

# Body Mass Index (BMI)

- BMI is a height-to-weight calculation used by medical professionals to quickly estimate your weight related disease risk. It correlates with, but does not actually measure body fat percentage.
- High body fat has been associated with increased risk for cardiovascular disease, high blood pressure, premature death, some cancers, diabetes, osteoarthritis, as well as other lifestyle diseases.
- BMI may overestimate body fat in athletes who have a muscular build. Women are likely to have more body fat than men of the same BMI.
- BMI may underestimate body fat in older persons and others who have lost muscle mass. Older people are likely to have more body fat than younger people of the same BMI.

## BMI and Associated Disease Risk

BMI	Weight Status
Below 18.5	Underweight
18.5 – 24.9	Normal
25.0 – 29.9	Overweight
30.0 and Above	Obese

- BMI is only one piece of a person's health profile.
- Other important factors when assessing risk factors for disease include: diet, activity, waist circumference, blood pressure, blood sugar, cholesterol and family history.
- It is important to talk with your doctor about other measures and risk factors.

Body Mass Index Table																																																						
	NORMAL					OVERWEIGHT					OBESE					EXTREMELY OBESE																																						
BMI	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54																		
Height (inches)	Body Weight (pounds)																																																					
58	91	96	100	105	110	115	119	124	129	134	138	143	148	153	158	163	168	173	178	183	188	193	198	203	208	212	217	222	227	232	237	242	247	252	257	262	267																	
59	94	99	104	109	114	119	124	128	133	138	143	148	153	158	163	168	174	179	184	189	194	199	204	209	215	220	225	230	235	240	245	250	255	261	266	271	276																	
60	97	102	107	112	118	123	128	133	138	143	148	153	158	163	168	174	180	185	190	195	201	206	211	217	222	227	232	238	243	248	254	259	264	269	275	280	285																	
61	100	106	111	116	122	127	132	137	143	148	153	158	164	169	175	180	186	191	196	202	207	213	218	224	229	235	240	246	251	256	262	267	273	278	284	289	295																	
62	104	109	115	120	126	131	136	142	147	153	158	164	169	175	180	186	191	196	202	207	213	218	224	229	235	240	246	251	256	262	267	273	278	284	289	295																		
63	107	113	118	124	130	135	141	146	152	158	163	169	175	180	186	191	197	203	208	214	220	225	231	237	242	248	254	259	265	270	276	282	287	293	299	304																		
64	110	116	122	128	134	140	145	151	157	163	169	174	180	186	192	197	204	209	215	221	227	232	238	244	250	256	262	267	273	279	285	291	296	302	308	314																		
65	114	120	126	132	138	144	150	156	162	168	174	180	186	192	198	204	210	216	222	228	234	240	246	252	258	264	270	276	282	288	294	300	306	312	318	324																		
66	118	124	130	136	142	148	155	161	167	173	179	186	192	198	204	210	216	223	229	235	241	247	253	260	266	272	278	284	291	297	303	309	315	322	328	334																		
67	121	127	134	140	146	153	159	166	172	178	185	191	198	204	211	217	223	230	236	242	249	255	261	268	274	280	287	293	299	306	312	319	325	331	338	344																		
68	125	131	138	144	151	158	164	171	177	184	190	197	203	210	216	223	230	236	243	249	256	262	269	276	282	289	295	302	308	315	322	328	335	341	348	354																		
69	128	135	142	149	155	162	169	176	182	189	196	203	209	216	223	230	236	243	250	257	263	270	277	284	291	297	304	311	318	324	331	338	345	351	358	365																		
70	132	139	146	153	160	167	174	181	188	195	202	209	216	222	229	236	243	250	257	264	271	278	285	292	299	306	313	320	327	334	341	348	355	362	369	376																		
71	136	143	150	157	165	172	179	186	193	200	208	215	222	229	236	243	250	257	265	272	279	286	293	301	308	315	322	329	338	343	351	358	365	372	379	386																		
72	140	147	154	162	169	177	184	191	199	206	213	221	228	235	242	250	258	265	272	279	287	294	302	309	316	324	331	338	346	353	361	368	375	383	390	397																		
73	144	151	159	166	174	182	189	197	204	212	219	227	235	242	250	257	265	272	280	288	295	302	310	318	325	333	340	348	355	363	371	378	386	393	401	408																		
74	148	155	163	171	179	186	194	202	210	218	225	233	241	249	256	264	272	280	287	295	303	311	319	326	334	342	350	358	365	373	381	389	396	404	412	420																		
75	152	160	168	176	184	192	200	208	216	224	232	240	248	256	264	272	279	287	295	303	311	319	327	335	343	351	359	367	375	383	391	399	407	415	423	431																		
76	156	164	172	180	189	197	205	213	221	230	238	246	254	263	271	279	287	295	304	312	320	328	336	344	353	361	369	377	385	394	402	410	418	426	435	443																		

Source: Adapted from *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults; The Evidence Report.*

# BODY COMPOSITION

## The Numbers Behind Body Composition and Weight Loss

- 🦋 Body composition refers to the ratio of lean body mass to body fat.
- 🦋 3500 calories = approximately one pound of body fat
- 🦋 Creating a negative caloric balance is needed to lose weight: **calories IN < calories OUT = weight loss**
- 🦋 A 500 calorie deficit x 7 days = a 3500 calorie deficit per week, which equals one pound fat loss
- 🦋 To lose one pound of body fat per week, do a workout each day that will burn at least 250 calories and reduce your caloric intake each day by at least 250 calories.
- 🦋 A reduction in calories can be as easy as substituting a soda for water with a fresh lemon or orange slice, or choosing fresh fruit instead of a high-calorie candy snack.

## Appearances Can Be Deceiving—Who has a healthy body composition?

- Men A, B and C are exactly the same height (72 inches)
- A and B have the same weight (160 lbs)
- C weighs considerably more (200 lbs)

A carries 37 lbs of body fat  
B carries 27 lbs of body fat  
C carries 46 lbs of body fat



### **Which man is at greater risk for weight related disease?**

Based only on BMI (height to weight ratio) C appears to be in an unhealthy, overweight category.

Based on body composition testing, analyzing lean tissue and fat percentages B and C have acceptable body fat percentages (17% and 20%) while A has above the recommended range and is at a higher health risk (23%).

Source: [www.tanita.com](http://www.tanita.com)

### How to alter your body composition

The most effective means of decreasing body fat is by combining a healthy diet with regular aerobic exercise and resistance training.



🦋 **Healthy Diet:** Fat is the most concentrated source of food energy. Fat contains more calories per gram than either carbohydrates or proteins (9 calories/gram vs. 4 calories/gram, respectively). While some fat is essential in the diet, most of us tend to eat much more than we need. It is important to try and keep your fat consumption at 30% or less of your daily caloric intake.

🦋 **Aerobic Exercise:** Exercise is an essential part of any weight loss program. While burning calories during exercise, aerobic activity will also increase your basal metabolic rate, increasing caloric expenditure during exercise and at rest.

🦋 **Resistance (Strength) Training:** Proper and consistent strength training will increase the amount of lean muscle tissue your body carries. Muscle is a very active tissue utilizing a lot of calories. An increase in muscle mass will raise your metabolic rate therefore increase caloric expenditure throughout the day. It is not uncommon for an individual to lose body fat but gain weight while strength training.