "Average", "Fair", or "Poor". If you fall in these later categories, don't despair. Regular exercise can improve your fitness at any age.