What is USDA's MyPyramid?

In 2005, the U.S. Department of Agriculture (USDA) released their food guidance system, MYPyramid. It is based on the same food grouping system that has been the foundation of nutrition education since the turn of the century, attesting to the system's effectiveness. Food groupings have endured because they have simplified the complicated world of nutrition.

USDA's MyPyramid is simply a basic outline of how much food to eat from each of the food groupings.

Food groupings have traditionally focused only on meeting essential nutrient needs. MyPyramid places priority on balancing essential nutrients, moderating added fat and sugar consumption and balancing calorie intake (foods) with calories expended (physical activity). This is accomplished by increasing the amount of low-fat and fat-free milk and milk products, fruits, vegetables and whole grains in the diet. These are nutrient-dense foods that are naturally lower in calories and higher in essential nutrients.

It's important to note that MyPyramid now incorporates physical activity as a key piece of the healthy lifestyle puzzle.

Think of the diet as a giant pyramid. Food groups – which are made up of foods that contain similar nutrients – form the building blocks of the pyramid. Like a giant puzzle, the pyramid is incomplete if any piece is removed. The same is true of a nutritious diet. Each food group is equally important because it plays a different role in good health. Foods from all the food groups are needed to form the foundation of a healthy diet. The same would be true for the physical activity piece of the puzzle – the pyramid is incomplete without that component as well.

Anatomy of "MyPyramid. Steps to a Healthier You"

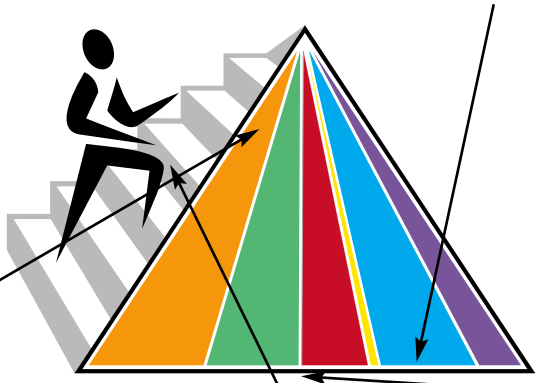
The graphic depiction chosen by the USDA for their food guidance system symbolizes a personalized approach to healthy eating and physical activity. One size doesn't fit all, and there are countless combinations of foods and physical activity that support a healthy lifestyle. Further, gradual improvement is suggested by the slogan – that individuals can benefit from taking small steps to improve their diet and lifestyle each day.

Activity

Activity is represented by the steps and the person climbing them, as a reminder of the importance of daily physical activity.

Balance (proportionality)

Balance is shown by the different widths of the food group bands. The widths suggest how much food a person should choose from each group.



Moderation

Moderation is represented by the narrowing of each food group from bottom to top. The wider base stands for foods with little or no solid fats or added sugars. These should be selected more often. The narrower top area stands for foods containing more added sugars and solid fats. The more active you are, the more these foods can be included in your diet.

Variety

Variety is symbolized by the six color bands representing the five food groups of the pyramid and oils. This illustrates that all foods from all groups form the foundation for a healthy diet.

Personalization

Personalization is shown by the person on the steps, the slogan, and the URL.

What are the benefits of teaching students to use a food grouping system?

Rather than have to memorize the nutrient and calorie content pf every food they eat, the pyramid provides children with an easy, quick and visual way to remember what to eat.

The pyramid provides an easy-to-use "frame of reference" for students. It offers food choice standards against which to compare their own choices (in some ways, it is a "rubric" for food choices) and it works for all students, regardless of their situation, food preferences or cultural background.

Foods Requiring Special Consideration

Oils: Vegetable oils, or the fats contained in nuts and certain fish, are depicted in MyPyramid by a thin yellow band. Such fats are an important part of daily healthful food choices – they contain essential fatty acids. However, they are not a separate food group per se in MyPyramid, nor are they typical of the food choices that children and/or adolescents make. For those reasons, we do not address selection of oils in the diet in our programs for school-age children.

Extras: Some foods don't fit into any group. These "extras" may be mainly fat or sugar – limit your intake of these:

- Limit foods that contain solid fat or added sugars, like sausage, biscuits, sweetened cereals or sour cream.
- Use discretion when adding fats or sweeteners to foods – like sauces, salad dressings, sugars, jellies and margarine.
- Limit foods that contain only fats or sugars – like candy, soda and chips.

Tomatoes: Even though botanically they are a fruit, tomatoes are classified in the Vegetables group because they are most often eaten with and prepared like other vegetables.

Avocados: While avocados are frequently consumed in salads with other vegetables, USDA places this food as a fruit. This is a match to its botanical origins.

Popcorn: While many associate popcorn with snack foods like chips, etc., it is part of the Grains, Breads & Cereals group. It is, in fact, fairly high in fiber. It is best, however, to eat popcorn unsalted and without butter and flavorings.

Beans: Beans such as pinto, lima, split pea and lentils have been placed in two food groups in USDA's MyPyramid: Meat, Beans & Nuts and Vegetables. There is justification for this dual placement based on the nutrient profile of beans. However, to simplify the food classification process for students, we place beans only in the Meat, Beans & Nuts group in this program. This is particularly important for students who may be vegetarians and consuming beans as a primary protein and iron source.

Questions & Answers

Q Aren't food choice guidelines and nutrition needs the same for children and adults?

A Children are unique in many ways – physically, intellectually, emotionally, socially and in their nutrition needs!

Some common **misperceptions** pertaining to the food choice behaviors of children are:

- There are "good foods" and "bad foods."
- All children need the same diet.
- All foods need to be low-fat.

Here's another view:

All foods have a place in the eating experiences of children. While some foods may be more nutritious than others and should be encouraged, there are no forbidden foods. While all children need the same nutrients for good health, they do not need the same diet.

Not all foods must be low-fat. Children need calories for adequate growth and development. Each of the major food groups contributes specific nutrients, and each food group contains foods that vary in fat content. By eating a variety of foods from all food groups, children will obtain the nutrients they need while moderating their consumption of fat.

Q What are some of the specific nutrition and health issues for children?

A **Adequate calories** are essential to ensure optimum growth and development of children. Diets that severely restrict food choices, calories and/or fat are not recommended for children. These diets may lack nutrients needed for normal growth and development.

Obesity, on the other hand, is a significant health issue facing children today. According to USDA, 27% of children ages 6 to 11 years are considered obese. The best way for most children to lose weight is to become more physically active rather than to significantly restrict calorie intake. Contributing factors to childhood obesity include:

1. television viewing, which replaces physical activity and often encourages overeating
2. excessive intake of extra foods high in added fat, sugars and calories
3. overly large portion sizes at meals and snacks – whether at home or when eating out.

Calcium is critical for strong bones and teeth. Children need two to four times more calcium per body weight than adults. Research shows that the more calcium consumed in childhood, the stronger their bones as adults.

Taste is the primary influence on a child's food choices. Help children learn to enjoy different tastes by exploring, preparing and tasting new foods.

Physical activity and play go hand-in-hand with healthy eating and are important to a child's development. Children who are active at play one to two hours a day can eat a wider variety and amount of food, making it easier to get the nutrients and calories they need to grow and learn.

Q Are vegetarian diets appropriate for children?

A Generally, vegetarian diets that include some animal foods (particularly milk products and/or eggs) can meet the needs of growing children if the recommended amounts for each food group outlined in the pyramid are consumed. When choices are restricted solely to plant-based foods, it may be wise to consult with a physician or a registered dietitian to ensure that children get ample calories and essential nutrients.

Q If a child is taking a vitamin/mineral supplement, does it really matter what he or she eats?

A There is more to foods than what we read on labels. Although foods are grouped according to major nutrients, there are other compounds in foods that are necessary for good health – some we know about, others scientists are exploring. Eating the recommended servings of food-group foods each day provides us with naturally nutrient-rich sources of energy and key vitamins and minerals. A daily vitamin/mineral supplement that provides no more than 100% of the recommended dietary allowances may seem like "insurance" that we get enough nutrients, but it doesn't replace the need for balanced food choices and nutrients from foods first.

Q Some of my students seldom get enough to eat. How are they supposed to make plans for improvement when food isn't available?

A Hunger is a major health concern. Although choices may be limited, students should be encouraged to identify and eat food-group foods that are available to them. Meal programs, such as school breakfast and school lunch, are excellent opportunities for students to plan and make nutritious selections. School lunch menus are designed to contribute one-third of a child's nutrient needs. School breakfast contributes 20-25% of a child's daily needs. The key is to support any efforts the student makes to improve his or her daily food choices.

Q What should I do if some of my students are lactose intolerant?

A Lactose intolerance, or the inability to digest milk sugar, is sometimes cited as an obstacle to children consuming milk and dairy products. Health professionals are specifically concerned with children who avoid dairy products getting the calcium, protein, vitamin D and riboflavin they need for normal growth.

If milk and dairy foods are not tolerated well (symptoms such as stomach cramps and diarrhea are common in children with lactose intolerance), the following suggestions should help:

- Choose dairy products that contain less lactose, such as buttermilk, aged or ripened cheese or yogurt.
- Eat or drink dairy products along with other foods at a meal or with snacks to slow digestion.
- Look for yogurt and frozen yogurt with "active culture" on the label. The cultures help to "digest" lactose.
- Eat or drink dairy products in smaller amounts but more frequently throughout the day.
- Use milk and cheese in cooking.
- Check labels for lactose-reduced dairy products, including milk, ice cream and American cheese slices.

In addition, other foods that provide some calcium are:

- tofu prepared with calcium salts
- small fish with soft bones, such as sardines
- mung and soy beans
- dark, leafy greens such as bok choy, mustard, dandelion and turnip greens, collards, kale and broccoli; but not spinach, beet greens, or chard from which the calcium is not well-absorbed
- refried beans, baked beans and lima beans
- corn tortillas, if the corn has been prepared in a lime solution, which is a source of calcium.

Nutrients and Their Functions ...

NUTRIENTS	FOOD GROUP SOURCES					FUNCTIONS
	M&MP	F	V	GB&C	MB&N	
PROTEIN	*				*	builds and repairs body tissues; supplies energy
CARBOHYDRATE	*	*	*	*		supplies energy; spares protein for purposes of body building and repair
FAT	*				*	supplies essential fatty acids; carries fat-soluble vitamins A, D, E, K; supplies energy
VITAMINS:						
VITAMIN A	*	*	*			helps maintain healthy skin and good eyesight
VITAMIN C		*	*			aids in formation and maintenance of connective tissues; promotes healing of wounds
VITAMIN D	*					promotes absorption of calcium and phosphorous which helps maintain strong bones and teeth
B-COMPLEX						
VITAMIN B_6		*	*	*	*	assists in metabolism of energy-yielding nutrients such as protein, fat and carbohydrate
VITAMIN B_{12}	*				*	works with folic acid to promote formation of red blood cells
FOLIC ACID			*		*	promotes formation of normal blood cells
NIACIN				*	*	assists in the release of energy from food; promotes a healthy nervous system
RIBOFLAVIN	*					promotes smooth, healthy skin
THIAMINE				*	*	assists in the release of energy from food; promotes a healthy nervous system
MINERALS:						
CALCIUM	*					helps build and maintain strong bones and teeth
IRON				*	*	a necessary constituent of hemoglobin, a substance which carries oxygen to cells
MAGNESIUM	*	*	*	*		aids transmission of nerve impulses and muscle contraction
POTASSIUM	*	*	*			necessary for healthy blood pressure
ZINC				*	*	a necessary constituent of several body enzymes

2005 U.S. Dietary Guidelines for Americans

Encouraging students to eat breakfast (whether at home or at school) is one of the most important things we can do to improve their health and their ability to achieve. This information, reprinted with permission by the California Department of Education, is included for your information.

Better Breakfast, Better Learning*

Breakfast readies children. Classroom demands become burdensome for the child who is hungry. All children and adults, regardless of economic class, experience what is known as "transient hunger." This is occasional hunger and is eliminated by eating. Adults learn compensating behaviors to overcome transient hunger; children have not yet developed this ability. Students require essential nutrients and enough energy to concentrate on and accomplish learning tasks. Breakfast provides these requirements while eliminating transient hunger symptoms, such as headache, fatigue, sleepiness and restlessness. We all know breakfast is the most important meal of the day. Now we have the research to prove it.

About Hunger and Classroom Performance

Classroom attention, attendance and achievement improve with breakfast.

Students' time-on-task is reduced when they are hungry. Hungry students' scores on achievement tests are lower, as are their other performance outcomes. Students do not compensate for feelings of hunger but exhibit unacceptable behaviors and require more disciplinary intervention by teachers. High achievement on standardized tests requires consistent, healthful food intake throughout the year, not only during evaluation periods.

About Hunger and Health

Classroom behavior changes when students are hungry.

Hunger which affects health and learning can be transient or ongoing, resulting in inadequate nutrition and poor health. Hungry children have more respiratory illness and are absent from school more often than children who are well-fed. While younger children have increased reporting of stomach illness, often necessitating a nurse's intervention, middle or high school children may experience deficits in physical performance such as sports. Overall health and weight maintenance are optimal in well-nourished children.

About Breakfast and the Family

Hunger is not a socioeconomic issue. Any student who skips or has no access to breakfast can suffer learning and health deficits.

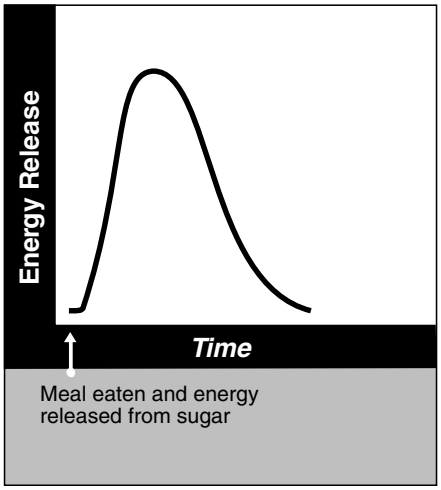
Children experience morning hunger for many reasons. Parental neglect is not the major cause. Families do not eat together as often for breakfast as they do for other meals. Children are often left to eat alone. Children who select their own breakfast frequently choose foods from only one or two food groups. They often choose foods high in sugar and fat. Morning meals eaten at fast-food restaurants seldom include all food groups and are often expensive. Young people are influenced by adults' eating habits, which may not be appropriate for growth and activity.

About School Breakfast

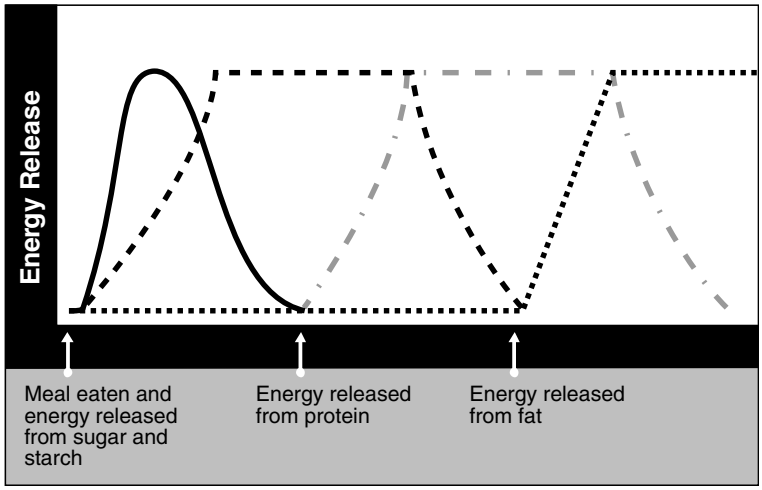
In many classrooms, the demanding school subjects are taught in the morning. School breakfast is served closest to classroom work time and thus energizes students to do their best on their hardest work. Meals offered at school are available to ALL students. These meals must include several food groups and are designed to sustain students' energy throughout the morning. School breakfasts are economical as compared to home or commercial choices. They are cost effective for schools, too, because they are supported by federal funds. School meals are a good investment for teachers, students and staff, especially since creative food service operations can vary their menus and service options.

School breakfast is the best option to provide students a balanced meal every school morning.

Comparison of Energy Available for Learning from Two Different Breakfasts



Sugary foods, such as fruit, fruit juice, candy or soda pop, eaten in place of a meal, cause a quick rise in blood sugar and energy in children. About an hour later, blood sugar and energy decline rapidly, bringing on symptoms of hunger.



A balanced breakfast containing sugar, starch, protein and fat (like a typical school breakfast containing fruit or juice and toast or cereal, and 2% or whole milk) gives a sustained release of energy in children, delaying symptoms of hunger for several hours.