

MEASURING BODY FAT COMPOSITION

What are we doing?

- › We are measuring percentage of body fat using bioelectrical impedance.
- › When holding the machine, it sends a small electrical pulse through the participant's body to measure water content.
- › Everything in our bodies has some water content, with the exception of fat.
- › Based on the electrical pulse reading, the machine then does a calculation using height, weight and age to give us a body fat percentage calculation.



Materials

- 1 Body composition machine
- 2 5 lb. models
- 3 Health Edco fitness display board
- 4 Reference and participant handouts
- 5 Soda bottle and sugar displays (if appropriate)
- 6 Faux food models
- 7 “Remember this is only a screening” stand
- 8 Pens
- 9 Alcohol wipe (to sanitize after each use)



Together, all the way.®



Instructions

- 1 Please refer to your instructions manual as it may vary depending on body composition machine model.
- 2 Ask female participants if they are pregnant.
- 3 Ask participant if they have a pacemaker (if they do have one, just let them know it is not recommended by Omron, the body composition machine's maker, that they do this screening).
- 4 Hit the Start button.
- 5 Reading will come back in percentage of body fat and BMI (Body Mass Index). Write the percentage down.
- 6 Fill out the screening form.
- 7 Show participant where they fall in the ranges.
- 8 Give them the form.
- 9 Write down the result on a tally sheet for yourself. Separate male and female – if client wants an aggregate result we can provide that to them.
- 10 Wipe off the machine using an alcohol wipe to sanitize for the next participant.

UNDERSTANDING BODY FAT AND BODY MASS INDEX

BODY COMPOSITION

Body fat percentage
Displays the body fat mass as percentage of body weight.

Body Mass Index (BMI)
BMI is an internationally used index to show the body condition by checking the balance between the height and weight. It is calculated with the following formula:
BMI = (weight (lbs.) x 703) / height (in.) x height (in.)

Recommended Body Fat Ranges and BMI:

	Women (% fat)	Men (% fat)	BMI Value	BMI Category
Essential Fat	10 - 13%	2 - 5%	< 18.5	Underweight
Athletes	14 - 20%	6 - 13%	18.5 - 24.9	Healthy
Fitness	21 - 24%	14 - 17%	25 - 29.9	Overweight
Acceptable	25 - 31%	18 - 24%	> 30	Obese
Obese	32% plus	25% plus		

Your Results
Date _____
Body Fat % _____
BMI _____

This body fat screening is only an educational tool and is not a substitute for a physical examination performed by a physician.

Together, all the way. 

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Notes

- Write the results on the handout – never say it out loud. Remind them that a combination of exercise, nutrition and hydration are the key to a healthy weight.
- Refer them to their doctor for additional information.
- Use an alcohol wipe between each person to clean off the machine and prevent the spread of germs.

FAQs – Body fat analyzer, body fat percentage and BMI

How to take an accurate measurement

- Be sensitive when asking personal information, position yourself in a location that is semi-private, and speak softly so that others cannot overhear your conversation.
- Make sure the Cigna Free Body Fat Analysis disclaimer is posted in a highly visible area.
- Enter the participant's data (height, weight, age, gender).
- Have the participant stand up straight, grip the sensors with both hands – thumbs on the front part – ensuring that the participant's palms fully cover the electrodes (squeezing is not necessary).
- Have the participant hold the analyzer straight out in front of them, with their arms at a 90 degree angle to their body.
- Ensure that participants remain still while the analyzer is reading.
- Those with pacemakers and pregnant women should not use this device.

Error displays (for more detail – refer to the instructional manual)

- E1 = Electrodes were not firmly grasped
- E2 = Measurement posture or grip was not stable
- E3 = Hands are too dry
- E4 = The values of body fat percentage and BMI are outside the measurable range
- E5/E6 = Abnormal operation



Q: What is “body fat percentage”?

A: Body fat percentage refers to the amount of body fat mass in regards to the total body weight described in a percentage. Fat-free mass includes: bones, blood, muscles, water and organs.

Q: What is “body composition”?

A: Your total weight is a combination of bones, ligaments, tendons, organs, fluids, muscle and fat. “Body composition” is the relationship between all of the lean tissue in the body vs. fat. During an individual’s wellness and fitness journey, it is important to understand the personal relationship of lean mass to fat mass, not just total weight. Muscle takes up less space than fat and is more dense. Therefore, as an individual builds muscle mass and burns fat, a slight increase or no change in total weight may occur.

Q: What is BMI?

A: BMI stands for “Body Mass Index.” BMI uses an equation to compare an individual’s height against his/her weight. BMI does not take into account the type of weight (i.e., lean muscle weight vs. fat weight). Therefore, BMI and body fat percentage are used together to obtain an overall picture of an individual’s body composition.

Q: How does this device determine/calculate body fat percentage?

A: This device uses a method called “bioelectrical impedance.” The body fat analyzer sends an extremely weak electrical current through the body to determine the amount of fat tissue. Muscles, blood vessels and bones are body tissues with high water content that conduct electricity easily. Body fat has very little water content and is a poor conductor of electricity. Individuals with pacemakers and pregnant women should avoid using this device.

Q: What can affect my body fat percentage reading?

A: 1) Water and food intake – if the participant has eaten or consumed fluids within 1-2 hours of the reading, the results can be off by a few percentage points.

2) Changes in blood circulation – after taking a bath/shower, immediately after exercising, in extreme environments (warm or cold), during illness or extreme fatigue.

3) Change in posture (during measurement) – moving from an upright standing position to lying down can skew an accurate reading.

Q: What if a participant has a high body fat percentage but a low BMI? What does that mean?

A: If an individual has a normal BMI (<25) – that means that according to the BMI chart, his/her weight is in the normal/healthy range for his/her height. However, if the corresponding body fat percentage is high – that indicates that the individual has a low amount of lean muscle and a high amount of body fat. This individual should consider consulting with a doctor to work on decreasing body fat and increasing lean muscle mass.

Q: What if a participant has a very low body fat percentage but a high BMI? What does that mean?

A: One of the drawbacks of BMI is that it does not differentiate between lean muscle weight and fat weight. Therefore, both BMI and body fat percentage are needed to gain a full understanding of body composition. In rare cases, an athlete or very active individual may have a low body fat percentage, but a high BMI. This means that the individual has very little body fat compared to muscle mass, which is good. In a situation like this, the individual should not be too concerned with the BMI reading, since the body fat percentage reading was good.

For instance, if you analyzed a body builder or professional football player, his body fat percentage would be very low, but his weight would be high (the high weight attributed to the large amount of lean muscle mass). His BMI may categorize him as “obese,” but his body fat percentage indicates that he is in excellent shape. That is why it is important to consider both readings.

