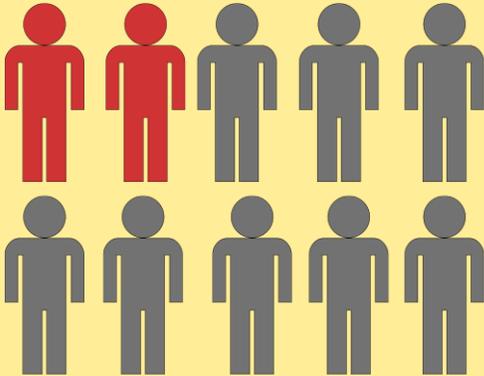


ADOLESCENT OBESITY



2 IN 10 ADOLESCENTS AGED 12-19 SUFFER FROM OBESITY

EARLY OBESITY INCREASES THE RISK OF DEVELOPING CHRONIC DISEASES SUCH AS:

- Heart Disease
- Type 2 Diabetes
- Hypertension
- Cancer

FOODS THAT PROMOTE OBESITY

- Saturated Fats
- Cholesterol
- Sodium & Sugar

AVOID!



AIM FOR 60 MINUTES OF PHYSICAL ACTIVITY A DAY

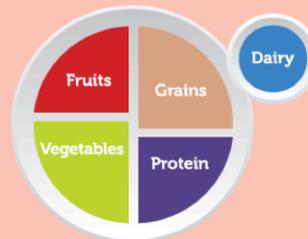
-WALK, RUN, BIKE, SWIM-

INCLUDING MORE PLANT BASED FOODS CAN REDUCE DIETARY CHOLESTEROL LEVELS BY 15-30%

REDUCING SUGAR INTAKE AND INCREASING FIBER CAN PROMOTE HEALTHY BLOOD SUGAR AND REDUCE RISK FOR TYPE 2 DIABETES

AIM TO INCLUDE THESE SERVINGS EVERYDAY

- 1.5 CUPS FRUIT
- 2 CUPS VEGETABLES
- 5 OZ PROTEIN
- 5 OZ WHOLE GRAINS
- 3 CUPS DAIRY



References

1. Lowering cholesterol with a plant-based diet. Physicians Committee for Responsible Medicine Web site. <https://www.pcrm.org/good-nutrition/nutrition-information/lowering-cholesterol-with-a-plant-based-diet>. Accessed APRIL 9, 2021.

Cholesterol is produced by the liver and is responsible for several metabolic processes such as building cell membranes and hormone production. The body naturally produces cholesterol, however it may also be consumed through animal foods such as dairy, meat and eggs. When cholesterol levels are too high, above 150 mg/dL, it can be detrimental for health and increase risk of chronic disease. Consuming a plant-based diet or including more plant-based food regularly can promote healthy cholesterol levels by 15-30% by reducing the amount of excess consumed through food.

2. Mary L. Gavin, M D. Fiber. Teen Health by Nemours Web site. [https://kidshealth.org/en/teens/fiber.html#:~:text=Teen%20girls%20\(14-18%20years,%2C%20and%20whole%2Dgrain%20foods](https://kidshealth.org/en/teens/fiber.html#:~:text=Teen%20girls%20(14-18%20years,%2C%20and%20whole%2Dgrain%20foods). Accessed APRIL 9, 2021.

Fiber can be a confusing concept for children unless they understand what it actually is and where it comes from. Fiber is a substance that cannot be digested by the body, but promotes a healthy digestive system, stable blood sugar levels and lower cholesterol levels. Carbohydrate-rich plants such as fruits, vegetables, grains and legumes are all sources of dietary fiber that can be easily added to one's diet. There are two sources of fiber – soluble and insoluble – the former helps with blood sugar and cholesterol, the later with healthy bowel movements. It is recommended that teen girls ages 14-18 consume 25g of fiber per day and teen boys ages 14-18 consume 31g of fiber per day.

3. Emily Ventura M, Jaimie Davis P, RD, Courtney Byrd-Williams. Reduction in risk factors for type 2 diabetes mellitus in response to a low-sugar, high-fiber dietary intervention in overweight latino adolescents. *Arch Pediatr Adolesc Med.* 2009;163(4):320-327. doi:10.1001/archpediatrics.2009.11.

In the United States childhood obesity is being recognized as an epidemic as number continue to climb, with around 17% of all children suffering from obesity. This review discusses the multitude of factors that attribute to the progressing numbers, the risk factors involved and the prevention or control methods that may aid the population. Even with awareness of obesity rates, number continued to rise from measurements taken in 1999-2000 to 2015-2016. Adolescents ages 12-19 years have the highest rate of obesity at 20.6%, meaning 2 out 10 children in this age range are obese, and it is predicted that 80% of obese adolescents ages 10-14 will remain obese in adulthood. This continued state puts them at a great risk for developing both physical and physiological comorbidities such as hypertension, hyperlipidemia, diabetes, poor self-esteem, depression, heart disease, digestive diseases and cancer. To prevent and control the spread of childhood obesity the main methods involve education of both

children and parents of proper nutritional requirements and awareness of appropriate portion sizes both for meals at and outside the home.

4. Adekunle Sanyaolu, PhD,¹ Chuku Okorie, MBBS, MPH,² Xiaohua Qi, MD, PhD,³ Jennifer Locke, MD,³ and Saif Rehman, MD³. Childhood and adolescent obesity in the united states: A public health concern. *Glob Pediatr Health*. 2019;6. doi: 10.1177/2333794X19891305.

A study of 54 overweight Latino adolescents partook in an intervention of sugar reduction and fiber increase to measure metabolic changes related to type 2 Diabetes Mellitus risk. The randomized control trial consisted of a 16-week study with 3 groups: control, nutrition and nutrition plus strength training. The mean decrease in sugar intake was 47g/day and mean fiber increase was 5g/day; the lower sugar intakes showed a strong relationship with improved glucose levels ($p=.049$) while those with higher fiber intakes had improvements in BMI ($p=.01$) and visceral adipose tissue ($p=.03$). Results from the intervention concluded that both sugar reduction and fiber increase showed improvements for key risk factors of type 2 diabetes.

5. MyPlate plan: 1600 calories, age 14+. <https://www.myplate.gov/myplate-plan/results/1600-calories-ages-14-plus>. Accessed APRIL 9, 2021.

After entering Jane's age, height, weight and activity level her MyPlate recommendations were to consume 1600 calories per day. To fulfill these 1600 calories she should have 1.5 cups of fruit, 2 cups of vegetables, 3 cups of dairy and 5 ounces each protein and whole grains daily.