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The Link Between Obesity and Cancer



Obesity is on the rise, putting many Americans at risk of serious health conditions, including type 2 diabetes, heart disease, high blood pressure, stroke, and cancer. According to the CDC, 1 in 3 adults in the U.S. are obese, having an excessive accumulation of fat in their bodies. What's more, a 2016 study showed that, compared with other countries, the U.S. had the highest rates of colorectal, pancreatic, and postmenopausal breast cancers attributable to being overweight or obese. Unfortunately, people with disabilities have an *increased* risk of becoming obese due to various reasons, including lack of mobility, medication side effects, and mental health issues. If you have a disability and are overweight or obese, your cancer risk may be higher than it is for other people. It's why it's important that you understand how obesity affects your health and take preventative measures to reduce complications due to being overweight. In this resource we will explore the link between obesity and cancer, as well as provide you with helpful tips on how to manage your weight to reduce your cancer risk.

What is Obesity?

When a person is **overweight**, it means he or she has more body weight than is considered normal or healthy for his or her age or build. But when a person is diagnosed with the condition of **obesity**, that means he or she carries an **excess amount of body fat** with a **BMI of over 30**. An adult's weight category is determined using the **Body Mass Index (BMI)**, which measures the ratio of weight to height. This number correlates with the amount of body fat in adults.

$$\text{Body Mass Index (BMI)} = \frac{\text{Weight (kg)}}{\text{Height}^2 \text{ (m}^2\text{)}}$$

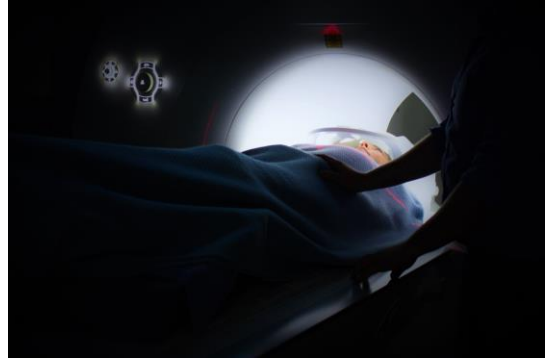
BMI in kg/m ²	Weight Category
Below 18.5	Underweight
18.5 to 24.9	Normal
25.0 to 29.9	Overweight
30.0 to 39.9	Obese
40.0 or higher	Severely obese

The Centers for Disease Control and Prevention (CDC), however, make mention that in people with disabilities, BMI may not be the best measurement for calculating fat. For example, BMI may underestimate the amount of fat in a person with a spinal cord injury, as he or she may have less lean muscle mass than a walking adult. Some researchers and doctors prefer measuring a person's waist, neck, or other regions of the body where excess fat may build up.

In **children**, obesity is defined slightly differently. Your child's physician will consider his or her sex and age, and then record weight and growth on a growth chart. The CDC defines overweightness as a BMI at or above the 85th percentile and lower than the 95th percentile. Obesity is defined as having a BMI at or above the 95th percentile.

What is known about the relationship between obesity and cancer?

According to the [National Institutes of Health](#), there is consistent evidence that higher amounts of body fat are associated with increased risks of many cancers,ⁱ including:



- **Endometrial cancer:** Obese and overweight women are about 2-4 times as likely as normal-weight women to develop endometrial cancer (cancer of the lining of the uterus), and extremely obese women are about 7 times as likely to develop the more common of the two main types of this cancer.ⁱⁱ The risk of endometrial cancer increases with increasing weight gain in adulthood, particularly among women who have never used menopausal hormone therapy.ⁱⁱⁱ
- **Esophageal adenocarcinoma:** People who are overweight or obese are about twice as likely as normal-weight people to develop a type of esophageal cancer called esophageal adenocarcinoma, and people who are extremely obese are more than four times as likely.^{iv}
- **Gastric cardia cancer:** People who are obese are nearly twice as likely as normal-weight people to develop cancer in the upper part of the stomach, that is, the part that is closest to the esophagus.^v
- **Liver cancer:** People who are overweight or obese are up to twice as likely as normal-weight people to develop liver cancer. The association between overweight/obesity and liver cancer is stronger in men than women.^{vi,vii}

- **Kidney cancer:** People who are overweight or obese are nearly twice as likely as normal-weight people to develop renal cell cancer, the most common form of kidney cancer.^{viii} The association of renal cell cancer with obesity is independent of its association with high blood pressure, a known risk factor for kidney cancer.^{ix}
- **Multiple myeloma:** Compared with normal-weight individuals, overweight and obese individuals have a slight (10% to 20%) increase in the risk of developing multiple myeloma.^x
- **Meningioma:** The risk of this slow-growing brain tumor that arises in the membranes surrounding the brain and the spinal cord is increased by about 50% in people who are obese and about 20% in people who are overweight.^{xi}
- **Pancreatic cancer:** People who are overweight or obese are about 1.5 times as likely to develop pancreatic cancer as normal-weight people.^{xii}
- **Colorectal cancer:** People who are obese are slightly (about 30%) more likely to develop colorectal cancer than normal-weight people.^{xiii} A higher BMI is associated with increased risks of colon and rectal cancers in both men and in women, but the increases are higher in men than in women.
- **Gallbladder cancer:** Compared with normal-weight people, people who are overweight have a slight (about 20%) increase in risk of gallbladder cancer, and people who are obese have a 60% increase in risk of gallbladder cancer.^{xiv,xv} The risk increase is greater in women than men.



- **Breast cancer:** Many studies have shown that, in postmenopausal women, a higher BMI is associated with a modest increase in risk of breast cancer. For example, a 5-unit increase in BMI is associated with a 12% increase in risk.^{xvi} Among postmenopausal



women, those who are obese have a 20% to 40% increase in risk of developing breast cancer compared with normal-weight women.^{xvii} The higher risks are seen mainly in women who have never used menopausal hormone therapy and for tumors that express hormone receptors. Obesity is also a risk factor for breast cancer in men.^{xviii}

Ways to Keep a Healthy Weight

If you are overweight or obese, it's important you begin taking steps that will help you lose weight and, in turn, improve your overall wellbeing and reduce your cancer risk. Below are five general steps you can take in formulating and executing a food and exercise regimen that meets your health needs.

1. **Talk to your physician.** It is important that you speak with your physician on how you can keep a healthy weight based on your specific health needs. There is not a single diet or exercise regimen that works for everyone. Your physician may also encourage you to see a nutritionist, physical therapist, and/or counselor depending on the severity of your weight and/or existing health conditions.



2. **Talk to your family and/or caregiver.** Because genetics play a role in weight and obesity, it's likely that someone in your household also struggles with keeping a healthy weight. What's more, caregivers of people with disabilities are also at risk of being overweight.

If you are not the one preparing meals or shopping for them, talk to your relative or caregiver about integrating healthier food habits at home. This includes shopping wisely for more nutritious food options, getting rid of junk food at home, and addressing meal times and eating frequency. In addition, if your health professional has recommended any exercises at home, your family and/or caregivers may need to know how they can help you accomplish these exercises — be it by helping you with stretches or by driving you to a local accessible gym, for example.

- 3. Talk to your school, and/or workplace.** If your child's weight is an issue, talk to the school administrators and teachers about the changes that need to take place in your child's diet and/or exercise regimen. Include healthy eating, nutrition, and physical exercise goals in your child's Individualized Education Plan (IEP). Make sure the teachers and school personnel know how they can include your child in any physical classroom activities or recess games.



If, however, you are the one who is overweight, after making healthier choices at home, make sure those choices follow you at work. Talk to your coworkers and ask if they can help keep you accountable. Perhaps one of them may want to join you in your weight-loss efforts! You can also try speaking with your HR department; some workplaces have worksite nutritional and physical activity programs that can help you stay motivated and informed as you work on losing weight.

- 4. Believe in yourself and find people who will support your progress.** You can do this! Keep a positive attitude. Remember, ultimately this about getting you healthier and improving your overall wellbeing. Also, don't try to do this alone. Having people who will support your progress and cheer you on is very important. If you don't receive adequate support at home or from friends, join a weight-loss support group online or in person, or join a support group for people with your disability or health condition.

5. **Think of this as a long-term effort, not a temporary solution.** Yes, you need to address your weight challenges now, but if you have a disabling condition, the risk of obesity will likely follow you. It's important that these diet and exercise changes become *lifestyle* changes that will accompany you through the ups and downs of disability and chronic illness. The unexpected may hit: you may require a surgery that leaves you bedridden for a long time, your health condition may worsen, a new prescription could lead to an



increase in appetite, or you could experience a season of depression that affects your weight. Though you may not be able to control your circumstances, creating new eating and exercise habits now will put you on a better path — so that when hardships come, you'll better address any potential weight challenges.

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P.O. Box 3333, Agoura Hills, CA 91376

www.joniandfriends.org

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