Bodymapp Health Report

Information manual

Verson 1.0

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Report Generation

- To generate a report, select the scan date(s). You can generate a report with only 1 scan selected as Current Scan or you can select two scan dates to compare results.

- The Ranking Graphs is optional; if the user chooses to not be shown their ranking against the rest of the Bodymapp members. For more information on rankings, see section.

- Once the report is generated, this is **not** saved automatically to the phone.

- The user can save or share the report, in the method based on the phone model as it is different between iOS and Android.

Report Sections

The raw body scan views are based on the scan date selected as "Current scan" for comparison before creation.

The spidergram is an overview of the user's health metrics, as per numbered in the legend at the bottom of the page.
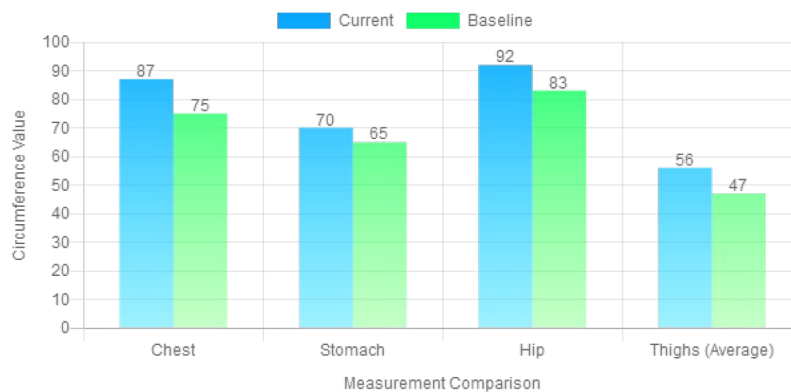
1. Body mass index (BMI)
2. Body fat estimate
3. Waist to Hip Ratio
4. Waist to Height Ratio

Each diamond represents a scan. The blue diamond is the Current Scan and the green is the Baseline Scan. The larger the diamond, or any particular corner, means the value of the metric is higher.
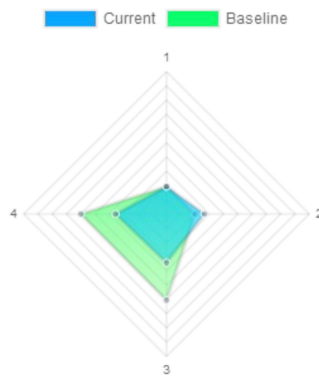
We believe in a holistic approach to viewing health indicators as opposed to relying on one; as each formula consists of different variables. For more information, please see the Health Indicators section.

The bar histogram consists of the key body measurements across the body; based on the same colour-coding as the spidergram.

Health Indicators

- Body mass index (BMI): Weight (kg) / [Height (m)]2
- Waist to Hip Ratio: Stomach / Hip
- Waist to Height Ratio: Stomach / Height
- Body Fat Estimate: This is a complex formula with rules based on the 3D scans including surface area. The variables are as follows:
    - Male: Abdominal circumference (not shown in the app), body surface area, mid-thighs, calves, biceps, stomach, weight.
    - Female: Abdominal circumference, body surface area, mid-thighs, calves, biceps.

We have standardised the ratings of all the different indicators to make it easier to comprehend:

Legend

Low	Healthy	Over	High	Very High

	Low	Healthy	Over	High	Very High
BMI	less than 18.5	18.5 to 25	25 to 30	30 to 40	over 40
Fat Estimate (male)	Less than 13%	14–25%	26–30%	31–34%	35%+
Fat Estimate (female)	Less than 20%	21–29%	30–35%	36–39%	40%+
Waist-Hip (see below)	Low	Moderate	High	Very high	N/A
Waist-Height	<= 34%	35% to 52%	53% to 57%	58% to 62%	>= 63%

Waist-Hip Chart:

	age	low	moderat	high	very high
female	20-29	<0,71	0,71-0,77	0,78-0,82	>0,82
	30-39	<0,72	0,72-0,78	0,79-0,84	>0,84
	40-49	<0,73	0,73-0,79	0,80-0,87	>0,87
	50-59	<0,74	0,74-0,81	0,82-0,88	>0,88
	60-69	<0,76	0,76-0,83	0,84-0,90	>0,99
male	20-29	<0,83	0,83-0,88	0,89-0,94	>0,94
	30-39	<0,84	0,84-0,91	0,92-0,96	>0,96
	40-49	<0,88	0,88-0,95	0,96-1,00	>1,00
	50-59	<0,90	0,90-0,96	0,97-1,02	>1,02
	60-69	<0,91	0,91-0,98	0,99-1,03	>1,03

Posture Analysis

The posture skeleton is based on the following points throughout the 3D body mesh:

- Center of Neck
- Centre of Chest
- Side and central points of Narrow Waist
- Side and central points of Hips
- Centre points of Knees
- Centre points of Calves

The skeleton is only indicative of the spinal alignment. We recommend seeking professional advice on the actual diagnosis.
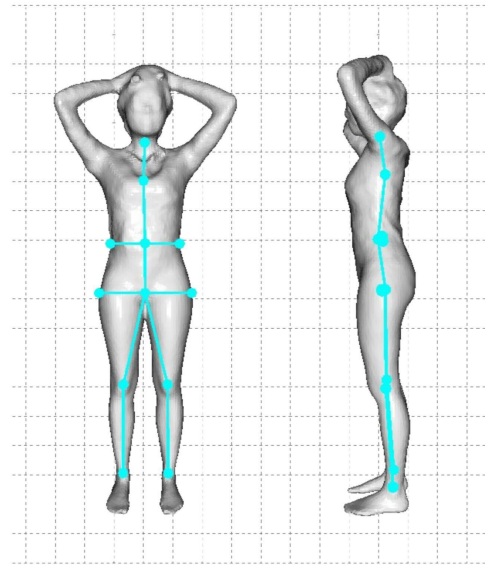
Body Shape Analysis

Body shape categories based Chest, Narrow Waist, Stomach and Hip measurements:

Male

- TRAPEZOID
- INVERTED TRIANGLE
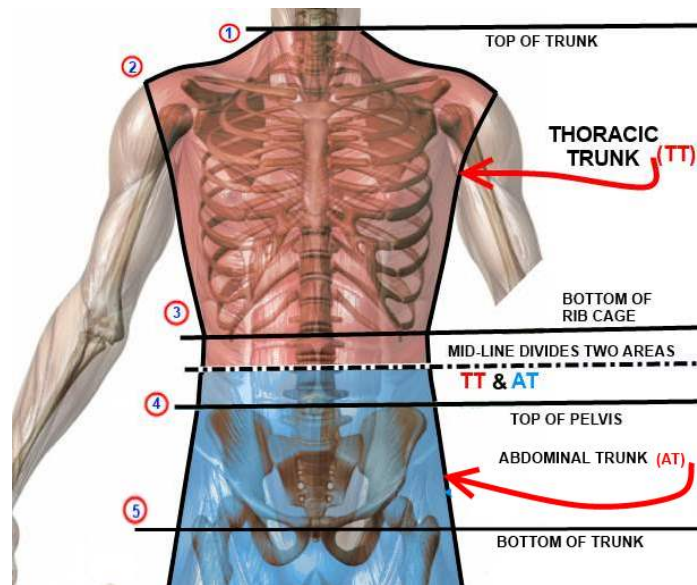- RECTANGLE
- TRIANGLE
- OVAL/APPLE

Female

- HOURGLASS
- INVERTED TRIANGLE / PEAR
- RECTANGLE
- TRIANGLE
- DIAMOND
- APPLE

Thoracic Trunk Surface Area: red region

Abdominal Trunk Surface Area: blue region

Torso Volume: volume of blue and red regions combined

Total Leg Volume: left and right legs below the crotch combined

Somatotypes

Somatotypes is used in the system of classification of human physical types developed by U.S. psychologist <u>W.H. Sheldon</u>. A somatotype number of three digits is determined for an individual classified by the system, each digit is on a scale of 1 to 7. The first digit corresponded to the degree of adiposity or 'endomorphy', the second to the extent of muscularity or 'mesomorphy', and the third to the physical linearity or 'ectomorphy.'

Variables applied = Thoracic trunk, Abdominal trunk, Weight, Age

Ectomorph

The ectomorph is typically long, slender and thin. They find it hard to gain muscle or fat mass. While they can easily get lean and hard, their lack of musculature severely limits their chances in sports requiring mass. Power and strength sports are perhaps not suitable, as their slight build leaves them susceptible to injuries, but they dominate endurance sports and gymnastics.

Naturally low levels of body fat allow ectomorphs to keep a high strength to bodyweight ratio as well as undergo less physical stress during repetitive movement long-duration activities such as running and cycling compared to other body types. At very low levels of body fat this can be riskier to health, and for females in endurance sports it can result in a cessation of periods and iron deficiency. Because of their smaller surface area, ectomorphs can regulate their body temperature and breathing more efficiently than other body types; a trait that is particularly important in aerobic endurance activities.

Endomorph

The endomorph is typically a larger build. They can gain both fat and muscle easily but struggle to lose fat.

Endomorphs typically have a larger bone structure and can naturally carry a large amount of both muscle and fat mass on their frame. They often have thick limbs (legs and arms). Their mass hampers their ability to compete in sports requiring high levels of agility or speed and perform

sustained weight bearing aerobic activities such as running. Sports of pure strength, like powerlifting, are perfect for an endomorph. They can gain weight easily and lose condition quickly if training stops. They typically have a large lung capacity which is beneficial in non-weight-bearing aerobic activities like rowing and they can increase their muscle mass much quicker than ectomorphs.

Mesomorph

The mesomorph body type is typically medium build and can gain or lose weight easily.

A mesomorphic individual excels in strength, agility, and speed. Their medium structure and height, along with their tendency to gain muscle and strength easily makes them a strong candidate for a top athlete in any sport. They can sustain low body fat levels and find it easy to lose and gain weight. These individuals are the ideal athlete because they not only have a medium bone structure and height but they typically excel at both cardiovascular and resistance training activities.

You can be a combination of types, as well as a balanced body type (4,4,4 or 3,3,3).

This means you have a balanced construction of the ectoderm (skin, nerves, sensory organs), endoderm (lining of the stomach, intestines and other internal organs associated with digestion) and mesoderm (muscle and bone) layers.

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Benchmarks

We provide personalised benchmarks on how much nutrients (calories, protein, fat, carbohydrates in grams/day) a person should consume based on their scan results for a range of physical activity levels described below:

Lifestyle Category	Description
Sedentary with No Exercise	An office worker, who do not have any option to move around and won't do any exercise.
Sedentary with Little Exercise	An office worker, who moves around or will do little exercise every day.
Moderately Active	Person who works by standing or doing moderate exercises like running or swimming for an hour every day.
Vigorously Active	Highly active person or doing exercises like swimming or running for two hours every day.
Extremely Active	Athletes or sports person spending lot of time in a day practicing and doing exercise.

TDEE (Total Daily Energy Expenditure) is expressed in calories / day and is based on the user's BMR.

Basal Metabolic Rate (BMR) is the minimum amount of energy expressed in calories that a person needs to keep the body functioning at rest.

Variables applied for BMR: height, weight, age.

Target Heart Rate Zones is a chart that defines what the user's heart rates are based on the physical activity level. Your max heart rate is the highest number of heart beats per minute (BPM) when performing at the highest level of physical activity. For more information, please visit this link.

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Ranking Graphs

This is an optional feature if the user chooses to/not view where their BMI and Body Fat Estimate sit as a percentile against the rest of the Bodymapp users around the world within the same demographic.

Your percentile for Body Fat Estimate: 18th
This means that 18% of 17836 females aged between 35-39 years old have a body fat percentage lower than you.