

What do my results mean?

BODY TYPE

As a general guideline, we recommend 'Standard' to most users. Athlete mode is only for individuals who carry out more than 10 hours of intensive aerobic exercise a week AND who have a resting heartbeat of under 60bpm (Some people naturally have a low heart rate, however it does not apply unless they exercise at this level). They should also have been exercising at this level for at least 6 months.

BODY FAT % AND FAT MASS

Body Fat % is the amount of fat as a proportion of your body weight. Fat Mass is the actual weight of fat in your body. Body Fat is vital to basic bodily functions such as regulating body temperature, storing vitamins and cushioning joints. Yet, too much fat can damage your health.

FFM

Fat Free Mass is everything in the body that is not fat; muscle, water, bone, connective tissue etc. Muscle acts as the body's natural 'fat-burning engine', therefore it is important to maintain or even gain healthy muscle mass when dieting or exercising.

MUSCLE MASS

Muscles play an important role as they act as the body's engine in consuming energy (calories). As you exercise more, your muscle mass increases, which in turn accelerates the rate of energy or calories consumed. Increasing Muscle Mass will raise your metabolic rate, helping you to reduce excess body fat levels and lose weight the healthy way.

Muscle Mass varies from person to person, therefore your results are only a guide should you wish to monitor your progress as a result of increased physical activity.

TOTAL BODY WATER AND BODY WATER %

Total body water is the weight of water in your body. Total Body Water Percentage (TBW%) is the total amount of fluid in the body expressed as a percentage of the total weight. Being well hydrated will help concentration levels, sports performance and general wellbeing.

BONE MASS

Bone Mineral Mass indicates an estimated weight of Bone Mineral Mass and this result is reached through a statistical calculation. Based on research findings there is a close correlation with bone weight and FFM (Fat Free Mass).

The development of muscle tissue through exercise has been shown to encourage stronger, healthier bones. It's important that you should aim to develop and maintain healthy bones through plenty of exercise along with a calcium-rich diet.

There is no healthy range or target for Bone Mineral Mass but the DIY Health Check Point allows you to monitor any changes over time.

BASAL METABOLIC RATE (BMR)

Basal Metabolic Rate (BMR) is the daily minimum level of energy or calories needed at rest for your body to function effectively. A person with a high BMR can burn more calories at rest than a person with a low BMR.

METABOLIC AGE

Metabolic age rating indicates what age your BMR is currently rated at compared to other age groups. If the age indicated is higher than your actual age then you need to improve your BMR by increasing exercise levels. Building muscle will burn more calories, even at rest!

VISCERAL FAT RATING

Visceral fat is the harmful fat in the stomach area, surrounding the vital organs. Ensuring you have a healthy level reduces the risk of certain conditions such as heart disease, high blood pressure and type 2 diabetes.

BODY MASS INDEX (BMI)

BMI gives you an idea of whether you're underweight, overweight or an ideal weight for your height. It is a useful measurement for most people over 18, but there are limitations to this system. For instance, adults with a very athletic build (e.g. professional athletes) could show as overweight. This is because muscle weighs more than fat and BMI does not take this into account. If you're pregnant, the BMI does not apply.

IMPEDANCE

Impedance value reflects the strength and speed of an electrical signal travelling through the body. Muscle is the signal's highway, and Fat Mass is like a traffic jam. More muscle means it's easier for the signal to pass through your body, resulting in a low impedance value. Consistent conditions and stable hydration status are not only healthy, but will also yield consistent results.

BLOOD PRESSURE TESTING

Blood pressure (BP) is the pressure exerted by circulating blood upon the walls of blood vessels. During each heartbeat BP varies between a maximum (systolic) and a minimum (diastolic) pressure.

BP is measured on the inside of the elbow at the brachial artery, which is the upper arm's major blood vessel that carries blood away from the heart. BP is usually expressed in terms of the systolic pressure over diastolic pressure (mmHg), e.g. 120/80.

RESTING HEART RATE

This is the number of times the heart beats every minute when relaxing. At rest the heart normally beats at around 72 beats per minute. The lower the resting heart rate the fitter the individual usually is.

INDICATOR

The indicator guides are a visual way of checking your results and monitoring your improvement. The minus and plus symbol shows there is room for improvement.

TANITA BODY COMPOSITION ANALYZER SC-330ST

09/JUN/2012
SERIAL No.

10:04
00000001

INPUT

BODY TYPE	STANDARD
GENDER	FEMALE
AGE	39
HEIGHT	166 cm
CLOTHES WEIGHT	1.0kg

RESULT

WEIGHT	57.4kg
FAT %	22.9 %
FAT MASS	13.1kg
FFM	44.3kg
MUSCLE MASS	42.0kg
TBW	30.7kg
TBW %	53.5 %
BONE MASS	2.3kg
BMR	5481 kJ
	1310kcal
METABOLIC AGE	24
VISCERAL FAT RATING	2
BMI	20.8

DESIRABLE RANGE

FAT %	21.0-32.9 %
FAT MASS	11.8-21.7kg

INDICATOR

*FAT %	- : 0 : + : ++
*BMI	- : 0 : + : ++
*VISCERAL FAT RATING	13
*MUSCLE MASS	- : 0 : +
*BMR	- : 0 : +
*IMPEDANCE	517.3

Aug. 3 2012 14:04

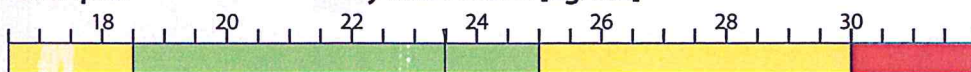
SYS	DIA	PUL
120	62	76
[mmHg]	[mmHg]	[bpm]

DIY Health Check Ranges

Use the following scales to determine if your results fit within the desirable parameters. If you require any further information please refer to the relevant fact sheets.

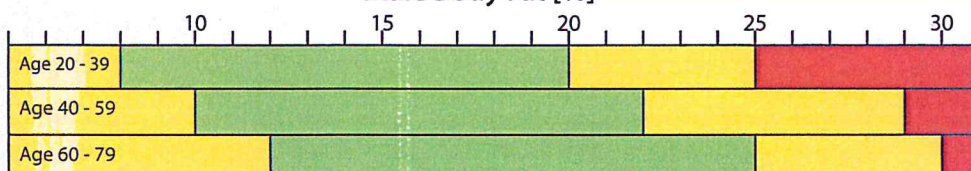
Example:

Body Mass Index [kg/m²]

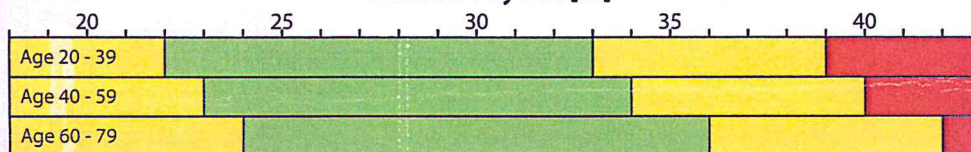


- Healthy
- Increased Health Risk
- High Risk

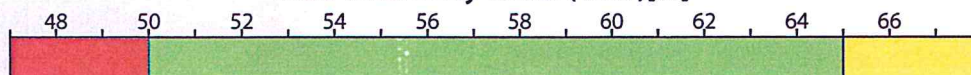
Male Body Fat [%]



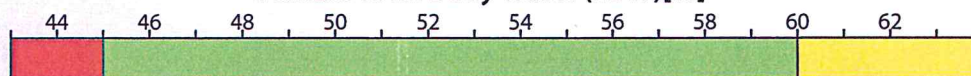
Female Body Fat [%]



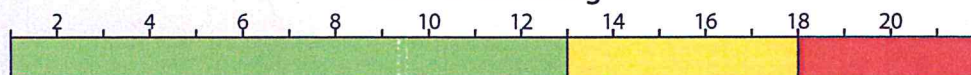
Male Total Body Water (TBW) [%]



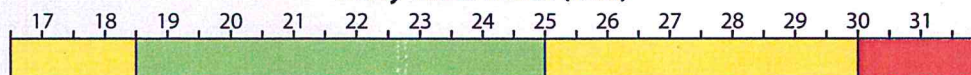
Female Total Body Water (TBW) [%]



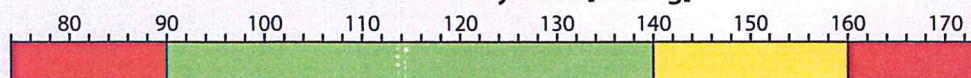
Visceral Fat Rating



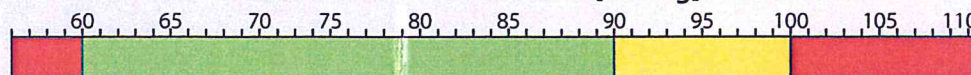
Body Mass Index (BMI)



Blood Pressure: Systolic [mmHg]



Blood Pressure: Diastolic [mmHg]



Please note that if you fall outside the ranges for Blood Pressure, we advise that you speak to your GP.

TANITA
BODY COMPOSITION
ANALYZER
SC-330ST

09/JUN/2012 10:04
SERIAL No. 00000001

INPUT
BODY TYPE STANDARD
GENDER FEMALE
AGE 39
HEIGHT 166 cm
CLOTHES WEIGHT 1.0kg

RESULT
WEIGHT 57.4kg
FAT % 22.9 %
FAT MASS 13.1kg
FFM 44.3kg
MUSCLE MASS 42.0kg
TBW 30.7kg
TBW % 53.5%
BONE MASS 2.3kg
BMR 5481 kJ
1310kcal
METABOLIC AGE 24
VISCERAL FAT RATING 2
BMI 20.8

DESIRABLE RANGE
FAT % 21.0-32.9 %
FAT MASS 11.8-21.7kg

INDICATOR
*FAT %
- : 0 : + : ++
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*VISCERAL FAT RATING
13
*MUSCLE MASS
- : 0 : +
*BMR
- : 0 : +
*IMPEDANCE 517.3

Aug. 3 2012 14:04

SYS DIA PUL
120 62 76
[mmHg] [bpm]

Recommendations:

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What does my score mean?

Compare your scores with the following table:

Assessment	20 – 39 years	40 – 59 years	60 – 79 years
Low	< 21%	< 23%	< 24%
Healthy	21% - 33%	23% - 34%	24% - 36%
Increased	33% - 39%	34% - 40%	36% - 42%
High	> 39%	> 40%	> 42%

Table: Body fat percentage ranges (Women) ¹

Assessment	20 – 39 years	40 – 59 years	60 – 79 years
Low	< 8%	< 11%	< 13%
Healthy	8% - 20%	11% - 22%	13% - 25%
Increased	20% - 25%	22% - 28%	25% - 30%
High	> 25%	> 28%	> 30%

Table: Body fat percentage ranges (Men) ¹

What is percentage body fat?

Body fat percentage is the percentage of body fat in relation to total weight.

Body Fat

Body fat protects organs, cushions joints, controls temperature, stores vitamins and acts as an energy store for the body.

Too much body fat can lead to adverse effects in terms of health i.e. blood pressure, heart disease and diabetes. Body fat values outside the healthy body fat range lead to a significantly higher risk of health problems.

You have 2 types of abdominal fat:

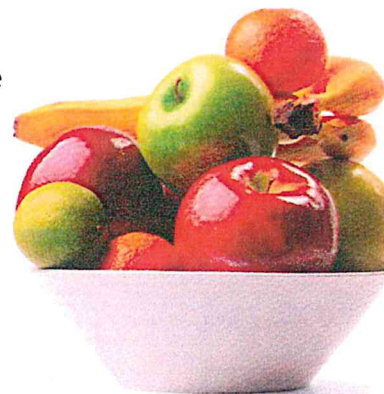
Subcutaneous fat body fat that lies superficial and close to the skin. Characteristics are:

- Outwardly visible
- Less metabolically active
- Less easily broken down



Visceral fat body fat that lies around the central organs (the viscera). Generally, visceral fat is considered a lot more harmful to health than subcutaneous fat as it affects the viscera and may contribute to the causation of such diseases as diabetes and heart disease². Characteristics are:

- Not outwardly visible
- More metabolically active
- Breaks down quickly in order to be used as energy



How to reduce risk

It is not possible to specifically target an area of your body for fat reduction. Usually, the abdomen is the first place where fat loss will occur. A reduction of 5% to 10% of body weight can result in a reduction of 10% to 30% of abdominal fat. It is generally accepted that visceral fat reduces at a greater rate because it is more metabolically active and breaks down quicker than subcutaneous fat.

Here are some tips for reducing body fat and losing weight.

- Try and avoid snacking**
Try to eat at roughly the same time each day to avoid being hungry, this will help you avoid snacking. If you snack choose a healthy option.
- Choose reduced fat versions of foods**
Such as spreads, dairy and salad dressings, however still use sparingly.
- Be more active, more often**
Walk or be active every day! Aim for 10,000 steps or 30-40 minutes per day.
- Portion Control**
Don't pile food on your plate unless it is vegetables.
- Think drink**
Choose water or sugar free squashes, also alcohol is high in calories so control your consumption.
- Five a day**
Eat at least five portions of fruit/vegetables per day. Fresh, frozen, or tinned.

1. Gallagher et al (2000) Healthy Percentage Body Fat Ranges: an approach for developing guidelines based on body mass index. Am J Clin Nutr. 72(3), 694-701.

2. Westphal, S.A (2008) Obesity, Abdominal Obesity and Insulin Resistance. Clin Cornerstone. 9(1), 23-29.

Recommendations:

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What does my score mean?

Compare your scores with the table below.

Analysis	Men (over 18)	Women (over 18)
Low	< 50%	< 45%
Healthy	50% - 65 %	45% - 60%
High	> 65 %	> 60%

Table: Body water percentage ranges

What is total body water percentage?

Total body water percentage (TBW%) is the total amount of fluid in the body expressed as a percentage of your total body weight.

Your body needs water for a wide variety of reasons including transportation of nutrients around the body and for waste products carried out of the body in the form of urine. It also allows organs to function, regulates body temperature, aids digestion and helps our muscles to contract and relax. Being well hydrated will help concentration levels, performance and general wellbeing.

The average TBW% ranges for a healthy adult are:
Females – 45 to 60%, Males – 50 to 65%

How much should we drink per day?

In countries like the United Kingdom we need to drink about 1.2 litres per day; this represents approximately 6 to 8 standard glasses.

Are all drinks the same?

Many drinks such as coffee, tea and cola contain caffeine which can lead to increased visits to the toilet, so inevitably it will not be as effective at hydrating as other drinks. Try not to have too many of these and/or balance with drinks that don't include caffeine. Try to check the sugar content of your drinks and choose sugar free versions where possible.

Alcohol

Alcohol is also a diuretic (meaning it removes fluids from the body).

- To avoid dehydration try not to drink on an empty stomach. Have a meal beforehand that includes carbohydrates and healthier fats.



- Drink water or non-fizzy soft drinks in between each alcoholic drink.
- Avoid carbonated (fizzy) drinks as they speed up the absorption of alcohol into your system.
- Lastly drink a pint or so of water before you go to sleep and keep a glass of water by the bed to sip if you wake up during the night.



Can I really drink too much water?

Drinking too much water can lead to a condition known as water intoxication. It is most commonly seen in infants under the age of 6 months and sometimes in athletes. The kidneys of a healthy adult can process 15 litres of water a day so you are unlikely to suffer from water intoxication, even if you drink a lot of water, as long as you drink it over time as opposed to drinking an enormous volume at one time.

How to improve your hydration

- Drinking regularly throughout the day is the best way to keep well-hydrated. This is because our bodies can't store extra water.
- Start the day with a cup of hot water and a good squeeze of fresh lemon. This will give your digestive system a real boost.
- Create a daily routine i.e. drink a glass after breakfast, one before lunch etc.
- Instead of caffeine and alcohol, drink water or diluted juice.
- Throughout the day have water constantly available. Keep a water bottle on your desk so you can top up your glass and carry a bottle of water with you when you are on the go.
- If you are cold, drink warm water or herbal teas instead of coffee or tea which can dehydrate you.
- Have a glass of water to go with your coffee/tea.
- Drink a glass of water before and during meals.
- Don't forget to eat plenty of fruit and vegetables as these have a high water content and will contribute to your daily intake.
- Keep a daily record of how many glasses of water you drink per day. Try to reach 8 glasses.

Recommendations:

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What does my score mean?

Compare your scores with the following table^{1,2}:

Classification	BMI Score	South Asian Score
Underweight	Under 18.5	Under 19
Normal weight	18.5 to 24.9	19 to 22.9
Overweight	25 to 29.9	23 to 27.9
Obese	30 and over	28 and over
Extremely Obese	40 and over	

These ranges are only for adults. BMI is interpreted differently for children. If you're concerned about your child's weight, contact your GP.

What is Body Mass Index?

BMI is a measure that most people can use to check if their weight is healthy for their height. However, it is important to note that muscle is heavier than fat and this needs to be borne in mind when interpreting bmi of athletic/muscular individuals

Overweight BMI

If your BMI is 25 or more, you should think about losing weight as being overweight or obese can increase your risk of health problems, such as:

Heart disease, Stroke, Type 2 diabetes, Some types of cancer, Kidney disease, High blood pressure (hypertension)

Underweight BMI

If your BMI is less than 18.5, you may want to talk to your GP about gaining weight. Being underweight can increase your risk of other health problems, such as:

- Brittle bones (osteoporosis)
- Absent periods in women
- Iron deficiency (anaemia)



Weight Loss

There are three main goals when thinking about weight loss.

- To prevent further weight gain
- To gradually lose weight through a combination of a calorie-controlled diet and regular exercise
- To avoid regaining any lost weight

Do - today

You can take four actions today to start your journey towards a healthy weight:

- Swap an unhealthy snack for something healthier. Many snacks, such as sweets, chocolate, biscuits and crisps are high in fat and sugar and supply calories that we don't need. Why not opt for a piece of fruit or a slice of malt loaf with a low-fat spread.
- Swap a sugary drink for a sparkling water with a slice of lemon. Don't forget that alcohol is also high in calories, so cutting down could help you to control your weight.
- Next, find a way to fit just one extra walk into your day. Fast walking is a way to burn calories, and you can often fit this into your daily routine.
- Make sure you have breakfast and see if you can make it healthier, using the foods you already have at home.



Do - this week

There are four actions you can take this week:

- First, plan a healthy weekly shop. Nutritious, balanced meals are key to a healthy weight. Eating a balanced diet often starts with having the right foods at home.
- Everyone likes a treat occasionally such as a pizza or a takeaway. Swap your treat for a healthier, home-made alternative as you can make lower-calorie versions of many of your favourite meals.
- Next, commit to one more way to increase your level of physical activity. It's recommended that adults between 19 and 64 get at least 150 minutes of moderate-intensity aerobic physical activity. For example, fast walking or cycling.
- Lastly, identify this weeks danger zones. These are times when you might find yourself eating lots of foods that are high in fat and sugar, perhaps because you are eating out or simply because you're tired or stressed. Plan ahead so that you can limit those foods. But don't be too strict an indulgence from time to time is fine.

1. ACSM (2013) ACSM's Guidelines for Exercise Testing and Prescription. Lippincott Williams and Wilkins Health, Baltimore.

2. WHO Experts Consultation (2004) Appropriate Body Mass Index for Asian Populations and it's Implications for Policy and Intervention Strategies. Lancet. 363(9403), 157-163.

Recommendations:

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What does my score mean?

Compare your scores with the table below¹. Use the highest number of your two numbers to work out your classification. If your score is high, try retesting in a quiet place.

Category	Systolic BP	Diastolic BP	Action
Low BP	<90	<60	
Optimal BP	120	80	
Normal BP	100 - 139*	60 - 89	
High-normal BP	130 - 139	85 - 89	
Grade 1 hypertension mild	140 - 159	90 - 99	See your GP for recheck
Grade 2 hypertension moderate	160 - 179	100 - 109	See your GP ASAP and refer to OH
Grade 3 hypertension severe	>180	>110	See GP asap or attend A&E same day - refer to OH

1. Guidelines Committee (2003) European Society of Hypertension: European Society of Cardiology guidelines for the management of arterial hypertension. J. Hypertens. 21, 1011-1053.

*People with diabetes should aim to keep their blood pressure below 130/80 mmHg.

What is blood pressure?

The heart is a muscle that pumps blood around the body. The blood is pumped away from the left side of the heart through the arteries to reach the muscles and vital organs. Arteries expand and contract as the heart beats and relaxes, moving the blood around the arterial system. The blood returns to the right-hand side of the heart by a network of veins. From here it is pumped into the lungs, where carbon dioxide (CO₂) is exchanged for oxygen. The blood then returns to the left side of the heart to be pumped via the arteries through the body once again.

Systolic

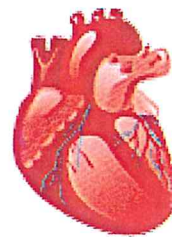
This is the peak pressure exerted on the walls of the arteries as the blood pumps away from the heart. The walls of the arteries expand as the blood is forced through them.

Diastolic

The second figure is the diastolic blood pressure. As the heart relaxes between beats and refills with blood ready for the next beat, the arteries contract and the blood is moved around the body through the system of arteries.

Resting heart rate

This is the number of times the heart beats every minute when relaxing. At rest the heart normally beats at around 72 beats per minute. The lower the resting heart rate the fitter the individual usually is.



Changes in your blood pressure

Blood pressure changes throughout the day according to the level of the individual's activity. It is normally at its lowest in the latter part of the sleep period.

High blood pressure

High blood pressure is a risk factor for heart disease or stroke. If your blood pressure is consistently raised, it will need to be treated either by making changes to your lifestyle or by taking medication. If your blood pressure is consistently above 140/90mmHg see your GP.

Low blood pressure

If your blood pressure is naturally low, it is unlikely that it will cause you any symptoms or require treatment. However, low blood pressure can sometimes mean there is not enough blood flowing to your brain and other vital organs. If your blood pressure is consistently below 90/60mmHg see your GP.

Managing blood pressure²

Thousands of people each year could be saved from suffering a heart attack or stroke if they managed their blood pressure more efficiently. Here are some things you can do:

- ✚ Manage your stress levels
- ✚ Maintain a healthy body weight (if you are overweight, losing 10kg can reduce your BP by about 5mmHg)
- ✚ Stop smoking
- ✚ Refrain from adding salt during cooking or at the table (lowering salt intake by 5g a day can lower BP by approximately 5mmHg. Aim for less than 6g a day)
- ✚ Regular moderate - intensity exercise
- ✚ Diabetics or those diagnosed with high BP, must be under GP care.
- ✚ Healthy use of alcohol. The NHS recommends men should not regularly drink more than 3-4 units of alcohol a day and women should not regularly drink more than 2-3 units a day. If you've consumed an excessive amount of alcohol, avoid alcohol for 48 hours after.

2. It remains the responsibility of each individual to inform their GP of their BP readings, and if appropriate their line manager too

Recommendations:

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