

# Free overweight and obesity essay example

[Health & Medicine](#), [Obesity](#)



## Introduction

Obesity and overweight have been classified as global and serious conditions that have an adverse effect on the human health. Obesity and overweight conditions are defined as excessive or abnormal accumulation of fat that may negatively affect health. In adults the obesity and overweight are measured by the body mass index (BMI), which is simple weight-for-height index (WHO, 2014). The BMI is computed by the ratio of the individual's body weight to the square of body height, indicated in Kg/m<sup>2</sup> (WHO, 2014).

According to W. H. O., (World Health Organisation), a BMI equal or above 25 is considered as overweight while a BMI exceeding or equal to 30kg is overweight. These conditions have emerged serious problem claiming over 3. 4 million lives of adults annually. The excessive accumulation of the body enhanced development of other disorders that involve type 2 diabetes, breathing problem, certain cancers, coronary heart disease, gallstones and high blood pressure (WHO, 2014).

There are various risk factors that have influenced the obesity and overweight. One of the major factors that expose me to the conditions includes the family background. My family lifestyle has genes that increase the chance of being obese and overweight. The genetics do affect not only the storage and distribution of food, but also the body converts food nutrients into energy and how calories are burnt in the body. In addition, I am resistant to the physical activities that are supposed to help me burn the calories in the body. The Sedentary lifestyle facilitates the taking of more calories in every day than the calories burnt through normal activities and exercise. As a result, the inactive lifestyle enhances the energy imbalance.

Although various factors determine how calories are burnt in the body each day, the dominant factors are the amount of activities an individual has undertaken. Another risk factor includes the social factor enhanced by the peer pressure, which influence consumption of unhealthy foods such as junks and snacks. Consequently, this leads to exposure to unhealthy eating and diet habits. This includes consumption of foods that have high calories contents and lack of vegetables and fruits. The main challenge for the obesity and overweight as explained by this paper is the excessive intake of carbohydrates.

## **Mechanisms**

Carbohydrates are the main type of nutrients and needed in large amounts by the body. The body requires carbohydrate between 45 to 65% of calories. According to DRI, carbohydrates are frequently criticized for contributing to weight gain. However, carbohydrates are required for body to function well therefore; it should be part in every diet. The key role of carbohydrates includes providing energy in the body for proper working muscles.

Carbohydrates, therefore, becomes an accelerating fuel for the central nervous system that enables fat metabolism as well as preventing conversation of protein into energy. Carbohydrate is the ideal basis of fuel the muscle contraction or energy and the biologic work. For proper function of cells and tissues, they require carbs that are essential to waste elimination and intestinal health.

## **Metabolism of carbohydrates**

Carbohydrate metabolism digestion starts in the small intestine where absorption of monosaccharides occurs into the blood stream through intestinal epithelium. There are three hormones that control blood sugar concentrations. The hormones include glucagon, insulin, and epinephrine. When the absorption of glucose in the blood is high, secretion of insulin by the pancreas occurs. The stimulation of insulin in the body transfer glucose into the cells, particularly in the muscles and liver. In addition, other bodies organs are capable of metabolize glucose. In the muscles and liver, most of the glucose is changed into glycogen in a process called glycogen. Glycogen is stored in the liver and muscles until when the body require it later when the levels of glucose lowers. When blood glucose levels lower, then glucagon and epinephrine hormones are secreted to arouse the change of glycogen to glucose. This process is called glycogenolysis, also referred as catabolism. Glucagon is a hormone that ignites the liver to release stored glucose.

## **Mechanisms of absorption**

### **Mechanism of active transport**

In the intestinal cells of the cell membrane, free carrier protein is found, and it is known as sodium-dependent glucose transporter. The carrier transports glucose to inside the cell using energy. The energy is obtained from sodium-potassium pump. The transporter has two distinct sites, one for glucose and the other for sodium. Sodium-dependent glucose transports glucose and sodium sites from the intestinal lumen through cell membrane to the cytoplasm. Afterwards, both glucose and sodium are released into the

cytoplasm letting the carrier come back for more transport of glucose and sodium.

## **How Carbohydrate can lead to overweight and obesity**

Carbohydrate can influence the metabolic process, thereby increasing risk factors of obesity and overweight. High carbohydrates foods stimulate satiety in the short term. It is noted that excess energy in any form increase and promotes body fat accumulation. If energy expenditure is not increased in the body, excess consumption of high-fat products will lead to obesity. Energy from dietary fats rather than carbohydrates causes liver damage and heart disease. Most of seldom exhaust stored glycogen goes into ketosis.

## **Solutions and Recommendations**

According to Dietary Reference Intake (DRI), a minimum of 130 g or 520 kcal is recommended on a daily basis. For athletes, 250g or 1000 kcal must be taken in a day. In every 24 hours, an athlete should take 6-10g of carbohydrate per kg of body weight. The DRI guideline indicates that an average of 358 g of carbs is still okay for the body. The target intake for whole grains and refined grains is 4½ ounces each. Averagely, 5 ounces(s) is acceptable for the body.

## **Foods that are good sources of the nutrient include Whole-Wheat Pasta, Whole-Wheat Bread, and oatmeal.**

### **Whole-Wheat Pasta**

The Whole-wheat Pasta is versatile and delicious. Whole-Wheat offers more fiber thus acts as a better source of carbohydrates. An intake of whole grains, especially three servings in a day, lowers BMI and abdominal fat. The

recommended intake of the nutrient is 2 ounces dry: 198 calories, 43g carbs, and 5g fiber. Most importantly, the portions of the noodle must be kept at 100-200 calories (1/2 to 1 cup cooked).

## **Whole-Wheat Bread**

An intake of 2 slices is helpful for the body. A 100% whole wheat bread contains 160 calories, 30 grams carbs, and 8g fiber. A slice of the bread contains 1g of sugar, and this is recommendable.

## **Oatmeal**

50% of fiber contained in oatmeal is soluble. It can liquefy into a gel-like substance, increasing the satiety factor since it delays stomach emptying. Additional of soluble fiber to the diet lessens visceral fats that cause metabolic disorders, diabetes, and cardiovascular disease. For Oatmeal, ½ cup dry is recommended for the body, and it contains 153 calories, 27g carbs, and 4g fiber.

According to DRI, grains are the major sources of carbohydrates, and their serving sizes are listed. The intake of grains must include a half of whole grains, i. e., whole-wheat flour, whole cornmeal, brown rice or oatmeal. 1 ounce is either got from a slice of bread, 1½ cup of cooked pasta, rice or cereal or even a cup of ready to eat cereal.

The specific changes that can be used to reduce obesity are addressed. Reduce the amount of calories intake help people to reduce weight. For instance, if an adult targets losing 1-2 pounds in a week, he or she must reduce the intake of calories by 500 to 1000 in a day. Women reduce weight if their calorie intake ranges from 1, 000 to 1, 200. On the other hand, men

are recommended to take 1200 to 1600 calories daily to lose weight comfortably.

A healthy eating plan is instrumental in reducing the high prevalence rates of obesity. It ensures that the body acquires the right amount of nutrients on a daily basis. It guides a person to take the right amount of calories. A good plan contains low levels of saturated fats, Trans fat, sodium, cholesterol and sugar.

## **Conclusion**

Obesity and overweight are a serious problem that requires not only prevention measure but also mitigation measures. The consumption of an average 5 ounces of carbs will be appropriate to mitigate and control the overweight and obesity. This is enough nutrients to help avoid excess accumulation of fat. Other important consumption will include whole-wheat of 2 ounces that contain 198 calories, 43 grams, and 5g fiber. Consumption of dietary fiber is important to help reduce weight because it produces modest insulin that helps to reduce excessive eating behavior. In addition, it is important to engage consistently to physical activities to enhance the burning of calories in the body. It is also important to avoid fast food and other unhealthy foods to help me mitigate the problem of obesity and overweight and prevent such conditions in the future.

## **References**

Hou, X., Jia, W., Bao, Y., Lu, H., Jiang, S., Zuo, Y., . . . Xiang, K. (2008). Risk factors for overweight and obesity, and changes in body mass index of Chinese adults in Shanghai. BMC Public Health. doi: 10. 1186/1471-2458-8-

389

Otten, J. J., Hellwig, J. P., & Meyers, L. D. (2006). Dietary Reference Intakes: The Essential Guide to Nutrient Requirements. Institute of Medicine of the National Academies.

WHO. (2014, August). WHO | Obesity and overweight. Retrieved from <http://www.who.int/mediacentre/factsheets/fs311/en/>

Wood, W. A. (1982). Carbohydrate metabolism: Pt. D. New York, NY: Academic Press.