

Section 7

The Recommended Dietary Allowances (RDA)

The adequate, recommended amounts of certain nutrients have been established by the Food and Nutrition Board. The Recommended Dietary Allowances (**RDA**) are the levels of intake of essential nutrients considered in the judgment of the Food and Nutrition Board to be adequate to meet the known nutritional needs of practically all healthy persons in the United States. RDA have been established for energy intake (Calories), protein, eleven vitamins, and seven minerals.

Recommended Dietary Allowances For The Eight Key Nutrients

Nutrient	U.S RDA	Plant Source	Animal Source	Major Food
<u>Exchanges</u>				
Protein	56 g	Dried beans and peas, nuts	Meat, poultry, fish, cheese, milk	Meat, milk
Vitamin A vegetables, fat	5000 IU	Dark green leafy vegetables, yellow vegetables, margarine	Butter, fortified milk, liver	Fruits,
Vitamin C vegetables	60 mg	Citrus fruits, broccoli, potatoes, strawberries, tomatoes, cabbage, dark green leafy vegetables	Liver	Fruits,
Vitamin B ₁ meat (thiamin)	1.5 mg	Breads, cereals, pasta, nuts	Pork, ham	Starch/Bread,
Vitamin B ₂ milk (riboflavin)	.7 mg	Breads, cereals, pasta	Milk, cheese, liver	Starch/Bread,
Niacin meat	20 mg	Breads, cereals, pasta, nuts	Meat, fish, poultry	Starch/Bread,
Iron starch/bread asparagus, prune juice	15 mg	Dried peas and beans, spinach,	Meat, liver	Meat,
Calcium	1000 mg	Turnip greens, okra, broccoli, vegetables spinach, kale	Milk, cheese, mackerel, salmon	Milk,

Food Pyramid



Grains





What foods are in the grain group?

Any food made from wheat, rice, oats, cornmeal, barley or another cereal grain is a grain product. Bread, pasta, oatmeal, breakfast cereals, tortillas, and grits are examples of grain products.

Grains are divided into 2 subgroups, whole grains and refined grains.

Whole grains contain the entire grain kernel -- the bran, germ, and endosperm. Examples include:

whole-wheat flour

bulgur (cracked wheat)

oatmeal

whole cornmeal

brown rice

Refined grains have been milled, a process that removes the bran and germ. This is done to give grains a finer texture and improve their shelf life, but it also removes dietary fiber, iron, and many B vitamins. Some examples of refined grain products are:

white flour

degermed cornmeal

white bread

white rice

Most refined grains are enriched. This means certain B vitamins (thiamin, riboflavin, niacin, folic acid) and iron are added back after processing. Fiber is not added back to enriched grains. Check the ingredient list on refined grain products to make sure that the word “enriched” is included in the grain name. Some food products are made from mixtures of whole grains and refined grains.



Some commonly eaten grain products are:

Whole grains:

brown rice
buckwheat
bulgur (cracked wheat)
oatmeal
popcorn

Ready-to-eat breakfast cereals:

whole wheat cereal flakes
muesli

whole grain barley
whole grain cornmeal
whole rye
whole wheat bread
whole wheat crackers
whole wheat pasta
whole wheat sandwich buns and rolls
whole wheat tortillas
wild rice

Less common whole grains:

amaranth
millet
quinoa
sorghum
triticale

Refined grains:

cornbread*
corn tortillas*
couscous*
crackers*
flour tortillas*
grits
noodles*

Pasta*

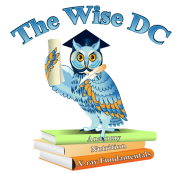
spaghetti
macaroni

pitas*
pretzels

Ready-to-eat breakfast cereals

corn flakes

white bread
white sandwich buns and rolls



How many grain foods are needed daily?

The amount of grains you need to eat depends on your age, sex, and level of physical activity. Recommended daily amounts are listed in the chart. Most Americans consume enough grains, but few are whole grains. At least $\frac{1}{2}$ of all the grains eaten should be whole grains.

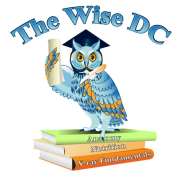
		Daily recommendation*	Daily minimum amount of whole grains
Children	2-3 years old	3 ounce equivalents**	1 $\frac{1}{2}$ ounce equivalents**
	4-8 years old	4 – 5 ounce equivalents**	2 – 2 $\frac{1}{2}$ ounce equivalents**
Girls	9-13 years old	5 ounce equivalents**	3 ounce equivalents**
	14-18 years old	6 ounce equivalents**	3 ounce equivalents**
Boys	9-13 years old	6 ounce equivalents**	3 ounce equivalents**
	14-18 years old	7 ounce equivalents**	3 $\frac{1}{2}$ ounce equivalents**
Women	19-30 years old	6 ounce equivalents**	3 ounce equivalents**
	31-50 years old	6 ounce equivalents**	3 ounce equivalents**
	51+ years old	5 ounce equivalents**	3 ounce equivalents**
Men	19-30 years old	8 ounce equivalents**	4 ounce equivalents**
	31-50 years old	7 ounce equivalents**	3 $\frac{1}{2}$ ounce equivalents**
	51+ years old	6 ounce equivalents**	3 ounce equivalents**

Vegetables



What foods are in the vegetable group?

Any vegetable or 100% vegetable juice counts as a member of the vegetable group. Vegetables may be raw or cooked; fresh, frozen, canned, or dried/dehydrated; and may be whole, cut-up, or mashed.



Vegetables are organized into 5 subgroups, based on their nutrient content. Some commonly eaten vegetables in each subgroup are:

Dark green vegetables

bok choy
broccoli
collard greens
dark green leafy lettuce
kale
mesclun
mustard greens
romaine lettuce
spinach
turnip greens
watercress

Orange vegetables

acorn squash
butternut squash
carrots
hubbard squash
pumpkin
sweet potatoes

Dry beans and peas

black beans
black-eyed peas
garbanzo beans (chickpeas)
kidney beans
lentils
lima beans (mature)
navy beans
pinto beans
soy beans
split peas
tofu (bean curd made from soybeans)

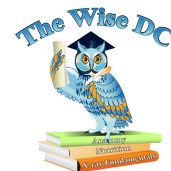
white beans

Starchy vegetables

corn
green peas
lima beans (green)
potatoes

Other vegetables

artichokes
asparagus
bean sprouts
beets
Brussels sprouts
cabbage
cauliflower
celery
cucumbers
eggplant
green beans
green or red peppers
iceberg (head) lettuce
mushrooms
okra
onions
parsnips
tomatoes
tomato juice
vegetable juice
turnips
wax beans
zucchini



How many vegetables are needed daily or weekly?

Vegetable choices should be selected from among the vegetable subgroups. It is not necessary to eat vegetables from each subgroup daily. However, over a week, try to consume the amounts listed from each subgroup as a way to reach your daily intake recommendation.

The amount of vegetables you need to eat depends on your age, sex, and level of physical activity. Recommended total daily amounts are shown in the first chart. Recommended weekly amounts from each vegetable subgroup are shown in the second chart.

Daily recommendation*		
Children	2-3 years old	1 cup**
	4-8 years old	1 ½ cups**
Girls	9-13 years old	2 cups**
	14-18 years old	2 ½ cups**
Boys	9-13 years old	2 ½ cups**
	14-18 years old	3 cups**
Women	19-30 years old	2 ½ cups**
	31-50 years old	2 ½ cups**
	51+ years old	2 cups**
Men	19-30 years old	3 cups**
	31-50 years old	3 cups**
	51+ years old	2 ½ cups**

Fruits



What foods are in the fruit group?

Any fruit or 100% fruit juice counts as part of the fruit group. Fruits may be fresh, canned, frozen, or dried, and may be whole, cut-up, or pureed. Some commonly eaten fruits are:

Apples

Apricots

Avocado

Bananas

Berries:

strawberries

blueberries

raspberries

Cherries

Grapefruit

Grapes

Kiwi fruit

Lemons

Limes

Mangoes

Melons:

cantaloupe

honeydew

watermelon

Mixed fruits:

fruit cocktail

Nectarines

Oranges

Peaches

Pears

Papaya

Pineapple

Plums

Prunes

Raisins

Tangerines

100% Fruit juice:

orange

apple

grape

grapefruit



How much fruit is needed daily?

The amount of fruit you need to eat depends on age, sex, and level of physical activity. Recommended daily amounts are shown in the chart.

Recommended amounts are shown in the table below.

Daily recommendation*		
Children	2-3 years old	1 cup**
	4-8 years old	1 to 1 ½ cups**
Girls	9-13 years old	1 ½ cups**
	14-18 years old	1 ½ cups**
Boys	9-13 years old	1 ½ cups**
	14-18 years old	2 cups**
Women	19-30 years old	2 cups**
	31-50 years old	1 ½ cups**
	51+ years old	1 ½ cups**
Men	19-30 years old	2 cups**
	31-50 years old	2 cups**
	51+ years old	2 cups**

Milk



What foods are included in the milk, yogurt, and cheese (milk) group?

All fluid milk products and many foods made from milk are considered part of this food group. Foods made from milk that retain their calcium content are part of the group, while foods made from milk that have little to no calcium, such as cream cheese, cream, and butter, are not. Most milk group choices should be fat-free or low-fat.

Some commonly eaten choices in the milk, yogurt, and cheese group are:

Milk*

All fluid milk:

fat-free (skim)
low fat (1%)
reduced fat (2%)
whole milk

flavored milks:

chocolate
strawberry

lactose reduced milks
lactose free milks

Milk-based desserts*

Puddings made with milk
ice milk
frozen yogurt
ice cream

Cheese*

Hard natural cheeses:

cheddar
mozzarella
Swiss
parmesan

soft cheeses

ricotta
cottage cheese

processed cheeses

American

Yogurt*

All yogurt

Fat-free
low fat
reduced fat
whole milk yogurt



How much food from the milk group is needed daily?

The amount of food from the Milk Group you need to eat depends on age. Recommended daily amounts are shown in the chart.

Daily recommendation		
Children	2-3 years old	2 cups*
	4-8 years old	2 cups*
Girls	9-13 years old	3 cups*
	14-18 years old	3 cups*
Boys	9-13 years old	3 cups*
	14-18 years old	3 cups*
Women	19-30 years old	3 cups*
	31-50 years old	3 cups*
	51+ years old	3 cups*
Men	19-30 years old	3 cups*
	31-50 years old	3 cups*
	51+ years old	3 cups*

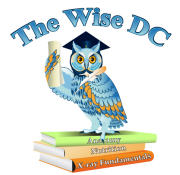
Meat and Beans



What foods are included in the meat, poultry, fish, dry beans, eggs, and nuts (meat & beans) group?

All foods made from meat, poultry, fish, dry beans or peas, eggs, nuts, and seeds are considered part of this group. Dry beans and peas are part of this group as well as the vegetable group.

Most meat and poultry choices should be lean or low-fat. Fish, nuts, and seeds contain healthy oils, so choose these foods frequently instead of meat or poultry.



Some commonly eaten choices in the Meat and Beans group, with selection tips, are:

Meats*

Lean cuts of:

beef
ham
lamb
pork
veal

Game meats:

bison
rabbit
venison

Lean ground meats:

beef
pork
lamb

Lean luncheon meats

Organ meats:

liver
giblets

Poultry*

chicken
duck
goose
turkey
ground chicken and turkey

Eggs*

chicken eggs
duck eggs

Dry beans and peas:

black beans
black-eyed peas
chickpeas (garbanzo beans)
falafel
kidney beans
lentils
lima beans (mature)
navy beans
pinto beans
soy beans
split peas
tofu (bean curd made from soy
beans)
white beans
bean burgers:
garden burgers
veggie burgers

tempeh
texturized vegetable protein
(TVP)

Nuts & seeds*

almonds
cashews
hazelnuts (filberts)
mixed nuts
peanuts
peanut butter
pecans
pistachios
pumpkin seeds
sesame seeds
sunflower seeds
walnuts

Fish*

Finfish such as:

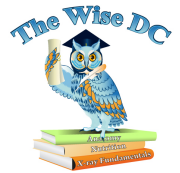
catfish
cod
flounder
haddock
halibut
herring
mackerel
pollock
porgy
salmon
sea bass
snapper
swordfish
trout
tuna

Shellfish such as:

clams
crab
crayfish
lobster
mussels
octopus
oysters
scallops
squid (calamari)
shrimp

Canned fish such as:

anchovies
clams
tuna
sardines



How much food from the meat & beans group is needed daily?

The amount of food from the Meat and Beans Group you need to eat depends on age, sex, and level of physical activity. Most Americans eat enough food from this group, but need to make leaner and more varied selections of these foods. Recommended daily amounts are shown in the chart.

Daily recommendation*		
Children	2-3 years old	2 ounce equivalents**
	4-8 years old	3 – 4 ounce equivalents**
Girls	9-13 years old	5 ounce equivalents**
	14-18 years old	5 ounce equivalents**
Boys	9-13 years old	5 ounce equivalents**
	14-18 years old	6 ounce equivalents**
Women	19-30 years old	5 ½ ounce equivalents**
	31-50 years old	5 ounce equivalents**
	51+ years old	5 ounce equivalents**
Men	19-30 years old	6 ½ ounce equivalents**
	31-50 years old	6 ounce equivalents**
	51+ years old	5 ½ ounce equivalents**

Oils



What are “oils”?

Oils are fats that are liquid at room temperature, like the vegetable oils used in cooking. Oils come from many different plants and from fish. Some common oils are:

canola oil

corn oil

cottonseed oil

olive oil

safflower oil

soybean oil

sunflower oil

Some oils are used mainly as flavorings, such as walnut oil and sesame oil. A number of foods are naturally high in oils, like:

nuts

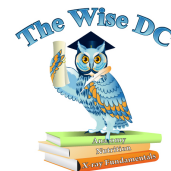
olives

some fish

avocados

Foods that are mainly oil include mayonnaise, certain salad dressings, and soft (tub or squeeze) margarine with no trans fats.





Most oils are high in monounsaturated or polyunsaturated fats, and low in saturated fats. Oils from plant sources (vegetable and nut oils) do not contain any cholesterol. In fact, no foods from plants sources contain cholesterol.

A few plant oils, however, including coconut oil and palm kernel oil, are high in saturated fats and for nutritional purposes should be considered to be solid fats.

Solid fats are fats that are solid at room temperature, like butter and shortening. Solid fats come from many animal foods and can be made from vegetable oils through a process called hydrogenation. Some common solid fats are:

butter

beef fat (tallow, suet)

chicken fat

pork fat (lard)

stick margarine

shortening

How much is my allowance for oils?

Most Americans consume enough oil in the foods they eat, such as:

nuts

fish

cooking oil

salad dressings

A person's allowance for oils depends on age, sex, and level of physical activity. Daily allowances are shown in the chart.

Daily allowance*		
Children	2-3 years old	3 teaspoons
	4-8 years old	4 teaspoons

Girls	9-13 years old	5 teaspoons
	14-18 years old	5 teaspoons
Boys	9-13 years old	5 teaspoons
	14-18 years old	6 teaspoons
Women	19-30 years old	6 teaspoons
	31-50 years old	5 teaspoons
	51+ years old	5 teaspoons
Men	19-30 years old	7 teaspoons
	31-50 years old	6 teaspoons
	51+ years old	6 teaspoons

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Dietary Guidelines for Americans

The *Dietary Guidelines for Americans* has been published jointly every 5 years since 1980 by the Department of Health and Human Services (HHS) and the Department of Agriculture (USDA). The Guidelines provide authoritative advice for people two years and older about how good dietary habits can promote health and reduce risk for major chronic diseases. They serve as the basis for Federal food and nutrition education programs.

Overview of Key Recommendations

Fats :

Consume less than 10 percent of calories from saturated fatty acids and less than 300 mg/day of cholesterol, and keep *trans* fatty acid consumption as low as possible.

Keep total fat intake between 20 to 35 percent of calories, with most fats coming from sources of polyunsaturated and monounsaturated fatty acids, such as fish, nuts, and vegetable oils.

When selecting and preparing meat, poultry, dry beans, and milk or milk products, make choices that are lean, low-fat, or fat-free.



Limit intake of fats and oils high in saturated and/or *trans* fatty acids, and choose products low in such fats and oils.

Recommendations for Specific Population Groups

Children and adolescents. Keep total fat intake between 30 to 35 percent of calories for children 2 to 3 years of age and between 25 to 35 percent of calories for children and adolescents 4 to 18 years of age, with most fats coming from sources of polyunsaturated and monounsaturated fatty acids, such as fish, nuts, and vegetable oils.

Carbohydrates:

It is recommended that carbohydrates constitute 45 to 65 percent of an individuals daily total calories. With respect to older adults, dietary fiber is important for laxation. Since constipation may affect up to 20 percent of people over 65 years of age, older adults should choose to consume foods rich in dietary fiber. Other causes of constipation among this age group may include drug interactions with laxation and lack of appropriate hydration.

¹ Williams, Melvin, *Lifetime Fitness & Wellness*, Brown and Benchmark Publishers, 1993, pg 114.

² <http://www.mypyramid.gov/>