Nutrition worksheet

A Teenager’s Nutritional Needs

Calories

A surge in appetite around the age of ten in girls and twelve in boys foreshadows the growth spurt of puberty. How much of a surge? Let's just say that Mom and Dad might want to oil the hinges on the refrigerator door and start stockpiling a small cache of their own favorite snacks underneath the bed.

Calories are the measurement used to express the energy delivered by food. The body demands more calories during early adolescence than at any other time of life.

- **Boys require an average of 2,800 calories per day.**
- **Girls require an average of 2,200 calories per day.**

Typically, the ravenous hunger starts to wane once a child has stopped growing, though not always. Kids who are big and tall or who participate in physical activity will still need increased amounts of energy into late adolescence. During middle and late adolescence, girls eat roughly 25% fewer calories per day than boys do; consequently, they are more likely to be deficient in vitamins and minerals.

Nutrients

The nutrients *protein*, *carbohydrates,* and *fats* in food serve as the body's energy sources.

- Each gram of protein and carbohydrate supplies 4 calories, or units of energy.
- Fat contributes more than twice as much: 9 calories per gram.

Protein

Of the three nutrients, we're least concerned about protein. Not because it isn't important—50% of our body weight is made up of protein—but because adolescents in the United States get twice as much protein as they need.

The densest sources of protein include teenage favorites such as:

- Beef
- Chicken
- Turkey

- Pork
- Fish
- Eggs
- Cheese

Carbohydrates

Carbohydrates, found in starches and sugars, get converted into the body's main fuel: the simple sugar glucose. Not all carbs are created equal, however. In planning meals, we want to push *complex-carbohydrate foods* and go easy on *simple carbohydrates*. Complex carbs provide sustained energy; that's why you often see marathon runners and other athletes downing big bowls of pasta before competing. As a bonus, many starches deliver fiber and assorted nutrients too. They are truly foods of substance: filling yet low in fat.

- Most nutritionists recommend that complex carbohydrates make up 50% to 60% of a teenager's caloric intake.
- Simple carbs, on the other hand, seduce us with their sweet taste and a brief burst of energy but have little else to offer and should be minimized in the diet.

Dietary Fat

Fat should make up no more than 30% of the diet. Fat supplies energy and assists the body in absorbing the **fat-soluble vitamins: A, D, E, and K**. But these benefits must be considered next to its many adverse effects on health. A teenager who indulges in a fat-heavy diet is going to put on weight, even if he's active. It would take a workout befitting an Olympic athlete to burn off excess fat calories day after day.

Fatty foods contain cholesterol, a waxy substance that can clog an artery and eventually cause it to harden. The danger of *atherosclerosis* is that the blockage will affect one of the blood vessels leading to the heart or the brain, setting off a heart attack or a stroke. Although these life-threatening events usually don't strike until later in adult life, the time to start practicing prevention is now, by reducing the amount of fat in your family's diet.

Dietary fat contains varying proportions of three types:

- **Monounsaturated fat** —the healthiest kind; found in olives and olive oil; peanuts, peanut oil and peanut butter; cashews; walnuts and walnut oil, and canola oil.
- **Polyunsaturated fat** —found in corn oil, safflower oil, sunflower oil, soybean oil, cottonseed oil, and sesame-seed oil.

- **Saturated fat** —is the most cholesterol laden of the three; found in meat and dairy products like beef, pork, lamb, butter, cheese, cream, egg yolks, coconut oil, and palm oil.

You want to limit your family's intake of saturated fat to no more than 10% of your total daily calories. The other 20% of daily calories from dietary fat should come equally from the two unsaturated kinds of fat, both of which are contained mainly in plant oils.

If your family eats a lot of packaged and processed foods: Make a habit of reading the food labels. You may be surprised to see how much fat, sugar, and salt (sodium), is in the foods you eat every day. And almost all packaged goods that contain fat are likely to have partially hydrogenated fat, because it has a longer shelf life.

Vitamins and Minerals

A well-rounded diet based on the USDA guidelines should deliver sufficient amounts of all the essential vitamins and minerals. Adolescents tend to most often fall short of their daily quotas of calcium, iron, zinc, and vitamin D.

Unless blood tests and a pediatrician's evaluation reveal a specific deficiency, it's preferable to obtain nutrients from food instead of from dietary supplements.

Fads and Diets

Teenaged opinions about food may be based on concern for the environment and our role in it, a humanitarian view of animal exploitation, or the relationship between diet and health. In many cases, such opinions are well thought out and deserve respect. At times, adolescents may be pardoned for focusing on food as a symbol of everything that’s wrong in their families.

Vegetarian Diets

Parents can safely ignore faddish notions about food as long as the teenager continues to eat a balanced diet. Vegetarian diets, which are appealing to many, are so widely accepted that few consider them faddish any more. Among adolescents, the most common reason for rejecting meat is the exploitation of animals.

Long-term vegetarians who maintain a proper nutritional balance have lower rates of several diseases associated with the typical Western high-fat, low-fiber diet. They are less likely to have high blood pressure and high cholesterol levels and have lower rates of some cancers, and their weight is usually closer to a healthy ideal than that of meat eaters. They may also have less constipation and other functional bowel complaints. However, eliminating animal products from an otherwise unhealthy diet will not provide the health advantages of vegetarianism.

More restricted diets increase the risk of nutritional deficiencies. Partial vegetarians usually have no difficulty getting a good balance of nutrients. They should take care, however, that complex carbohydrates make up the bulk of their diet. Some rely too much on dairy products and end up with a diet that's too high in fats and calories. All vegetarians should learn how to combine 2 or more foods, like beans and corn, to ensure that they get essential amino acids, the building blocks of protein.

Vitamin Supplements

Those who keep to a strict vegan diet must find alternative sources of vitamin D, important for healthy bones, and vitamin B12, which is needed in all cells but especially for healthy blood. Humans can get some vitamin D from sunlight but cannot absorb the B12 that occurs in small amounts in a few plant foods. Vegans of all ages should consume soy milk or cereals fortified with B12. Without dairy foods, a vegan diet may also lack calcium. Your pediatrician or a qualified dietitian may recommendsupplements to ensure that your child receives adequate amounts of vitamins, calcium,iron, and zinc.

Weight Loss Diets

Any adolescent planning to go on a weight-loss diet should first talk with a pediatrician, who may recommend books on nutrition or provide a referral to a nutrition counselor. When it comes to adopting a vegetarian diet, it's as much about what your teenager does eat as what he does not.

Protein for the Teen Athlete

Protein is essential for growth, energy, and tissue repair. Athletic performance depends on muscle strength, and muscles are made of protein. Although athletes who are involved in strength and endurance training may need slightly more protein, it's a mistake to think you can

simply build up muscles by eating lots of protein.Exercise, not dietary protein, increases muscle mass.

The amount of protein adolescents need varies at different stages of development. As a rule, boys and girls between ages 11 and 14 need half a gram per pound of body weight daily. Thus, a young teenager weighing 110 pounds needs about 50 g of protein a day. Between ages 15 and 18, the RDA drops slightly. As with all essential nutrients, common sense is the rule—you don't have to weigh every gram on a scale. Each gram of protein provides 4 calories—the same ascarbohydrates—and protein should make up about 10% to 12% of each day's calories. As a general rule, there are approximately 22 g of protein in 3 oz of meat, fish, or poultry. An 8-oz glass of milk contains about 8 g of protein. Therefore, an average teenager who is drinking 3 glasses of milk a day does not need enormous amounts of meat to meet his daily protein requirement.

The protein in foods of animal origin is termed complete or high-quality protein because it contains all the essential amino acids in about the proportions humans need. Vegetable proteins are called incomplete because, except for soybeans, they have low levels of one or more essential amino acids. You don't have to eat animal products to obtain high-quality protein, however.

People on vegetarian diets take care of their protein needs by pairing plant foods that balance each other's shortfalls. Pairing foods in this way is called protein complementation. Eating a grain and a legume does the trick; beans and tortillas, a peanut butter sandwich on wheat bread, and black-eyed peas and rice are good examples of protein complementation. You can also compensate for any lack in a plant-based food by adding a small amount of animal-derived protein, such as in pasta with cheese or cereal with milk.

Protein and Calorie Content of Foods Most Teenagers Like to Eat

Food (portion size)	Protein Content (g)	Calorie Average

Bagel (1 medium)	7	200
Bread, whole wheat, 1 slice	3	60-65
Cheese, processed, American (1 oz)	6	105
Cheeseburger (4-oz meat patty)	30	525
Lean meat, fish, or poultry	22	180/120/140
Milk, reduced-fat (2%). low-fat (1%), or nonfat (skim) milk	8	120/100/85
Peanut butter (1 tablespoon)	5	95
Pizza, cheese (1 slice)	15	290
Taco	9	195
Yogurt, low-fat, coffee or vanilla (8 oz)	8	195

1. Boys need _____ calories a day.
2. Girls need _____ calories a day.

3. What type of fat is healthiest and where can it be found?

4. Why is cholesterol bad for you?

5. What are complex carbohydrates used for and what activities would require you to eat a lot of them?

6. Your diet should consist of _____% fats and _____ % carbohydrates.What influences our decisions about food?

7. What are some pro's and con's of vegetarian diets?

8. How can a vegetarian get protein in their diet without eating meat? Give examples

9. What are some benefits of taking vitamin supplements?

10. Why are vitamin D and B12 important?

11. Why is protein important?

12. Calculate how much protein you need each day based on the formula given above.

13. Protein should make up ____% of your calories each day.

14. What is the difference between animal and vegetable protein?

Source: https://www.healthychildren.org/English/ages-stages/teen/nutrition/Pages/default.aspx