

# RANGES FOR THE RESULTS

## TOTAL BODY FAT – RANGES FOR MEN AND WOMEN (%)

### Females

RANGES	18-40	41-60	61-79
Low	15% - 20.9%	16% - 22.9%	17% - 23.9%
Low-Medium	21% - 32.9%	23% - 34.9%	24% - 35.9%
Medium-High	33% - 38.9%	35% - 39.9%	36% - 41.9%
High	39% - 65%	40% - 66%	42% - 67%

### Males

RANGES	18-40	41-60	61-79
Low	5% - 7.9%	8% - 10.9%	9% - 12.9%
Low-Medium	8% - 18.9%	11% - 21.9%	13%- 24.9%
Medium-High	19% - 24.9%	22% - 26.9%	25% - 29.9%
High	25% - 50%	27% - 52%	30% - 55%

*NOTE - The ranges above are based on Body Fat as derived from Magnetic Resonance Imaging (MRI) data which looks at all the body fat, good and bad for health risk, in the body. Please note that references to other types of body composition equipment may be different.*

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## VISCERAL FAT – RANGES FOR MEN AND WOMEN (ltrs)

### Females

RANGES	FROM	TO
Low	0.1	1.5
Low-Medium	1.6	4.9
Medium-High	5	6.9
High	7	10

### Males

RANGES	FROM	TO
Low	0.1	2.5
Low-Medium	2.6	6
Medium-High	6.1	8.9
High	9	13

**REF:** Medical Research Council MRI data used in BVI validation - 2009 - 2017

*The ranges above are based on Body Fat as derived from Magnetic Resonance Imaging (MRI) data. Please note that references to other types of body composition equipment may be different.*

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## WAIST CIRCUMFERENCE – RANGES FOR MEN AND WOMEN (cm)

### Females

RANGES	FROM	TO
Low	50	79.9
Medium	80	87.9
High	88	150

### Males

RANGES	FROM	TO
Low	55	93.9
Medium	94	101.9
High	102	150

**REF:** WHO cut-off points and risk of metabolic complications

[\(IDF,2006; Zimmet & Alberti, 2006\)](#)

## WAIST TO HIP RATIO – RANGES FOR MEN AND WOMEN (cm)

### Females

RANGES	FROM	TO
Low	0.5	0.79
Medium	0.80	0.90
High	0.91	1.5

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## Males

RANGES	FROM	TO
Low	0.5	0.84
Medium	0.85	0.95
High	0.96	1.5

**REF:** WHO cut-off points and risk of metabolic complications

[\(IDF,2006; Zimmet & Alberti, 2006\)](#)

## WAIST TO HEIGHT RATIO – RANGES FOR MEN AND WOMEN (cm) \*

Waist to height ratio is a simple measurement for assessment of lifestyle risk and overweight. Compared to just measuring waist circumference, waist to height ratio is equally fair for short and tall persons. This calculator is valid for children and adults.

Instructions:

1. Measure your waist circumference at a horizontal line one inch above your belly button.
2. Enter waist circumference and height by turning the dials.

Waist to Height Classification	Adult women	Adult men
Extremely slim	$\leq 0.34$	$\leq 0.34$
Slim	0.35 – 0.41	0.35 – 0.42
Healthy	0.42 – 0.48	0.43 – 0.52
Overweight	0.49 – 0.53	0.53 – 0.57

[REF: NICE guidance, published 8th September 2022](#)

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## BVI RISK INDICATOR

The four BVI quartiles will indicate the level of expected risk of the Metabolic Syndrome as follows:-

QUARTILE	PREDICTED RISK
FIRST Quartile	Low Risk
SECOND Quartile	Medium to Low Risk
THIRD Quartile	Medium to High Risk
FOURTH Quartile	High Risk

## BODY VOLUME INDEX (BVI) NUMBER

Over 105 different indices of body volume parameters were reviewed against known indicators of obesity and cardiometabolic risk to create BVI. The Body Volume 'Index' has been validated by Mayo Clinic on over 1,280 patients in a longitudinal study, published in April 2022:-

See: <https://www.jacc.org/doi/10.1016/S0735-1097%2822%2903019-4>

Below is an explanation of the ranges for the BVI Number:-

BVI Number	Risk of Metabolic Syndrome
<b>1 -5</b>	A person with a low BVI number is at low risk of developing cardio-metabolic disease. The abdominal and torso volume in proportion to the total volume is not concerning.
<b>6 - 10</b>	Someone with a BVI number in this range puts them at low to medium risk for cardio-metabolic disease, as a result of their abdominal and torso volume being higher in proportion to their overall total body volume.

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<b>11 - 15</b>	A BVI number in this range is indicative of a medium to high risk of metabolic disease, as the abdominal and torso volume is high in proportion to their total body volume.
<b>16 - 20</b>	In this range, a BVI number may be indicative of a high risk of developing diabetes, hypertension and cardiovascular disease, as the chest, abdomen and pelvis volumes are high as a proportion of total body volume.

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