BODY MASS

INDEX

Compiled by

Campbell M Gold

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Introduction

Body Mass Index is a value which relates an individual's body weight to their height.

The Body Mass Index (BMI) formula was developed by Adolphe Quetelet (1796-1874), a Belgium statistician, and was originally called the "Quetelet Index".

BMI is also referred to as "Body Mass Indicator", and is an international measurement of obesity.

BMI Imperial

The Body Mass Index (BMI) - Imperial - is calculated by taking weight in pounds (lbs), which is then multiplied by 703. This result is then divided by the height in inches (ins) which has been squared:

BMI = ((Weight in Pounds) x 703)) / ((Height in Inches) Squared)

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BMI Metric

The Body Mass Index (BMI) - Metric - is calculated by taking weight in kilograms (kg), which is then divided by height in metres (m) squared.

BMI = Weight in Kilograms / ((Height in metres) Squared)

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BMI Quick Find

Use the following table to find/confirm your BMI.

Identify height (inches) in the left-hand column; locate weight (pounds) to the right. The number at the bottom of the column is the corresponding BMI for that height and weight.

BMI - Quick Find													
Height in inches	**Weight in Pounds**												
58	91	96	100	105	110	115	119	124	129	134	138	143	167	191
59	94	99	104	109	114	119	124	128	133	138	143	148	173	198
60	97	102	107	112	118	123	128	133	138	143	148	153	179	204
61	100	106	111	116	122	127	132	137	143	148	153	158	185	211
62	104	109	115	120	126	131	136	142	147	153	158	164	191	218
63	107	113	118	124	130	135	141	146	152	158	163	169	197	225
64	110	116	122	128	134	140	145	151	157	163	169	174	204	232
65	114	120	126	132	138	144	150	156	162	168	174	180	210	240
66	118	124	130	136	142	148	155	161	167	173	179	186	216	247
67	121	127	134	140	146	153	159	166	172	178	185	191	223	255
68	125	131	138	144	151	158	164	171	177	184	190	197	230	262
69	128	135	142	149	155	162	169	176	182	189	196	203	236	270
70	132	139	146	153	160	167	174	181	188	195	202	207	243	278
71	136	143	150	157	165	172	179	186	193	200	208	215	250	286
72	140	147	154	162	169	177	184	191	199	206	213	221	258	294
73	144	151	159	166	174	182	189	197	204	212	219	227	265	302
74	148	155	163	171	179	186	194	202	210	218	225	233	272	311
75	152	160	168	176	184	192	200	208	216	224	232	240	279	319
76	156	164	172	180	189	197	205	213	221	230	238	246	287	328
BMI	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**35**	**40**

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To Manually Calculate BMI - Imperial

BMI = ((Weight in Pounds) x 703)) / ((Height in Inches) Squared)

1) Take your height in inches and multiply the figure by itself (height squared)
2) Take your weight in pounds and multiply it by 703 (weight x 703)
3) Divide the weight by the height squared

Example, Height = 70 ins (5 ft 10 ins), and Weigh = 197 lbs (14 st 1 lb).

The calculation for BMI is:

70 x 70 = 4900 (height squared), then

197 x 703 = 138491 (weight times 703), then

BMI = 138491 / 4900 = 28.26

BMI = 28.26

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To Manually Calculate BMI - Metric

BMI = Weight in Kilograms / ((Height in metres) Squared)

1) Take your height in metres and multiply the figure by itself (height squared)

2) Take your weight in kilograms

3) Divide the weight by the height squared

Example, Height = 1.6 m, and Weigh = 65 kg

The calculation for BMI is:

1.6 x 1.6 = 2.56 (height squared), then

BMI = 65 / 2.56 = 25.39

BMI = 25.39

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BMI Interpretation

BMI rule of thumb for adults:

BMI Ranges	
Underweight	Less than 20
Ideal	20-25
Overweight	25-30
Obese	Greater than 30

BMI Interpretation	
BMI less than 20	This indicates a lean BMI, which reflects an individual with low amount of body fat. Consequently, the individual should consider gaining the necessary weight, through good diet and exercise, to increase their muscle mass
BMI between 20 and 22	This indicates the ideal, amount of body fat, which is associated with good health and longevity
BMI between 22 and 25	This is an acceptable BMI range, which is associated with health
BMI between 25 and 30	An individual in this range should lower their weight through diet and exercise. They are at an increased risk for illnesses
BMI greater than 30	This is an unhealthy condition, with the individual at risk for heart disease, diabetes, high blood pressure, gallbladder disease, and various cancers. Weight should be lowered through diet and exercise

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Waist Circumference Measurement)

Another guide to identify individuals who are at increased risk of obesity and cardiovascular disease is the Waist Circumference Measurement.

This may be a more accurate measure of future health problems, because what matters is where the excess weight is carried on the body.

People who are "apple shaped" store fat around the midriff, and they are more likely to develop heart disease and diabetes than those who are "pear shaped" or more diffusely plump.

A waist circumference greater than 37 in (94 cm) for men, and greater than 32 in (80 cm) for women indicates an increased risk.

A waist circumference greater than 40 in (102 cm) for men, and greater than 35 in (88 cm) for women is cause for concern.

BMI	Category	Waist less than or equal to 40" (men); 35" (women)	Waist greater than 40" (men); 35" (women)
18.5 or less	Underweight	n/a	n/a
18.5 - 24.9	Normal	n/a	n/a
25.0 - 29.9	Overweight	Increased Risk	High Risk
30.0 - 34.9	Obese	High Risk	Very High Risk
35.0 - 39.9	Obese	Very High Risk	Very High Risk
40 or greater	Extremely Obese	Extremely High Risk	Extremely High Risk

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Waist-Hip Ratio

A further measurement of risk is the ratio of the waist circumference (the narrowest point on the abdomen) to the hip circumference (the widest point on the abdomen).

A ratio of greater than 1.0 for a man (the waist is bigger than the hips), or 0.8 for a woman indicated that weight needs to be reduced and exercise levels need to be increased

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