Kentucky 4-H Health Project

EATING

Did you know a taco contains something from each food group?
The Food Guide Pyramid

An easy way to get the nutrients we need every day is to follow the Food Guide Pyramid. This pyramid divides our food into five groups. While a variety of foods are important to our diet, we need more of some foods than we do others. This point is illustrated by the shape of the Pyramid. The group at the base (breads and cereals) represents a strong foundation upon which to begin building our diet. As you work your way up to the top you will notice that the recommended number of servings from each group decreases. This is because different foods provide different concentrations of protein, fat, carbohydrate, vitamins and minerals. The higher you go up the Pyramid, the fewer number of servings you need from each group.

We can meet all of our basic nutrient needs without ever eating foods from the tip of the Pyramid. That is because this group contains primarily high fat and/or high sugar foods that provide few or in some cases no nutrients. These are empty-calorie foods. This group’s primary function is to provide extra calories to meet higher energy requirements. Examples of foods from this group are chips, fries, candy, soft drinks, margarine, bacon, gravy and many rich desserts.

The combined servings from the “low end of the recommended range” will supply a teen with about 1500 calories. More calories may be added by eating more servings from the food groups and adding small amounts of food from the fats/ sweets group. Study the individual groups in the Food Guide Pyramid to learn about your needs.

Source: U.S. Department of Agriculture/US. Department of Health and Human Services
Sound familiar? Like somebody's mom or dad? Well, maybe it is time to start making your own food choices. But do you really know enough about nutrition to make the right choices? Do you know which foods you need to help you feel good and have enough energy?

Decide right now that you are going to learn enough in this project to be responsible for your own diet—for getting the foods you need to keep your body healthy and fit.

Studies show that teens as a whole have several nutritional problems: diets deficient in vitamin A, vitamin C, calcium and iron; diets with too few or too many calories; meal skipping; and snacking on empty-calorie foods.

In this project you will learn:
- Your basic nutritional needs.
- How to be in control of your weight.
- Good nutrition for those who participate in vigorous physical activities.
- How to get good nutrition from fast foods.

**You Are What You Eat**

In this section we will review your basic nutritional needs; when you complete the section you should be able to:
1. Name the food groups and the number of servings you require from each.
2. Name some foods from each group and what is considered a portion size.
3. Determine the vitamins and minerals you need in your diet.
4. Plan a balanced diet.
5. Determine the extra nutritional requirements for women during pregnancy.
The Basic Food Groups

Bread & Cereal Group
- This group supplies fiber, carbohydrates, thiamin, niacin and iron. The carbohydrates are especially important in helping us meet our energy needs.
- It consists of breads, cereals, pastas and other grain foods.
- Teens need six to eleven servings daily.
- A serving is equal to:
  1 slice bread
  1 ounce ready-to-eat cereal
  1/2 to 3/4 cup cooked cereal, pasta or grits

Vegetable & Fruit Group
- This group consists of all fruits and vegetables.
- It supplies vitamins A and C and fiber.
- Teens need five or more servings daily. Dark green, leafy, or deep yellow vegetables and fruits are recommended three or four times weekly for vitamin A. At least one vitamin C source should be included in your daily diet. Sources of vitamin C include citrus fruits, strawberries, melons, cabbage, green pepper, broccoli and potatoes.
- A serving from this group is equal to:
  1/2 cup cooked fruits and vegetables
  1/2 cup citrus juice or other juice enriched with vitamin C
  1 medium potato
  1 grapefruit
  1 orange
  1 apple
**Dairy Group**
- The dairy group consists of milk-based products such as milk and cheese.
- It supplies calcium, riboflavin and vitamins A and D.
- **Teens need four servings** from this group daily. You should choose low-fat dairy products when possible. An example would be to select ice milk or low-fat frozen yogurt instead of ice cream.
- A serving is equal to:
  - 1 cup milk or yogurt
  - 1 1/2 slices (1 1/2 ounces) cheddar or Swiss cheese
  - 1 1/2 cups ice cream or ice milk
  - 2 cups cottage cheese

**Meat, Poultry, Fish, & Beans Group**
- This group consists of meat, fish, poultry, eggs, dried beans and peanut butter.
- It supplies protein, niacin, thiamin and iron.
- **Teens need two to three servings daily.**
- A serving is equal to:
  - 2 to 3 ounces cooked, lean meat, poultry, or fish.
  - 2 eggs
  - 1 cup cooked dried beans or peas
  - 4 tablespoons peanut butter

**Activity**
For one week, keep a record of all the foods you eat including meals and snacks. Then look at your record. Did you include foods from all groups in the Food Guide Pyramid in your daily intake? If not, which food groups were lacking? What changes can you make to improve your diet? Select some specific improvements you can make. Keep a record of all the food you eat the next week and compare this to the improvement you wanted to make. Check your progress periodically. Changing eating habits requires continuous effort.
The Key Nutrients

All foods contain substances called nutrients. Various nutrients have different functions in your body, but the major functions of nutrients are for:

- growth and repair of body cells,
- regulation of body processes and energy.

You need 40 or more different nutrients in your diet. Exactly how much of each nutrient depends on your age, size, sex, activity and state of health.

Six classes of nutrients are referred to as key nutrients. These are proteins, carbohydrates, fats, minerals, vitamins and ‘water.

Protein

You require protein in your diet for:

- building body cells,
- maintaining and repairing body tissues,
- making hemoglobin, a substance that carries oxygen in your blood,
- forming antibodies to fight infection.

Proteins are made up of smaller units called amino acids. You need nine amino acids. Foods that supply all essential amino acids are called complete proteins. Generally, complete proteins are from foods of animal origin - meat, fish, poultry, eggs and milk.

Proteins from cereals, beans and nuts do not provide all nine amino acids. The protein from plant foods can be made complete by combining them with food from animal sources or other plants that provide complementary proteins. For this to work, the complementary sources must be eaten at the same meal. Grains such as corn or rice can be combined with legumes (beans and peas) to yield a complete protein (all nine amino acids) value. Other ways to complement your proteins are to serve legumes with seeds such as sunflower or pumpkin or to combine seeds with grains.

Carbohydrates

You obtain carbohydrates in three forms: starches, sugars and fiber.

Starches and sugars are the major sources of energy for your body. Starches are found in many kinds of plants, especially grain foods. These grain foods include wheat, corn, rice, oats, rye and barley. Starches are also found in potatoes, sweet potatoes, beans and peas. Sugar is found in cane and beet sugar, syrup, molasses, honey and fruits.

Fiber furnishes bulk in your diet, which helps your intestines to work well. Fiber is found in fruits, vegetables and whole grain breads and cereals.

Fats

Fats are concentrated sources of energy. They give you more than twice as much energy per gram as proteins or carbohydrates. Fat also adds flavor and is needed in your diet:

- for energy,
- to carry fat-soluble vitamins,
- to make up cell structure,
- to form a protective cushion around vital organs,
- for satiety (to make you feel full),
- to supply linoleic acid, an essential fatty acid.

Fats are available from both animal and vegetable sources. You may see fats identified as saturated or polyunsaturated. Saturated fats are usually hard at room temperature. Examples of these include lard, butter, stick margarine, shortening and the fat in and around meat. In excess, saturated fats promote high blood cholesterol (a fat-like substance found only in animal products). Since our bodies need only moderate amounts of cholesterol, it is wise to keep the amount of fat and cholesterol in your diet at a moderate level. To do this, choose lean meat, poultry and fish as your protein sources. Limit your intake of eggs and organ meats. Remember to trim excess fat from meats, and broil, bake or boil instead of frying. When choosing fats, choose polyunsaturated fats instead of saturated fats.
Polyunsaturated fats are in oils from soybeans, corn, sunflower, and safflower, salad dressings from polyunsaturated oils, and special margarine made from oils. Most other fat sources can be considered saturated fats.

Minerals

Minerals are inorganic substances needed in small amounts for life processes. Your body requires many minerals. Two that are most commonly lacking in the diet of teens are calcium and iron.

**Calcium.** Calcium is largely responsible for the hardness of bones and teeth. It is also needed by your body for the proper functioning of the heart, muscles, nerves, and blood. If your diet doesn't supply enough calcium, your body draws calcium from your bones causing them to weaken.

Teens require extra calcium due to growth spurts. You can get calcium from milk and milk products (cheese, ice cream, yogurt), certain leafy green vegetables (collards, kale, mustard greens, turnip greens, broccoli), sardines and canned salmon if you eat the bones.

**Iron.** You need iron to form hemoglobin in your blood. Hemoglobin is the substance that carries oxygen from the lungs to body cells and removes carbon dioxide from the cells.

Teenage girls, due to menstruation and faulty diets, are often lacking in iron.

Foods you should eat for lots of iron include lean meats, organ meats such as liver, heart and kidney, clams, dry beans, dry peas, dark green vegetables, dried fruit, eggs, and molasses. Whole-grain and enriched bread and cereals contain smaller amounts of iron.

Vitamins

Vitamins are important in your body processes. They:
- take part in release of energy from foods,
- promote normal growth of tissue,
- help nerves and muscles function properly.

Vitamins are divided into two groups: fat soluble and water soluble. Fat soluble vitamins are stored in the body, so if you take in too many of these vitamins, you can develop vitamin toxicity. Fat soluble vitamins are A, D, E and K. Other vitamins are water soluble. They are not stored in the body, so those that your body does not use are secreted in body wastes.

Two vitamins commonly lacking in the diets of teens are vitamins A and C.

**Vitamin A.** Vitamin A is needed for normal growth and for normal vision. It also helps keep your skin and the inner linings of your body healthy. Vitamin A is found only in animal foods; however, many fruits and vegetables, especially green and yellow ones, contain a substance called Beta carotene that your body can convert to vitamin A.

Liver is an excellent source of vitamin A. Other good sources include butter, margarine, whole milk, and whole milk cheese. Beta carotene is found in dark green and deep yellow vegetables and deep yellow fruits, including greens, broccoli, carrots, pumpkins, apricots, and sweet potatoes.

You are not likely to get too much vitamin A from your diet; however, it is possible for you to develop vitamin A toxicity from taking vitamin A supplements over a period of time. Check with your doctor before taking such supplements for acne or other skin problems.

**Vitamin C (Ascorbic Acid).** Vitamin C has several jobs in your body. These include:
- holding body cells together,
- strengthening walls of blood vessels,
- healing wounds,
- forming teeth and bones,
- preventing illness and infection.

If your diet is low in vitamin C, you might develop gums that bleed easily, joints that swell and hurt, weak muscles, internal bleeding, and defects in your bones.

Since vitamin C is a water-soluble vitamin, you must take it in every day. Citrus fruits and fresh strawberries are rich in vitamin C. Other good sources include tomatoes, broccoli, brussels sprouts, cabbage, cantaloupe, cauliflower, green peppers, some dark-green leafy vegetables, potatoes, sweet potatoes (cooked with jackets on) and melons.
Water

Water is essential for life. Your body’s need for water is greater than its need for food. About 65% of your body’s weight is water, and it loses 2 to 2 1/2 liters of water per day. These losses are through the kidneys as urine, the lungs as vapor, and the skin as perspiration.

You can replace lost water by drinking plenty of fluids. Do this by drinking a total of six to eight glasses of water and other fluids every day.

Activity: Identifying the Key Nutrients
1. Write down every food you ate yesterday. Beside each food, write what key nutrients are found in it. Identify any nutrients lacking in your diet and set goals to improve this area of your nutrition.
2. Plan a balanced diet for three days for you and your family. Have your leader look at your plan. Then talk to your family about helping prepare the foods on the menu.

Nutrition During Pregnancy—A Special Note for Girls

Early teen pregnancy is risky for both mother and infant. While physically mature enough to have a baby, a teen hasn’t completed her development. Because of this, infants born to young teens have a higher mortality rate and are more likely to be smaller and less healthy babies. But it is never too early to prepare your body for having a baby. Even if you don’t expect to have children for years, it is important to take care of your body now. You are more likely to have a healthy baby if your body is physically mature enough for pregnancy and if you eat a good diet before and during pregnancy.

Here are some points to remember about eating right and pregnancy.

- The unborn baby gets nutrients from the mother’s food and from her body. If you get enough nutrients before pregnancy, you are more likely to have a good supply during pregnancy.

- The use of alcohol and drugs during pregnancy affects the development of the baby. Babies born to mothers addicted to drugs or alcohol are born addicted and suffer withdrawal discomforts for several weeks. Drugs, even aspirin, should be taken only under doctor’s orders.
- Pregnant teens need extra nutrients for their own development as well as that of their babies. For example, pregnant teens require four or more servings of milk. They also require other extra nutrients during pregnancy. Pregnant teens should eat the recommended number of servings from the food guide and a variety of foods in each group. The doctor may prescribe a vitamin/mineral supplement.
- An average weight gain varies from person to person. The doctor will advise on weight gain.
- Some women seem to have food cravings during pregnancy. Or they may crave nonfood items such as starch or clay. Eating nonfood items may be harmful, and a craving such as this should be discussed with the doctor.
- Cigarette smoking during pregnancy may lead to a low birth-weight baby, making it more difficult for the baby to survive. Women should not smoke during pregnancy.
- It is important for pregnant women to see a doctor regularly during pregnancy and follow the doctor’s advice. They are more likely to have a healthy baby and feel good if they eat properly and otherwise take care of themselves.
Weight Control

For various reasons, many people want or need to limit their weight. You may be one of that group. If so, you should realize that you are not alone. You should also realize that a permanent change in your eating habits is necessary if you want to lose (or gain) weight. Changing eating habits is a difficult task. It requires us to look closely at ourselves. Our friends, our family, and our lifestyle all influence the way we eat.

In this section you will learn the need for maintaining the proper weight. You will also learn how to be in control of your weight.

Upon completion of this section, you will be able to:
1. Give several reasons why people are overweight or underweight.
2. Give an average weight range for your age, sex, and height.
3. Describe the diet changes needed for you to gain or lose weight.
4. Explain behavioral changes needed for you to gain or lose weight.
5. Describe the symptoms to look for in anorexia nervosa.
6. Name several problems with diet aids or supplements.

Your Ideal Weight

In our culture today, few of us are satisfied with our weight. Unfortunately, our concern is often for our appearance and not for overall health. Before you decide to gain or lose weight, you should have a health assessment to determine if you really need to change your weight. Often, the weight of young teens varies greatly due to growth spurts. A doctor can determine if you should have a special diet to gain or lose weight. Weight charts, such as the one that follows, can help you see if your weight fits into the normal range of weights for your age, height, and sex.

Activity: Determining A Desirable Weight Range

To determine a desirable weight range for your height, use the chart provided or a similar chart. Remember that your age and body frame are important in determining average weight. Small-framed people need less weight than those with larger frames. Growing cycles also make weight vary before a normal weight is attained. If you have a serious weight problem, check with your doctor on a realistic weight range.

Gaining Weight

If you need to gain weight and are in good physical condition, there are several ways to increase your weight:
- Eat regular meals, making sure you take in the necessary nutrients.
- Increase your food intake at each meal. (For example: have an extra piece of bread with butter or margarine or a second helping of other foods served.)
- If you have a small appetite, add smaller amounts of high-calorie foods instead of larger amounts of low-calorie foods. (For example: increase calories without adding to the size of portions by putting whole milk instead of skim milk on cereals and in pudding.
Add butter or margarine to cooked vegetables. Cover toast with peanut butter, honey, or jam.

- Eat some high-calorie foods such as cake, pie, candy, nuts, and pastries in addition to your regular meals, but not in place of them.
- Eat between-meal snacks to increase your caloric intake. Pizzas, milkshakes, hamburgers, buttered popcorn, and sandwiches are all good snacks for you if you want to gain weight. However, these snacks should not interfere with your regular meals.
- If you are frequently fatigued, cut down on your regular activity.
- A calorie counter is a useful tool for you in calculating caloric intake. You can buy these in a drug store or book store. If a food is thick, oily, greasy-crisp, gooey, sweet, sticky, or concentrated, it is usually high in calories.
- For every 3,500 calories you consume above your energy needs, you can add about one pound of body fat. So, if you need to gain weight, you first should know how much you need to gain. Then plan meals and snacks to include foods you enjoy eating and which may help you gain weight.

Review your progress and record your weight weekly. If you are not reaching your goal, review your diet and make changes to improve your progress.

**Activity: Testing The Fat Content of Foods**

As mentioned above, thick, oily, greasy type foods are extremely high in calories due to their fat content.  
1) Test various foods for fat content by rubbing them on brown paper. Fatty foods will leave a permanent brown spot. Other foods (such as apples, celery) will leave a wet spot which will dry.  
2) To show that a food gives off heat, hold it in a flame so it will burn. Foods with a high fat content will burn longer, showing that they provide more energy.

**Losing Weight**

If you decide you need to lose weight, these suggestions should help you achieve your goal:

- Lower your caloric food intake, but continue to follow the Basic Food Groups. Review a food calorie chart and select foods lower in calories. Compare the same food prepared different ways, such as a raw apple, baked apple and fried apples.
- Get plenty of exercise.
- Eat slowly and chew your food thoroughly.
- Eat fewer sweets, fatty and fried foods.

Since your body is still growing, you must not deprive yourself of the nutrients you need for development.

The only way for you to prevent the reoccurrence of being overweight (or underweight) is to make a permanent change. Diets which substitute a rigid, often highly abnormal pattern of eating cause you to make only a temporary change in behavior.

**Tips for Changing Eating Behavior**

1. Regulate your eating times: eat three meals, with two snacks (if desired), and no nibbling at other times.
2. Choose snacks that are filling but low in calories.
3. Regulate your food buying. Don’t buy high-calorie and empty-calorie foods (empty-calorie foods are those that are high in calories and low in nutrients, e.g., candy, pies, chips).
4. Be aware of when you are eating. Always eat while seated at the table using a plate and silverware. Avoid distractions such as television. This makes you more aware of what and how much you eat.
5. Eat slowly.
6. Leave something on your plate.
7. Make specific plans for a weight-loss program. If you need to lose weight, how much do you need to lose? List specific plans for changing your eating behavior.
8. Keep a weekly record of your progress. If you are not reaching your goal, review your plan. What do you need to change?
9. Be persistent and once you’ve reached your goal, make a plan for maintaining your ideal weight. Be specific about exercise plans and eating habits.

**Activity: Recognizing High-Calorie and Low-Calorie Foods**

If you want to lose weight, it’s important for you to recognize high-calorie and low-calorie foods. Place many different pictures of food on a large table. Choose foods that you think would be appropriate for a weight-loss diet for one day. Using a calorie counter, calculate the number of calories in the foods. See if the calorie count is correct for losing weight, and make sure the diet is balanced.

*Calorie charts are available from many sources. A sample of the kind of information you can find is shown on p. 11."
100-Calorie Portions

<table>
<thead>
<tr>
<th>Item</th>
<th>Calories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple, medium</td>
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</tr>
<tr>
<td>Apple juice</td>
<td>3/4 cup</td>
</tr>
<tr>
<td>Applesauce</td>
<td>1/2 cup</td>
</tr>
<tr>
<td>Asparagus</td>
<td>30 spears</td>
</tr>
<tr>
<td>Bacon</td>
<td>2 slices</td>
</tr>
<tr>
<td>Banana, small</td>
<td>1</td>
</tr>
<tr>
<td>Beans, baked</td>
<td>1/3 cup</td>
</tr>
<tr>
<td>Beef</td>
<td>1 thin slice</td>
</tr>
<tr>
<td>Biscuit, muffin, roll</td>
<td>1</td>
</tr>
<tr>
<td>Broccoli</td>
<td>2 cups chopped</td>
</tr>
<tr>
<td>Brownie, small</td>
<td>1</td>
</tr>
<tr>
<td>Brussels sprouts</td>
<td>1-1/2 cups</td>
</tr>
<tr>
<td>Butter</td>
<td>1T</td>
</tr>
<tr>
<td>Cabbage, cooked</td>
<td>2-1/2 cups</td>
</tr>
<tr>
<td>Coleslaw</td>
<td>3/4 cup</td>
</tr>
<tr>
<td>Cake, sponge</td>
<td>1 small slice</td>
</tr>
<tr>
<td>Cantaloupe</td>
<td>1/2 melon</td>
</tr>
<tr>
<td>Celery</td>
<td>6 cups</td>
</tr>
<tr>
<td>Cheese, American</td>
<td>1 oz.</td>
</tr>
<tr>
<td>Cottage</td>
<td>3/4 cup</td>
</tr>
<tr>
<td>Cream</td>
<td>1 oz.</td>
</tr>
<tr>
<td>Chicken (turkey)</td>
<td>1 thin slice</td>
</tr>
<tr>
<td>Cookies, plain</td>
<td>1</td>
</tr>
<tr>
<td>Corn, canned (creamed)</td>
<td>1/2 cup</td>
</tr>
<tr>
<td>Cob, large</td>
<td>1</td>
</tr>
<tr>
<td>Flakes</td>
<td>1-1/4 cups</td>
</tr>
<tr>
<td>Crackers, cheese or oyster</td>
<td>20</td>
</tr>
<tr>
<td>Saltpine</td>
<td>7</td>
</tr>
<tr>
<td>Cream, heavy, sour</td>
<td>2T</td>
</tr>
<tr>
<td>Dates</td>
<td>4</td>
</tr>
<tr>
<td>Doughnut</td>
<td>1/2</td>
</tr>
<tr>
<td>Eggs, raw or boiled</td>
<td>1-1/3</td>
</tr>
<tr>
<td>Frankfurter</td>
<td>1</td>
</tr>
<tr>
<td>Grapefruit</td>
<td>1</td>
</tr>
<tr>
<td>Griddle cakes</td>
<td>1-1/2</td>
</tr>
<tr>
<td>Hamburger, lean</td>
<td>1 very small</td>
</tr>
<tr>
<td>Ice cream</td>
<td>1/3 cup</td>
</tr>
<tr>
<td>Jams, jellies</td>
<td>2T</td>
</tr>
<tr>
<td>Lettuce</td>
<td>2 heads</td>
</tr>
<tr>
<td>Luncheon meat</td>
<td>1 slice</td>
</tr>
<tr>
<td>Macaroni, cooked</td>
<td>1/2-3/4 cup</td>
</tr>
<tr>
<td>Mayonnaise</td>
<td>1T</td>
</tr>
<tr>
<td>Milk, skim</td>
<td>1-1/4 cups</td>
</tr>
<tr>
<td>Whole</td>
<td>2/3 cup</td>
</tr>
<tr>
<td>Oil, vegetable</td>
<td>1T</td>
</tr>
<tr>
<td>Orange, fresh</td>
<td>1 large</td>
</tr>
<tr>
<td>Juice</td>
<td>1 cup</td>
</tr>
<tr>
<td>Peaches, fresh</td>
<td>2 medium</td>
</tr>
<tr>
<td>Peanuts, roasted</td>
<td>2T</td>
</tr>
<tr>
<td>Butter</td>
<td>1T</td>
</tr>
<tr>
<td>Pear, fresh</td>
<td>1 large</td>
</tr>
<tr>
<td>Peppers, green</td>
<td>5</td>
</tr>
<tr>
<td>Pickles, dill</td>
<td>6 large</td>
</tr>
<tr>
<td>Sweet</td>
<td>3 small</td>
</tr>
<tr>
<td>Pie, apple</td>
<td>1/3 slice</td>
</tr>
<tr>
<td>Pizza, cheese</td>
<td>3” section</td>
</tr>
<tr>
<td>Potato, boiled or baked</td>
<td>1 medium</td>
</tr>
<tr>
<td>Chips</td>
<td>8 large pieces</td>
</tr>
<tr>
<td>Radishes</td>
<td>75</td>
</tr>
<tr>
<td>Salad dressing, French</td>
<td>1-1/2 T</td>
</tr>
<tr>
<td>Soft drinks, carbonated</td>
<td>1 cup</td>
</tr>
<tr>
<td>Strawberries, fresh, no sugar</td>
<td>2 cups</td>
</tr>
<tr>
<td>Sugar cubes</td>
<td>4</td>
</tr>
<tr>
<td>Granular</td>
<td>6-1/2 tsp.</td>
</tr>
<tr>
<td>Tomatoes, fresh</td>
<td>3-5</td>
</tr>
<tr>
<td>Juice</td>
<td>2 cups</td>
</tr>
<tr>
<td>Watermelon</td>
<td>1 two-lb. wedge</td>
</tr>
</tbody>
</table>
Anorexia Nervosa

You probably have read newspaper or magazine articles about a disorder called anorexia nervosa. This can be a serious problem for teens, especially teen-age girls. It is a disorder involving self-imposed starvation. The most outstanding characteristic of anorexia nervosa is a severe weight loss with no signs of organic disease present.

A teen who develops anorexia nervosa usually begins a diet because she feels fat. As weight is lost, the fear of becoming fat again causes the teen to lose touch with reality and continue dieting, unable to realistically see herself as thin. This disorder can lead to serious health problems and even death, as the victim becomes dangerously underweight.

Bulimia is when a person may eat normally with friends or family, then right after the meal, go to the bathroom and induce vomiting. Characteristically, a bulimic may go on an eating binge, devouring huge quantities of food, and then, because of guilt feelings, induce vomiting. She may also use a lot of laxatives to lose weight quickly.

Teens with anorexia nervosa or bulimia usually don’t rely on dieting alone to lose weight. They also engage in frantic exercise programs to the point of exhaustion. They are usually excellent students in school.

If you suspect that you have (or a friend has) anorexia or bulimia, you (or the friend) should see a doctor. The treatment of these conditions is complex and involves both medical and psychological treatment along with dietary help.

Over-the-Counter Weight Loss Products

If you are interested in losing weight, you may have considered buying a product that is advertised as helpful in losing weight. You need to understand these products before you use one.

Liquid protein. The popularity of using liquid protein diets has grown in the past few years. You have probably seen a variety of diets that require liquid protein.

Liquid diets can be dangerous, even for healthy people. The Federal Drug Administration (FDA) has issued warnings about the safety of these diets. They are not recommended for teens and should be used only with the recommendation and close supervision of a medical doctor.

Before-meal candies. Before-meal candies are supposed to raise your blood sugar and make you feel full. Unfortunately, there is no conclusive evidence that these products will suppress appetite for a normal span of dieting. If you lose weight using these candies, it is due to lower calorie intake and exercise.

Most of the before-meal candies do have added vitamins and minerals; however, these are unnecessary if you are eating a well-balanced diet.

Starch blockers. Starch blockers are said to prevent your body from absorbing the calories in starchy foods. The effectiveness and safety of these products have not been established. They are currently banned by the FDA.

Appetite suppressant drugs. Amphetamines were the original drugs for weight loss available only by prescription. They do suppress the appetite and stimulate the user’s nervous system, however, over time they may lose their effectiveness as an appetite depressant. Other problems with amphetamines include drug dependence, high blood pressure, irregular heartbeat, and no permanent weight loss.

New suppressant preparations have more recently been developed. Most contain a drug called phenylpropanolamine, which is sold over the counter. The significant feature about appetite suppressants is that you may lose weight at first, but a change in eating patterns doesn’t develop and the weight you lose is usually regained after you quit taking the pills. With long-term use, you can develop a tolerance for the drug.

Appetite suppressants can also be dangerous to you if you suffer from any of certain medical problems. Any user should read the warning labels and contact a pregnancy care giver before trying these or any other over-the-counter drugs.
Nutrition for the Young Athlete

Exercise is more and more becoming a national pastime. People are beginning to realize the importance of exercise in a society where much of our time is spent sitting: we sit in school, sit at work, sit in front of the television, at home. Exercise—jogging, biking, swimming—is in. Good nutrition is especially important for those who participate in vigorous physical activities: (1) it helps us to achieve our maximum performance, and (2) it helps us to develop good eating habits for later life.

There is no perfect diet for those who are exercisers. In fact, if you are an athlete, your diet should be the same as for any normal individual except that you may need an increased caloric intake to provide you with energy for extra physical activity.

Everyone needs to eat a balanced diet. This includes servings from each of the basic food groups:

- Fruits and Vegetables ................. 5 or more servings daily
- Breads & Cereals............................. 6-11 servings daily
- Milk & Cheese............................. 2-4 servings daily
- Meat, Poultry, Fish & Beans.............. 2-3 servings daily

Upon completion of this section, you will be able to:

1. Describe the role of protein, carbohydrates, and fats in an athlete's diet.
2. Describe the need for vitamins and minerals in an athlete's diet.
3. Plan a pre-event meal for athletes.

Protein

As you learned earlier, proteins are used mainly for growth, maintenance, and repair of body tissues. Here are some facts you need to know about protein for athletes:

- Protein is a secondary source of energy. Athletic activity does not greatly increase your daily protein requirement.
- Excessive protein in your diet could hinder your athletic performance. Proteins, when broken down and used by the body, produce toxic waste by-products. These acids circulate in the body until filtered by the kidneys and excreted via the urine. An extremely high level of such waste products in circulation may contribute to early fatigue and diminish your athletic performance.
- Excessive protein foods for pre-event meals are not recommended. Protein foods are slow to digest and take four to six hours to work their way through the stomach to the upper bowel.
- Dairy products and meat, fish, poultry, eggs, and beans are protein foods.
Carbohydrates

Carbohydrates provide you with the quickest and most efficient source of energy for physical activity. Here are some guidelines for carbohydrates in the diet of athletes:

- Carbohydrates - the sugars and the starches - are found in foods such as cereals, pancakes, waffles, spaghetti, breads, and potatoes.
- Carbohydrates are easily broken down to glucose in your body and used for energy or they are converted to glycogen and stored for later use.
- Carbohydrate loading refers to a technique used by some distance runners to ensure ample supplies of glycogen or stored energy for their races. However, carbohydrate loading is not recommended for young people.

Fat

Fat is an essential part of a well-balanced diet, serving as a concentrated source of energy. Fat also carries fat-soluble vitamins. Stored fat insulates the body against cold and is a depository of energy.

- Like protein, fat takes longer to digest, and indigestion may occur if high-fat foods are eaten just prior to an athletic event.
- Fats are used as energy during prolonged exercise, whereas glucose (from carbohydrates) is used during the first few minutes of exercise.
- Fat is obtained from a variety of foods, including meat, milk products, vegetable oils and margarine.

Vitamins

Vitamins help regulate body functions. If you eat a well-balanced diet, a vitamin supplement will not enhance your athletic performance. If you take excessive amounts of the fat-soluble vitamins (A, D, E, & K), a toxic build-up can occur. You need vitamin supplements only if you are unable to eat a balanced diet, and then, only a daily multi-vitamin supplement with 100% or less of the Recommended Daily Allowance (RDA) is needed.

Minerals

Minerals that are especially important to you as an athlete are iron, sodium, and potassium.

- Iron is needed in your body for the oxygen-carrying capacity of your body's red blood cells. Iron stores can be depleted because of a heavy menstrual cycle. If you experience unusual fatigue, your doctor may prescribe a special iron supplement.

- Sodium and potassium are lost from the body through perspiration and urine. Your normal diet, or perhaps adding extra salt to your food, will usually supply a more than adequate intake of sodium and potassium. Only if you have extremely heavy workouts in hot and humid weather would you need additional sodium and potassium. You should not take salt pills. Excessive salt intake can be as serious as excessive loss through perspiration.

- Athletes need an adequate fluid intake. Dehydration from inadequate fluid replacement contributes to early fatigue, diminished performance, heat cramps, and heat illness. When you are engaged in vigorous exercise sessions, you need water before, during and after the session.

- Commercially prepared electrolyte drinks are not recommended because they have high sugar concentrations. The high sugar can contribute to dehydration and changes in your blood sugar level.

Pre-Event Meal

Here are some guidelines for a pre-event meal:

- Your meal should be eaten three to four hours before competition.
- The meal you eat should contain some high carbohydrate, but relatively low fiber foods such as pancakes, waffles, spaghetti; macaroni, potatoes, bread, etc.
- Include low-fat milk and milk products in the pre-event meal.
- Avoid foods and beverages containing high concentrations of sugar before and during competition. The high concentrations of sugar draw fluids to the digestive tract and away from your working muscles where you need them. This could contribute to dehydration. High sugar levels can also cause changes in your blood sugar level and result in early fatigue and weariness.

Activity: The Pre-Event Meal

Plan a meal that would be attractive and appropriate to serve before a basketball game. Write out the menu, the time of the meal and the time of the game. Discuss the menu with your leader and/or 4-H group. If possible, prepare the meal for yourself and other athletes.
A good-to-eat, good-for-you food.

Good Nutrition from Fast Foods

As a teen, you probably eat a lot of meals at fast-food restaurants. Sometimes your parents may bug you about eating too many fast-food meals. They are concerned that you won’t get the proper foods. But fast-food outlets can offer quick and tasty meals containing the essential nutrients if you plan your meals carefully. You need to learn to make proper choices when you eat at a fast-food restaurant.

Upon completion of this section, you will be able to:
1. Identify the major nutritional problems you need to consider when eating fast-food meals.
2. List ways to cut down on calories from fast foods.
3. Plan well-balanced meals from several fast-food restaurants.

The Problems with Fast Food

While many of us eat regularly at fast-food restaurants and enjoy nutritious meals, it is not a good idea to eat at these restaurants too often for two reasons.

Many fast foods tend to be high in calories. Preparation is usually done by frying, which adds a lot of extra fat and calories to foods. Many of the fried foods are coated with batter, adding even more calories. What might be a 100-calorie portion of fish could turn into a 300- or 400-calorie portion, due to batter frying.

Calories are also high in many of the deluxe type sandwiches. This is due to the extra sauces and bread often added to these sandwiches.

Another major problem of fast foods is the high salt content. Salt intake is a concern because of the relationship of a high sodium intake to high blood pressure. Many fast foods contain more salt in one portion than is needed for the whole day. High blood pressure is a major health problem that even teens need to be aware of and work at preventing.

Activity: Calorie Content of Various Fast Foods *

Rank the following foods in order from highest to lowest in calories. Check the calories on page 18 and see if you were correct. Which foods fooled you?

<table>
<thead>
<tr>
<th>Food</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long John Silvers Fish (2 pc)</td>
<td></td>
</tr>
<tr>
<td>Taco Bell - Beefy Tostada</td>
<td></td>
</tr>
<tr>
<td>Burger King Hamburger</td>
<td></td>
</tr>
<tr>
<td>McDonald's Big Mac</td>
<td></td>
</tr>
<tr>
<td>Pizza Hut thin crust pizza (2 slices standard pepperoni)</td>
<td></td>
</tr>
</tbody>
</table>

Ways to Cut Calories from Fast-Food Meals

If you do eat at fast-food restaurants, here are some ways to trim calories from your meals:

· Use mustard instead of relishes or ketchup (which contain sugar).
· Choose skim milk or 2% milk instead of a milkshake.
· Avoid super and deluxe burgers; these tend to be high in calories with little extra nutritional value.
· Beware of extra hidden calories such as those in batters or sauces.
· Save calories by choosing thin-crust pizza, rather than thick crust.
· Beware at the salad bar: salad dressing, bacon bits and croutons can add considerably to the caloric total of the salad.
· Avoid the calories of French fries and onion rings. Both are deep fried and tend to be extremely high in calories. If you must have some, order a small size and split it with a friend.
· Skip the desserts. Sundaes and turnovers are extremely high in calories. If you must have something sweet, order a single-scoop ice cream cone.

*The information given herein is supplied with the understanding that no discrimination is intended and no endorsement by Cooperative Extension is implied.
Activity
How could you change these fast-food meals to trim calories?

<table>
<thead>
<tr>
<th>McDonalds</th>
<th>Dairy Queen</th>
<th>Arby’s Roast Beef</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Mac</td>
<td>Big Braiser Deluxe</td>
<td>Arby’s Super Roast Beef</td>
</tr>
<tr>
<td>Large Fries</td>
<td>Onion Rings</td>
<td>Fried Potato Cake</td>
</tr>
<tr>
<td>Cherry Pie</td>
<td>Coca Cola</td>
<td>Salad</td>
</tr>
<tr>
<td>Vanilla Shake</td>
<td>Medium Chocolate Sundae</td>
<td>Chocolate Shake</td>
</tr>
</tbody>
</table>

Planning a Balanced Fast-Food Meal
If you’re within a normal weight range and are not concerned about calories, an occasional fast-food meal is not harmful. Just remember to choose a balanced meal based on the Food Guide Pyramid.

- Choose milk instead of a soft drink.
- Get lettuce, tomato, and other vegetables on your sandwich.
- Add lots of extra vegetables to pizza—green pepper, onion, mushrooms, etc.
- Take advantage of restaurants that offer salad bars and cooked vegetables.
- Add cheese to your sandwiches for extra calcium, vitamin A, and protein.
- Order your sandwich on whole wheat or rye bread and buns, when available.
Fast-food stores have changed the way we eat. They offer us quick and tasty family meals that can provide essential nutrients. If planned carefully. If you eat fast foods often, you may begin to put on weight because of the high-calorie content of these foods.

**What You Do:**

Using the Basic Food Groups, plan a nutritious but weight-conscious menu for two days for yourself, using only fast-food chains.

### Plan on Eating Out For Two Days

**Fast Food Menu**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Day 1</th>
<th>Day 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Write the names of three popular fast-food restaurants. Plan balanced meals based on what's available from each restaurant. Be sure each meal has a portion from the Basic Food Groups.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Demonstrations and Talks

Share what you have learned in this project with others through demonstrations, speeches and citizenship and leadership activities. Use these ideas and visit with your leader and agent for additional suggestions.

- Planning a Balanced Meal
- Nutrients and Their Importance in the Diet
- The Food Groups and the Importance of Each
- Nutritious Fast-food Meals
- Foods for Athletes
- Techniques for Gaining Weight
- Techniques for Losing Weight

Leadership Activities

- Plan a trip for your club or group to select a nutritious meal at a fast-food restaurant.
- Serve as a leader for a junior food-nutrition project group.
- Do a display or bulletin board at school on selecting nutritious fast-foods, food for athletes and techniques for losing and gaining weight.

Citizenship Activities

- Prepare grocery bag stuffers about balanced nutrition.
- Plan and present a program for health and physical education classes on nutrition for athletes.
- Prepare displays for the library and store fronts on nutrition and fast food nutritious meals.

ANSWERS to Calorie Content of Various Fast Foods on p. 15.

Calories and Rank

1. McDonald's Big Mac .......... 500
2. Long John Silver's Fish .......... 409
3. Pizza Hut thin crust (2 slices standard pepperoni) ..... 370
4. Taco Bell Beefy Tostada .......... 322
5. Burger King Hamburger .......... 275
Kentucky 4-H Health Project

EATING RIGHT

Record Sheet

Name ___________________________ Birthday ___________ Date ___________

Address ___________________________ (Street and Number/P. O. Box) (City) Zip ___________

County ___________________________ Name of Club or School ___________________________

Number of years in 4-H ___________

1. Describe your main objective or goal(s) for this project.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

2. Were you successful in reaching your goal(s)? Yes_______ No_______
If no, why?
________________________________________________________________________

________________________________________________________________________

3. List the activities which helped you reach your goal(s).

________________________________________________________________________

________________________________________________________________________

4. List one new thing you learned in each section.

Section 1. You Are What You Eat ___________________________

Section 2. Weight Control ___________________________

Section 3. Nutrition and Exercise for the Young Athlete ___________________________

Section 4. Good Nutrition From Fast Foods ___________________________
5. I assisted _______ other 4-H’ers with their nutrition and health project. I helped them by:

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

6. I participated in the following leadership/citizenship activities related to this project.

<table>
<thead>
<tr>
<th>Type of Activity</th>
<th>Where</th>
<th>Number of People Involved</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

__________________________________________________________________________

7. List demonstrations and/or speeches given about this project.

<table>
<thead>
<tr>
<th>Title</th>
<th>Audience to Whom Presented</th>
<th>Number of People</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

__________________________________________________________________________

Project Story. Use this space to write about your project. What did you enjoy most? The least? What are some things you learned? How will this project affect your future behavior?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

County Agent’s Signature

Leader’s Signature

Parent’s Signature

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