

Med-Fit Tech Assistant

Medical-Fitness Assessment - Learning Module #6

Anthropometrics

Part C

Part C: Health Risks & Weight Loss

Learning Objectives:

- Accurately determine weight-related health risk
- Accurately determine healthy weight range
- Determine the amount of excess fat weight
- Determine the duration and goal date of a weight loss goal

1. Weight-Related Health Risk

Body Mass Index (BMI) and Waist:Height Ratio (WHtR) are valid measurements of an individual's weight-related health risks when used together in order to distinguish excess weight as either fat or muscle.

- BMI's greater than 25 are associated with increasingly severe health risks, including: heart disease, diabetes, hypertension, osteoarthritis, and many forms of cancer, especially colon, breast, and prostate cancers.
- Since BMI is based solely on Height & Weight measurements, and not on body composition (percent body fat, %BF) which is the true predictor of health risk for chronic disease, BMI's are only valid for 75% of the adult population.
- Waist:Height Ratios greater than 0.5 usually validates the weight-related health risks based on the BMI, because it indicates the excess weight is probably due to excess fat rather than muscle.
- Excess abdominal fat (WHtR > 0.5) is an independent risk factor for chronic disease.
- Most of the 25% invalid BMI's indicate a LOW health risk when in fact excess fat weight is "hidden," because the person has an inadequate amount of muscle weight. This condition is known as "skinny-fat," which increases the risk of chronic disease rather than reducing it.
- A small amount of the 25% invalid BMI's indicate an increased risk when in fact the "excess" weight (BMI >25) is due to extra muscle, which reduces the health risk for chronic disease rather than increasing it.
- Fitness Tests are powerful tools to identify which individuals are healthy or unhealthy regardless of body Weight, BMI, or WHtR. Fitness tests will also determine an appropriate training program for unhealthy individuals to increase muscle mass, reduce fat weight, and improve cardiovascular fitness for preventing, or even reversing, chronic disease, reducing health risks, and achieving optimal health.

Health Risk Interpretation

If your client's BMI places him/her in the Healthy Weight category, but their WHtR is in the Overweight or Obese category, their body composition is probably unhealthy with not enough muscle.

If your client's WHtR category matches his/her BMI category, their BMI & WHtR are probably valid weight-related health risk indicators, and you can use the BMI chart to determine a Healthy Weight range specific to their Height and Gender.

If your client's BMI places him/her in the Overweight or Obese category, but their WHtR is in the Healthy Weight or Overweight category, their "excess" weight is probably due to having more muscle than the average person of his/her height and weight - making their BMI invalid as a health risk indicator. In that case, disregard their BMI and use their WHtR alone to determine their weight-related health risk.

Weight-Related Health Risk

BMI	WHR		Category	Risk Level
	M	F		
≤ 20	≤ .42	≤ .41	Underweight	Possible Health Risks
21-25	≤ .52	≤ .48	Healthy Weight	Low Health Risk
26-29	≤ .62	≤ .57	Overweight	Increased Health Risks
30-34	≥ .63	≥ .58	Obese – Class 1	Moderate Health Risks
35-39	≥ .63	≥ .58	Obese – Class 2	Severe Health Risks
≥ 40	≥ .63	≥ .58	Obese – Class 3	Extreme Health Risks

2. Healthy Weight Range

A healthy weight range can easily be determined for an average client by using the BMI Chart.

- Find the Healthy Weight range for the client's height.
 - Example: 5' 8" = 138-164 pounds
- Male clients should be in the mid to upper part of the Healthy Weight range for a BMI of 23-25.
 - Example: 151-164 pounds
- Female clients should be in the mid to lower part of the Healthy Weight range for a BMI of 21-23.
 - Example: 138-151 pounds
- For the client's weight to truly be healthy, it needs to be composed of mostly lean body mass (muscles, bones, organs, and connective tissues), and of less fat.
- Example: Male WHtR < 0.48, Female WHtR < 0.45 or Male %BF = 10-20%, Female %BF = 15-25%

Height		Body Mass Index																	
		Underweight		Healthy Weight					Overweight				Obese - Class 1			2	3		
Ft	In	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	40
6	4	156	164	172	180	189	197	205	213	221	230	238	246	254	262	270	278	287	328
6	3	152	160	168	176	184	192	200	208	216	224	232	240	248	256	264	272	279	319
6	2	148	155	163	171	179	186	194	202	210	218	225	233	241	249	256	264	272	311
6	1	144	151	159	166	174	182	189	197	204	212	219	227	235	242	250	258	265	302
6	0	140	147	154	162	169	177	184	191	199	206	213	221	228	235	242	250	258	294
5	11	136	143	150	157	165	172	179	186	193	200	208	215	222	229	236	243	250	286
5	10	132	139	146	153	160	167	174	181	188	195	202	207	216	222	229	236	243	278
5	9	128	135	142	149	155	162	169	176	182	189	196	203	209	216	223	230	236	270
5	8	125	131	138	144	151	158	164	171	177	184	190	197	203	210	217	223	230	262
5	7	121	127	134	140	146	153	159	166	172	178	185	191	198	204	211	218	223	255
5	6	118	124	130	136	142	148	155	161	167	173	179	186	192	198	204	210	216	247
5	5	114	120	126	132	138	144	150	156	162	168	174	180	186	192	198	204	210	240
5	4	110	116	122	128	134	140	145	151	157	163	169	174	180	186	192	197	204	232
5	3	107	113	118	124	130	135	141	146	152	158	163	169	175	180	186	191	197	225
5	2	104	109	115	120	126	131	136	142	147	153	158	164	169	175	180	186	191	218
5	1	100	106	111	116	122	127	132	137	143	148	153	158	164	169	174	180	185	211
5	0	97	102	107	112	118	123	128	133	138	143	148	153	158	163	168	174	179	204
4	11	94	99	104	109	114	119	124	128	133	138	143	148	153	158	163	168	173	198
4	10	91	96	100	105	110	115	119	124	129	134	138	143	148	153	158	162	167	191
Ft	In	Weight in Pounds																	

3. Weight Loss Formula's

If your client has been validated as being in the Overweight or Obese category, it is very helpful to spend a little extra time with him/her to explain their situation in more detail and explain their options, because although their fat weight puts them at increased risk for chronic disease, obesity and its related health risks are reversible using clinically proven therapeutic lifestyle therapies that are safe and effective. Most people can lose 0.5 to 1.0 pound per week (2-4 pounds per month) by implementing a simple and gradual nutrition and exercise program that meets their needs and preferences and keeps the weight off.

Use the BMI Chart above and your client's anthropometrics to answer the questions below:

1. For your client's Height and Gender, how much should he/she weigh to have a healthy BMI?

Goal Weight = _____ pounds

2. How many pounds over their Goal Weight does your client currently weigh?

Current Weight - Goal Weight = Excess Fat Weight: _____ pounds

3. Divide the number of pounds that your client is over their Goal Weight by 2, 3, or 4 (pounds per month to be lost), depending on their motivation level to lose their excess fat weight.

Excess Fat Weight
----- = **Duration of Weight Loss Program: _____ months**
Weight Loss Rate
(2,3, or 4 pounds/month)

4. If your client started his/her weight loss (fitness) program this month, when would they achieve their goal weight (Month/Year)?

Goal Weight: _____ pounds

Weight Loss Rate: - ___ pounds/month

Goal Date = ____/____

Instead of setting a huge, never-before-achieved goal for your client, such as: "You need to lose 50 pounds and then keep it off!" Most people can visualize a reasonable health and fitness program in which they make enough simple (and permanent) lifestyle changes to lose 4 pounds per month for 12 months, and then naturally (almost effortlessly) keep the weight off, because they will have personally developed a healthy lifestyle involving proper nutrition and regular exercise for themselves!