

MIND YOUR DIET

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Abstract

Obesity is growing concern for whole world. Childhood obesity is increasing rapidly in India due to various lifestyle changes after industrialization and urbanization. By knowing its complications we are still very slow to tackle. With all other measures Diet planning is a major aspect where our focus should be to prevent obesity in adolescents and children. A well planned plant based diet is proved to be effective to serve this purpose.

Keywords: Obesity, Urbanization, Plant based diet, Adolescents

Introduction

Obesity is a disease with excessive body fat. children who are medically obese usually are affected by their behavior, genetic and environmental factors that are very difficult to control just with dieting. Obesity increases the chances of certain diseases and other related health issues.¹

Obesity is a major worldwide problem which affects one in four americans even in India obesity is growing rapidly and around 3 crore Indians are obese and it is predicted to double its numbers in coming 5 years. An individual with Body Mass Index of 25 to 29.9 is classified as overweight whereas individual termed as obese when his BMI is above 30.¹

Even Indian children are suffering with under nutrition, the first national nutrition survey of children and adolescents reveal a growing threat of non-communicable diseases such as Hypertension, diabetes, and chronic kidney disease, with many children having primary signs of these diseases.²

According to the government's Comprehensive National Nutrition Survey released on October 8, In children between 5 years to 9 years, nearly one in 10 were pre-diabetic and 1% were already diabetic. In children between 5 years to 19 years, 5% were overweight, the survey found.²

Once an obese child completes the age of 6 years, there is more than 50% probability that obesity will remain which is of biggest concern is that 70–80% of obese adolescents will stay obese as adults. The Harvard Growth Study has revealed that being overweight during the adolescent age group predicts adult morbidity from several chronic life threatening diseases and mortality from all causes regardless of adult body weight ^{3,4}.

Plant based diet and obesity

Several studies have been conducted on Effect of diet in promoting or preventing the chances of obesity, different researchers have made various conclusions according to the findings of their studies. Epidemiologic studies have frequently revealed that compared to non vegetarians, vegetarians are thinner ⁵

As per the 1994–1996 Continuing Survey of Food Intakes by Individuals, In the United States vegetarians have a mean BMI of 22.1 as compared with nonvegetarians who have a mean BMI of 25. ⁶

According to the meta-analysis in 2001 of 36 studies in women and 24 studies in men using references from Messina and Messina's publication "The dietician's guide to vegetarian diets" ⁷. Boys and girls showed no significant difference in height between vegetarians and non vegetarians (men: $P = 0.48$; women: $P = 0.46$); however, vegetarians had significantly lower weight (-7.7 kg for men and -3.3 kg for women; $P < 0.0001$ and $P = 0.007$, respectively) and a 2-point lower BMI ⁸.

According to Adventist studies and European studies ^{11,12} data, it was observed that clear inverse association between BMI and the prevalence of obesity among vegetarians and nonvegetarians. In each of these studies, meat eaters on average have 1- to 2-point higher BMI values than vegetarians. ³

What is Plant based diet? (PBD)

A plant-based diet is one that concentrate on plants, such as vegetables, fruits, grains , tubers , legumes, and seeds. People on PBD's avoid all type of meat products and dairy, or eat them only in limited quantities. ⁹

There is no fixed rule for what to eat in plant based diet. Several varieties are followed according to the preferences of people.

- Vegetarian- Diet contains various levels of fruits, vegetables, grains, pulses, nuts and seeds.
- Vegan- This Diet is the strictest form of vegetarianism, diet not only excludes animal flesh, but also dairy, eggs and animal-derived ingredients
- Fruitarian- Diet mostly consists of eating raw fruits.
- Flexitarian- This diet is mostly vegetarian but sometimes include meat or fish,
- Pescatarian- In this diet person eats fish and shell fish but not meat
- Engine 2 – It is a vegan diet but it cuts out vegetable oils and prescribes only whole, plant foods
- Mediterranean diet- A diet low in red meat, sugar and saturated fat and high in produce, nuts and other healthful foods ⁹

Many use plant based diet to reduce obesity or some even use it as routine which prevent obesity if used in a planned manner. Meat contains saturated fatty acids and high density of calories, avoiding meat may be beneficial to weight management. 3 Different people follow different form of vegetarian diet according to its availability and its therapeutic benefits.

Other Health benefits of Plant based diet

- May reduce the risk of cancer

Some research findings reveal that vegetarian diet may be helpful in prevention of cancer like breast, colon, stomach, rectum ¹⁰

- May help to stabilize blood glucose levels

Several studies have showed that vegetarian diet may help to maintain normal sugar levels. In long term it also has the benefit of preventing diabetes. In a study 2918 people switched from non vegetarian diet to vegetarian diet, over a period of five years 53% of people showed the signs of reduced risk of diabetes ¹⁰

- Helps to promote heart health

Several studies have revealed that vegetarian diet will help to reduce the levels of triglycerides, total cholesterol and bad LDL cholesterol thus reducing the risk of heart diseases.¹⁰

Foods to eat in PBD

Vegetarian diet should include various types of fruits, grains, vegetables, protein and healthy fats

- Fruits: Apples, bananas, berries, oranges, melons, pears, peaches
- Vegetables: Leafy greens, asparagus, broccoli, tomatoes, carrots
- Grains: Quinoa, barley, buckwheat, rice, oats
- Legumes: Lentils, beans, peas, chickpeas.
- Nuts: Almonds, walnuts, cashews, chestnuts
- Seeds: Flaxseeds, chia and hemp seeds
- Healthy fats: Coconut oil, olive oil, avocados
- Proteins: Tempeh, tofu, seitan, natto, nutritional yeast, spirulina, eggs, dairy products



Conclusion

Majority of people who follow vegetarian diet avoid meat, fish, poultry products and few even avoid eating eggs and other animal products. A well balanced vegetarian diet have many health benefits including weight management, heart health and even reduce risk of cancer. But if its poorly planned might lead to many nutritional deficiencies. Therefore consulting your diet advisors is very essential to reap the complete benefits of vegetarian diet.

References:

1. Prajwal Bhat. India has the second highest number of obese children in the world: Down to earth, 17 june 2017.
2. Swagata Yadavar. A government survey shows the extent of obesity among Indian children and adolescents: scroll.in; October8 2019
3. Joan Sabaté, Michelle Wien. Vegetarian diets and childhood obesity prevention: The American journal of clinical nutrition. 17 March 2018; Volume 91, Issue 5, May 2010, Pages 1525S–1529S.
4. Must A, JacquesPF, Dallal GE,Bajema CJ,Dietz WH. Long-term morbidity and mortality of overweight adolescents. A follow-up of the Harward Growth Study of 1922 to 1935. N Engl J Med 1992;327:1350-5
5. Key TJ, Fraser GE, Thorogood M, et al. Mortality in Vegetarians and non-vegetarians: a collaborative analysis of 8300 deaths among 76000 men and women in five prospective studies. Public Health Nutr 1998;1:33-41.
6. Haddad EH, Tanzman JS. What do vegetarians in the United States eat? Am J Clin Nutr 2003;78:626S-32S
7. Messina M, Messina V. The dietician guide to vegetarian diets. Gaithersburg, MD: Aspen Publishers, 1996
8. Sabate J, Blix G. Vegetarian diets and obesity prevention. In: Sabate J ed. Vegetarian nutrition. Boca Raton, FL: CRC press, 2001:91-107
9. Malia Frey .What is Plant Based Diet ? Verywell Fit ; March 25, 2020

10. Rachael Link, MS, RD. The vegetarian diet: A Beginner's guide and meal plan. Healthline, October 17, 2018.

11. Appleby PN, Thorogood M, Mann JI, Key TJ. Low body mass index in non-meat eaters: the possible roles of animal fat, dietary fibre and alcohol. *Int J Obes Relat Metab Disord* 1998; 22:454-60.