## **ABSTRACT**

An active teenage male who is also vegetarian can have trouble getting enough calories and other nutrients into his diet to support an active lifestyle. Vegetarians in general have similar problems, often neglecting to include foods in their diet that are essential for proper nutrition. Teenage vegetarians face added problems, such as peer pressure, nonflexible families and the dreaded school cafeteria. However, I hypothesized that it is possible to combat these problems with a meal plan that is simple, nutritious and easy to prepare. In addition, information is provided on where to find many nutrients that are commonly lacking in a vegetarian diet. Healthy choices made early in life can affect one's lifelong eating habits, so being informed and making smart decisions now can lead to a healthy future.

## INTRODUCTION

Many teenage vegetarians find it difficult to eat a balanced and healthy diet. Vegetables and fruit are extremely important when it comes to nutrition, but one's diet cannot consist solely of these things. Variety and wise choices are essential if one wants to remain a vegetarian in a healthy way. Some people simply refuse to eat meat, but do not make adjustments in their diet to compensate for the lack of certain nutrients that can be found primarily in animal products. The food that most teenagers eat throughout the day is usually less than nutritious. Snack-foods such as chips, soda and candy are staples of the teenage diet, and obviously do not provide the body with much more than potentially harmful ingredients like sugar, salt and calories. Proper nutrition during this stage in life is very important because the body is still growing and needs nutrients for mental and physical development. Lifelong eating habits can also be established during the teenage years, so a knowledge of "what's good" and "what's bad" is important for a healthy future. It is commonly assumed that anyone can be a vegetarian. My hypothesis is that a meatless diet can be developed to fit an active teenager's nutritional needs.

## COMMON PROBLEMS FACED BY VEGETARIAN TEENS

Teenagers who choose to be vegetarian often have problems maintaining a meatless diet:

•Teens often rely on their parents for food, and many families are not willing to make a change in their eating habits for one member of the family.

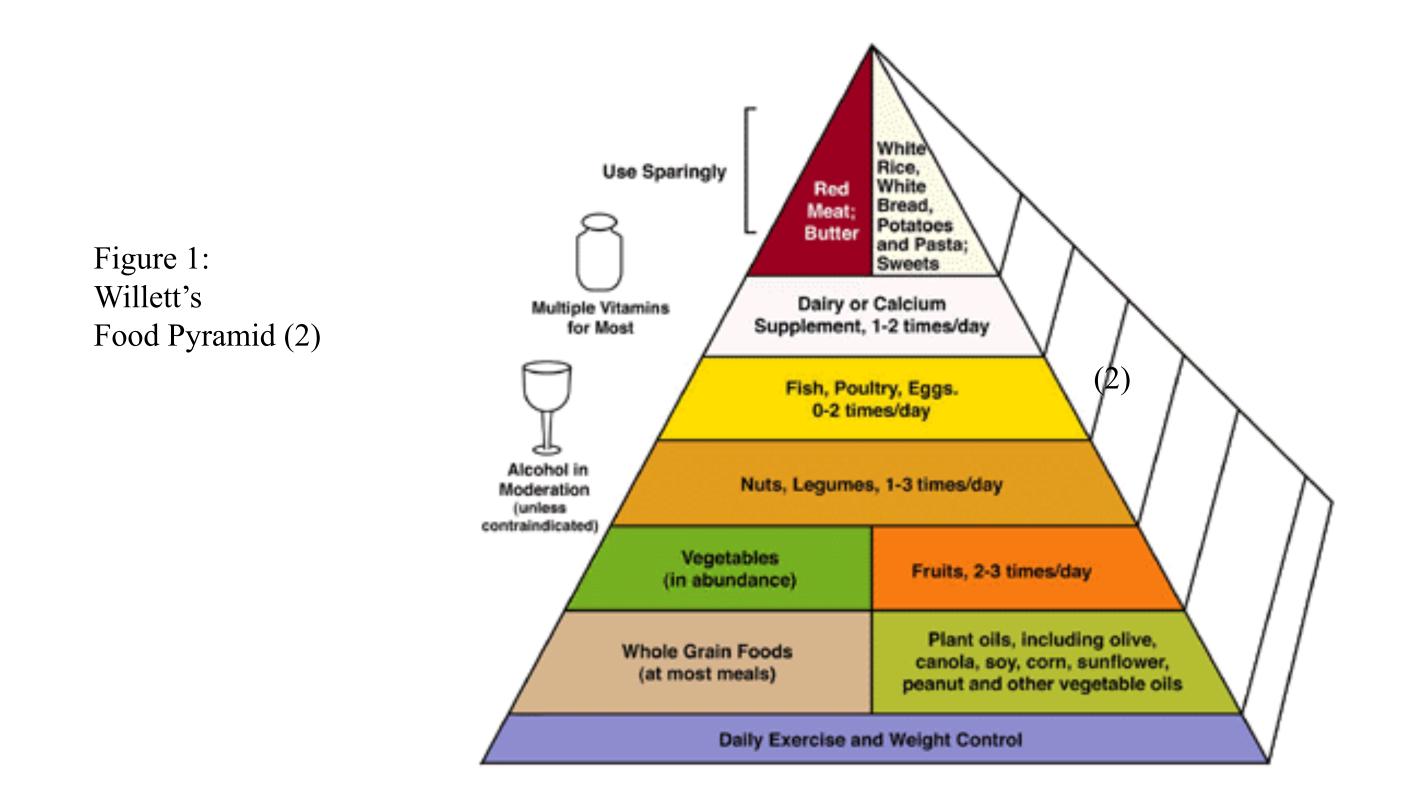
•School lunches can be an obstacle. Many of the options in a typical cafeteria contain meat, and many tend to be less than healthy. If salads are offered, they are most likely made of iceberg lettuce or some other low-quality unappetizing excuse for a vegetable.

•Peer pressure can be be an issue among groups of teenagers. If all pf your friends are eating chips, candy, and pizza rolls while chugging a soda, it can be harder to proudly unpack your pita bread in the school cafeteria.

Being a vegetarian takes determination, and some teens are greatly affected by peer pressure. This can mean a vegetarian meal consisting of cheetos and a coke. Hey, it's not meat!

## METHOD

There are many websites about vegetarian nutrition, but the information on each seems to be very similar. I used the Nutrition Navigator created by Tufts University (1) to choose sites that rated highly based on their evaluations of information accuracy and depth, user experience and last update. Walter Willett's revised food guide pyramid (2) also served as a basis for this research. The foods chosen show this emphasis on whole grains instead of processed or "white" grains and an abundance of vegetables. The USDA recommended daily values were also used to compare with the totals found for the "Skater Boy" diet.



# Vegetarian Skater Boy: A Meatless Diet for an Active Teenage Male

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# **RESULTS- THE SKATER BOY MEAL PLAN**

# BREAKFAST

Granola (1 cup) with 1 banana sliced on top, 1 Tbsp molasses and 1 cup 2% milk 1 1/2 cups Orange juice

# LUNCH

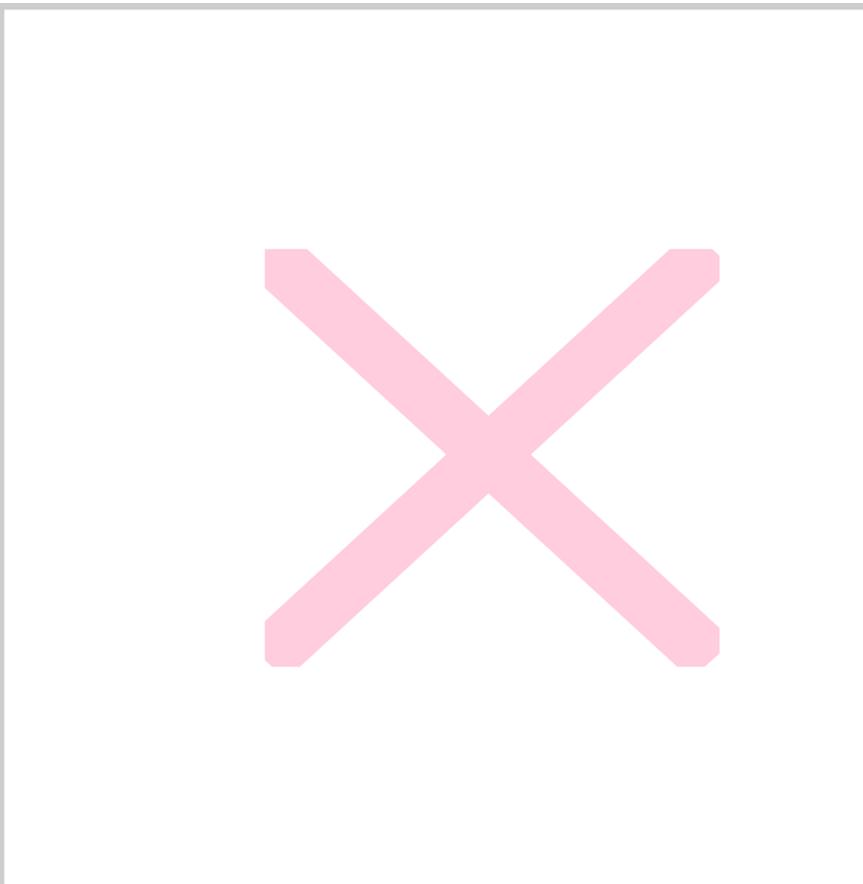
- 1 pita bread with 2 Tbsp hummus and 1 cup raw spinach
- 1 peach
- 1 cup plain yogurt 1 1/2 cups cranberry juice cocktail

## SNACK

1 Slice of whole wheat toast with 1 Tbsp peanut butter

## DINNER

One cup cooked wild rice with 1 cup black beans, 1/4 cup cheese and 1/2 cup cubed tofu Salad with spinach (1/2 cup), arugula (1/2 cup), romaine lettuce (1/2 cup), cherry tomatoes (1 cup), baby carrots (2), cucumber slices (1/2 cup), alfalfa sprouts (1/2 cup) with olive oil and balsamic vinegar dressing (1 Tbsp)



# COMPARING THE SKATER BOY DIET WITH THE USDA RECOMMENDATIONS

## USDA

(recommended DV) (3)

Total cal/cal from fat	2,000/ 600
Protein (g)	59
Fat (g)	65
Carbohydrates (g)	300
lron (mg)	10-18
Calcium (mg)	1300
B12 (mcg)	2.4

1 scrambled egg with 1/2 cup chopped tomato and 1/2 cup shredded mozzarella cheese, salt and pepper

## **Skater Boy Diet**

(based on meal plan above)

3,061/929

112

100

408

22

1732

4.15

## DISCUSSION

The foods in the meal plan were chosen for their **nutritional content**, **taste**, and in some cases, caloric value with an emphasis on choosing foods that were simple and convenient. One of the goals of this meal plan was to make sure the diet provides enough calories for an active boy with an active metabolism. Iron is also important during the teenage years when boys experience an increase in lean body mass(4). One hundred grams of fat may seem like a lot in one day, but an FDA site states that a diet for a teenage boy that includes about 3000 calories should include 100 grams of fat or less (5). Vegetarians often worry about finding effective sources for certain vitamins and minerals. Here is a list of elements that are often left out of a meatless diet and good places to find them. (6)

#### Calcium

Turnip greens (cooked, 1 cup) provides 197 mg (20% RDA) Orange juice-calcium fortified (8 ounces) provides 300 mg (30% RDA) Blackstrap molasses (1 cup) provides 2821 mg (282% RDA)

### Protein

granola (1 cup) provides 18.1g (38% RDA) hummus (1 cup) provides 12 g (24% RDA) peanut butter (1 cup) provides 62.1 g (124% RDA)

## Iron

Peanut butter (1 cup) provides 4.9 mg (27% RDA) Blackstrap molasses (I cup) provides 57.4 mg (319% RDA) 2 Tbsp provides 7.0 mg (38% RDA) Black beans (1 cup) provides 3.6 mg (20% RDA) Raisins (1 cup) provides 4.3 mg (24%)

### Vitamin B12

Vitamin B12 is used by the body for cell division and blood formation. Plant-based products do not contain vitamin B12 except when they are contaminated by microorganisms. People who previously ate meat may have B12 stored in their body that will not be depleted for 20-30 years. (7) This particular meal plan includes milk, but vegans should consider taking a B12 supplement.

Milk, 2% (1 cup) provides 1.1 mcg (19% RDA) Eggs (I cup) provides 1.7 mcg (28% RDA)

# CONCLUSION

Eating habits are established during childhood, so continuing to eat a variety of nutritious foods into the teenage years can lead to a lifetime of healthy eating. A vegetarian diet can work for anyone, even teens with additional dietary requirements and social pressures. A good method of ensuring a balanced diet is to remember to eat a variety of foods- if you find yourself eating only grains or only vegetables, you may need to expand your diet to include foods that will give you a more complete, nutritious diet. The teenage years (ages 13-19) are a time of dramatic growth and change (8), so being conscious of one's diet during this time is especially important in physical and mental development.

## SOURCES

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