

The Six Nutrients

By Taylor Ainley

Francesca Amen

Chanel Dellentash

Yellow water lily
Nymphaea mexicana

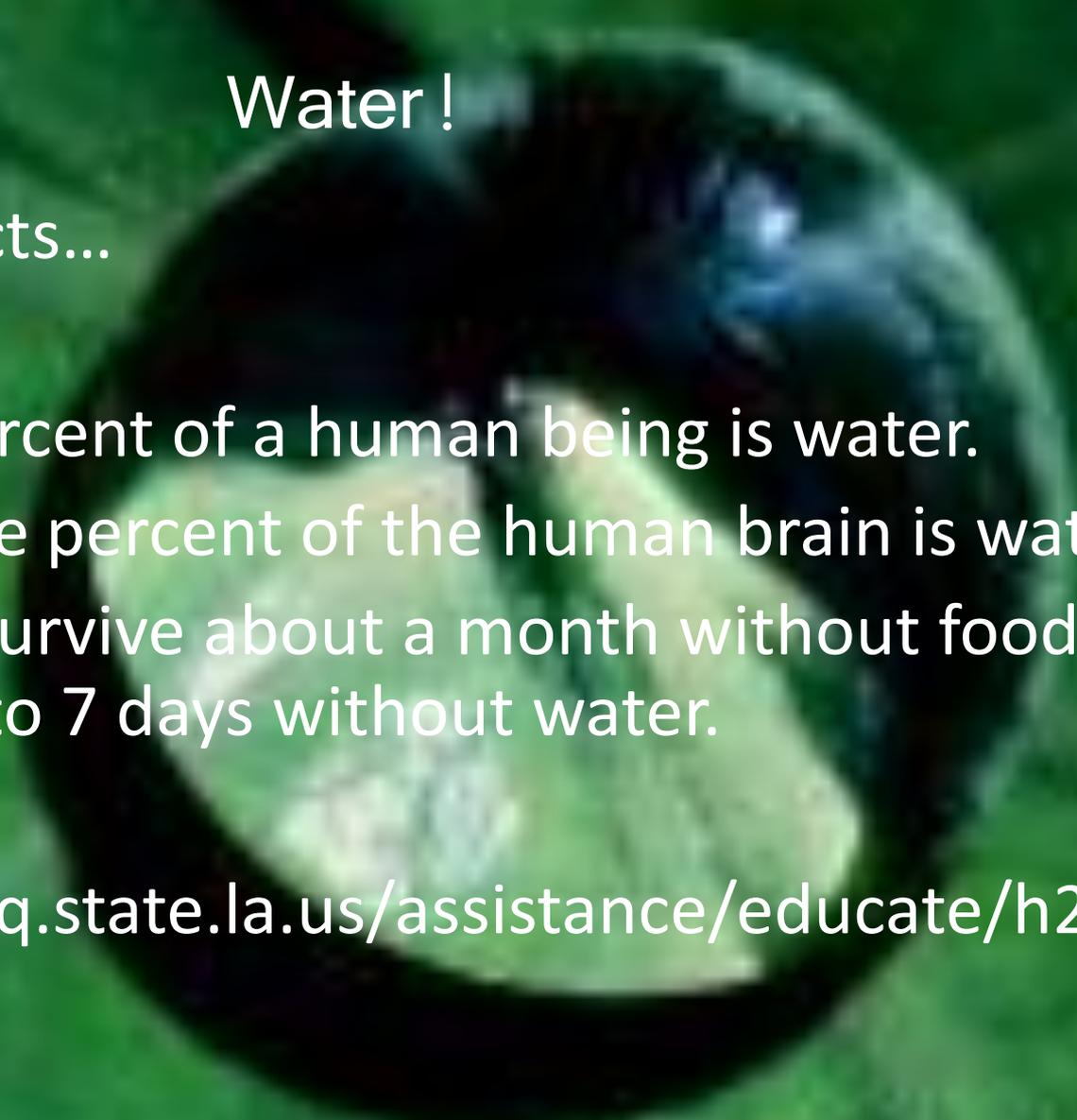
Photo by A. Murray
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What are the 6 nutrients?

- The 6 nutrients are Carbohydrates, Proteins, Fats, Vitamins, Minerals and Water.
- Of these six nutrients, three provide energy — in the form of calories.
These nutrients are carbohydrates, fats, and protein.
- The other three provide no calories, but they're just as vital to life. **These nutrients are vitamins, minerals, and water.** (Yes, water. It's actually been called the "forgotten nutrient.")

<http://www.boost.com/supersix.html>

Water !



Some water facts...

- Sixty-six percent of a human being is water.
- Seventy-five percent of the human brain is water.
- You could survive about a month without food, but only 5 to 7 days without water.

<http://www.deq.state.la.us/assistance/educate/h2ofacts.htm>

What does water do?

- **Transports essential nutrients throughout the body and rids the body of waste**
- **Acts as a lubricant for the body, moistening eyes, mouth, nose, and skin**
- **Helps maintain adequate blood volume**
- **Helps regulate body temperature, especially in warm weather**
- **Helps medications to work**
- **Acts as an appetite suppressant**
- **Boosts metabolism when drunk cold (we burn two calories per glass as we warm it up to body temperature)**

<http://groups.msn.com/FatBlastinBabes/amazingwaterfacts.msn>

SO HOW MUCH WATER SHOULD YOU DRINK?

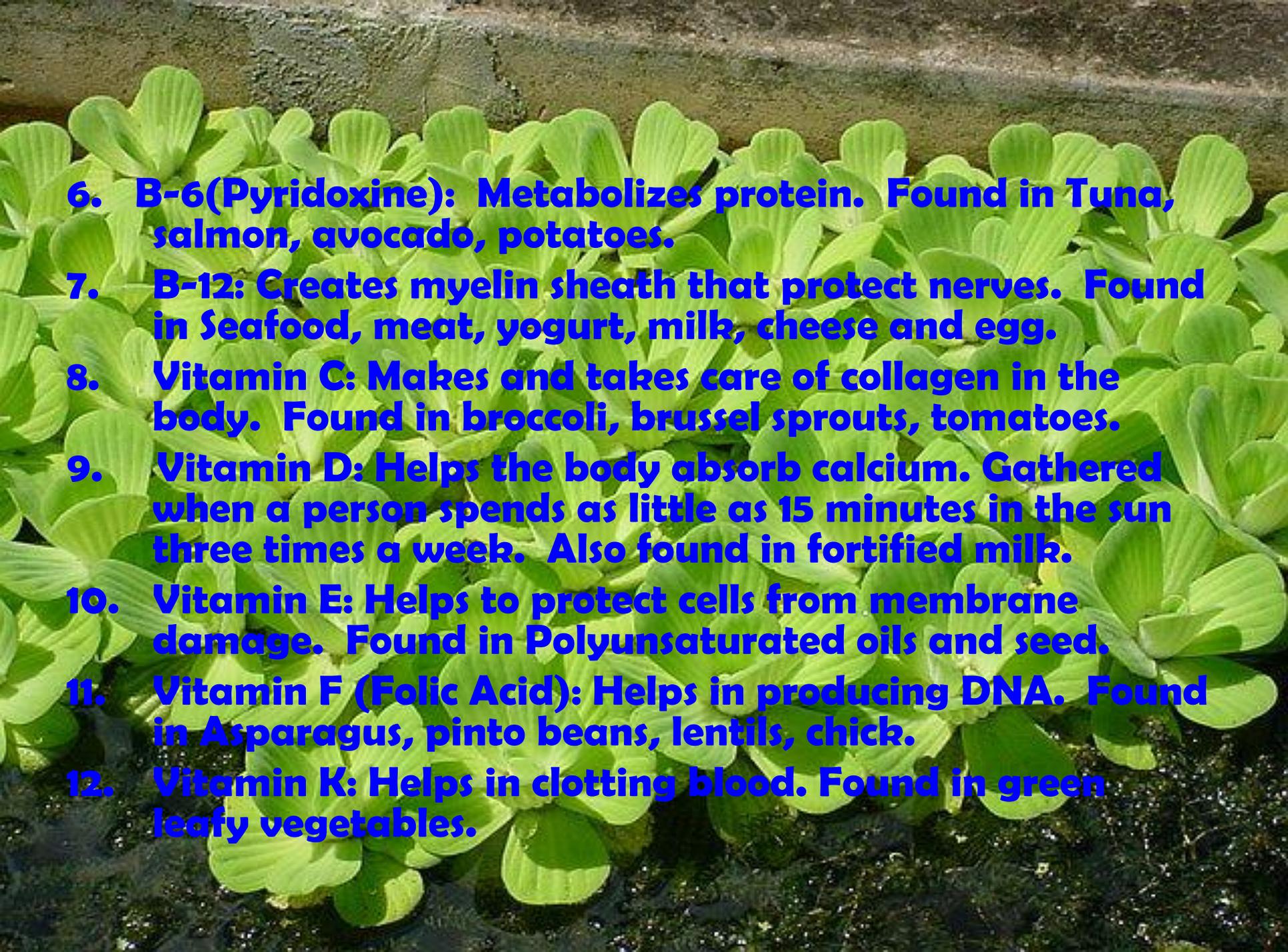
Formula

- Step 1: Your weight divided by 2 = The number of ounces of water you need each day.
- Step 2: Divide the ounces you need by 8 = The number of cups of water you need each day.

Vitamins!

There are 12 essential vitamins for humans....

1. **Vitamin A:** Promotes healthy vision. Found in carrots, sweet potatoes, leafy vegetables.
2. **Beta Carotene:** Converts into Vitamin A by the body for needs the body develops. Found in yellow-orange fruits, dark green vegetables.
3. **B-1(Thiamin):** Helps to convert sugar into energy: Found in whole grains, seeds and nuts.
4. **B-2 (Riboflavin):** Acts like a coenzyme, it helps to convert carbohydrates into energy. Found in organ meats, dairy products and seafood.
5. **B-3 (Niacin):** Converts sugar into energy. Seafood, peanuts and wheat.

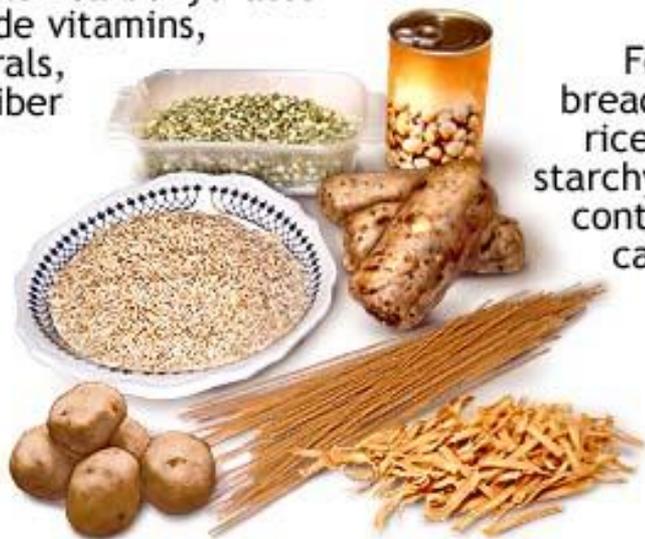
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- 6. B-6(Pyridoxine): Metabolizes protein. Found in Tuna, salmon, avocado, potatoes.**
 - 7. B-12: Creates myelin sheath that protect nerves. Found in Seafood, meat, yogurt, milk, cheese and egg.**
 - 8. Vitamin C: Makes and takes care of collagen in the body. Found in broccoli, brussel sprouts, tomatoes.**
 - 9. Vitamin D: Helps the body absorb calcium. Gathered when a person spends as little as 15 minutes in the sun three times a week. Also found in fortified milk.**
 - 10. Vitamin E: Helps to protect cells from membrane damage. Found in Polyunsaturated oils and seed.**
 - 11. Vitamin F (Folic Acid): Helps in producing DNA. Found in Asparagus, pinto beans, lentils, chick.**
 - 12. Vitamin K: Helps in clotting blood. Found in green leafy vegetables.**

CARBOHYDRATES

- Carbohydrates are the main energy source for the human body.
- All Carbohydrates are made up of units of sugar.
- There are two types of carbohydrates:
 - Simple
 - Complex

Complex carbohydrates

Complex carbohydrates provide vitamins, minerals, and fiber



Foods such as breads, legumes, rice, pasta, and starchy vegetables contain complex carbohydrates

ADAM

Simple carbohydrates

Simple carbohydrates are found in foods such as fruits, milk, and vegetables

Cake, candy, and other refined sugar products are simple sugars which also provide energy but lack vitamins, minerals, and fiber



ADAM

Minerals

- They are found in foods we eat
- They fall into two main categories the major minerals and the trace minerals.

Major Minerals

- They are present in your body.
- The major minerals are calcium, phosphorus, magnesium, sodium, potassium, and chloride.

Trace minerals

- They are taken in small amounts.
- The trace minerals are iron, zinc, iodine, copper, manganese, fluoride, chromium, selenium, and molybdenum.

Type

Calcium

Benefits

Calcium is vital for building strong bones and teeth. The time to build strong bones is during childhood and the teen years, so it's very important to get enough calcium now to fight against bone loss later in life. Weak bones are susceptible to a condition called osteoporosis, which causes bones to break easily.

Sources

Milk and other dairy products such as yogurt, cheese, and cottage cheese are good sources of calcium. You'll also find this mineral in broccoli and dark green, leafy vegetables like kale. Soy foods and foods fortified with calcium, including some kinds of orange juice and soy milk, are also good sources.

Quantity

Teen guys and girls need 1,300 mg (milligrams) of calcium each day.

Iron

Iron helps red blood cells carry oxygen to all parts of the body. Symptoms of iron-deficiency anemia include weakness and fatigue, lightheadedness, and shortness of breath.

Iron-rich foods include red meat, pork, fish and shellfish, poultry, lentils, beans and soy foods, green leafy vegetables, and raisins. Some flours, cereals, and grain products are also fortified with iron.

Teen guys need 11 mg of iron a day and teen girls need 15 mg. Girls need higher amounts.

heart rhythm, and keeps bones strong. It also helps the body to create energy and make proteins.

whole grain breads, nuts and seeds, leafy green vegetables, potatoes, beans, avocados, bananas, kiwifruits, broccoli, shrimp, and chocolate (yes, chocolate!).

each day and guys need 360 mg.

Phosphorus

Phosphorus helps to form healthy bones and teeth. It also helps the body to make energy. It is part of every cell membrane, and every cell in the body needs phosphorus to function normally.

Phosphorus is found in most foods, but the best sources are dairy foods, meat, and fish.

Teen girls and guys should aim for 1,250 mg of phosphorus each day.

Potassium

Potassium helps with muscle and nervous system function. It also helps the body to maintain the balance of water in the blood and body tissues.

Potassium is found in broccoli, potatoes (with skins), leafy green vegetables, citrus fruits, bananas, dried fruits, and legumes such as peas and lima beans.

Teen girls and guys should aim for 2,000 mg of potassium each day.

Zinc

Zinc is important for normal growth, sexual development, strong immunity, and wound healing.

You'll find zinc in red meat, poultry, oysters and other seafood, nuts, dried beans, soy foods, milk and other

Teen guys need 11 mg of zinc a day and teen girls need 9 m

Works Cited

- [http://kidshealth.org/teen/misc/mineral chart.html](http://kidshealth.org/teen/misc/mineral_chart.html)
- [http:// www.boost.com/minerals.html](http://www.boost.com/minerals.html)

Protein

- Can be converted into energy
- Main use is to assist with growth, and to repair body tissue.
 - Amino acids make up protein.
- When protein is digested the amino acids are put to work helping the body.
 - Builds hormones.
- Controls the water balance in the body.

FOUND IN...

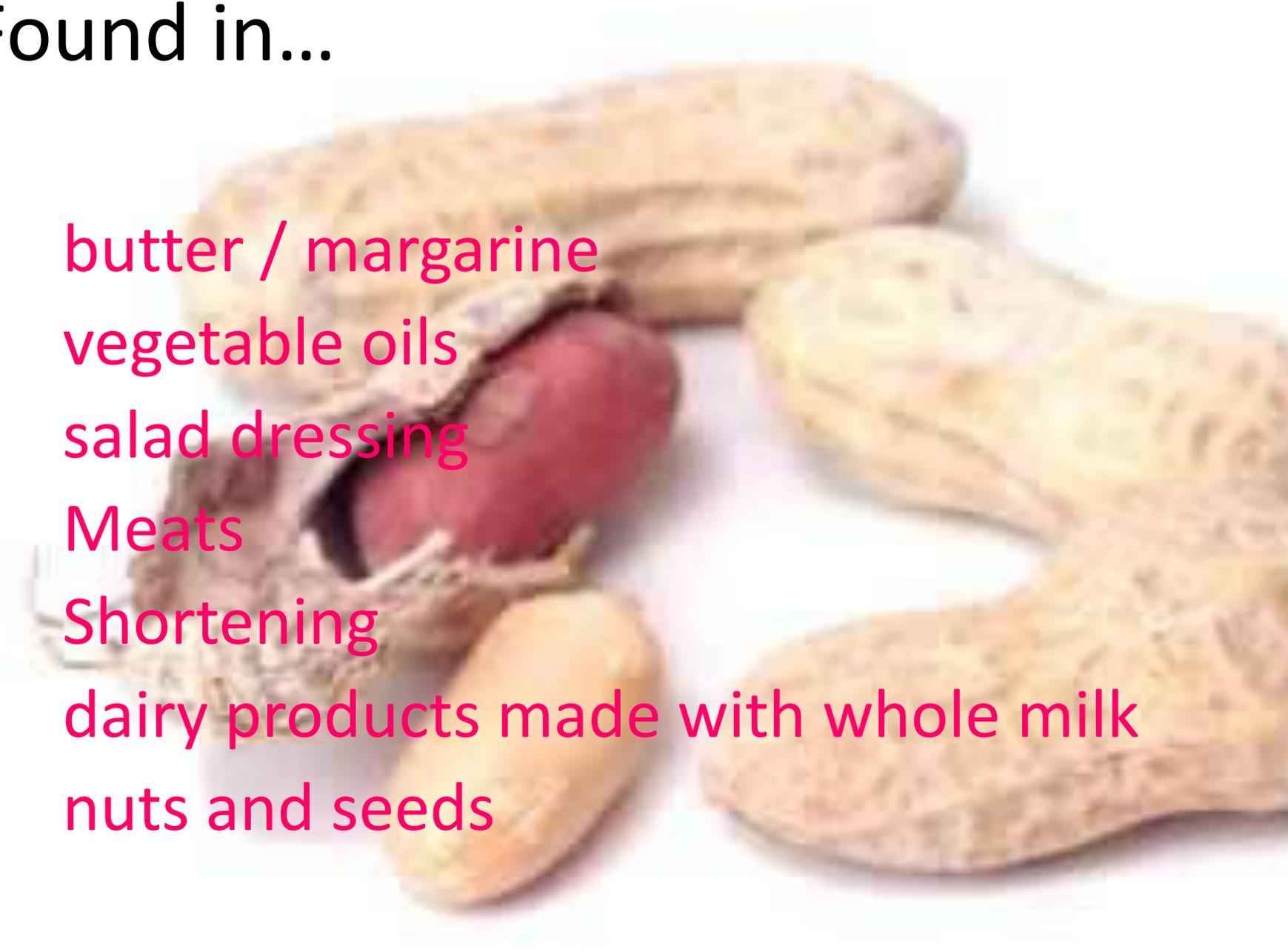
- Meat
- Poultry
- Dairy Products
- Cereals and Grains
- Fish
- Eggs
- Beans and Legumes
- Nuts and Seeds



Fats!

- Certain fats are needed for survival.
- Improve body's immune system.
- Can keep you feeling full longer because they take longer to digest.
- Based on a 2,000 a day calorie intake no more than 67 grams should be fat.
- Fatty acids should not be more than 30% of total calories.

Found in...

- butter / margarine
 - vegetable oils
 - salad dressing
 - Meats
 - Shortening
 - dairy products made with whole milk
 - nuts and seeds
- 
- A photograph showing several nuts and seeds on a white background. There are two almonds, one of which is cracked open to reveal its reddish-brown kernel. There are also several walnuts and pecans, some whole and some broken into halves. The nuts are scattered across the frame, with some in the foreground and others in the background.

Saturated Fat

- Are solids at room temperature
- No more than 10% of total calories.
- butter, lard, and vegetable shortening
- Found in high amounts in commercially prepared foods.
- Increases the chance of heart disease, and high cholesterol.

Polyunsaturated Fats

- Found in vegetable and fish oils.
- essential fatty acids that they body must intake because it can not be produced on it's own.
- Can prevent and/or promote heart disease.
- Believed that omega-3 can lower blood cholesterol, but in high amounts can be harmful.

Monounsaturated Fats

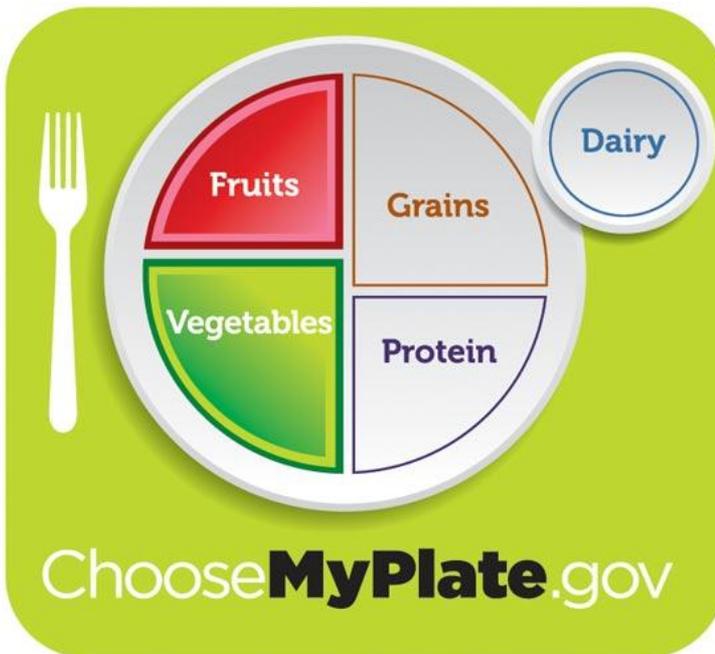
- Found in olive oil and canola oil.
- May reduce the risk of heart disease and some cancers.

Hydrogenated Fats/Trans Fatty Acids

- They are polyunsaturated fats that have been turned into a solid at room temperature.
- Found in: Corn oil is hydrogenated to create margarine.
- Not certain of the effects but is believed to be potentially harmful.

Vitamins and MyPlate

- Vitamins are primarily found in the fruits and vegetables group, with the B complex vitamins found in the grains group.



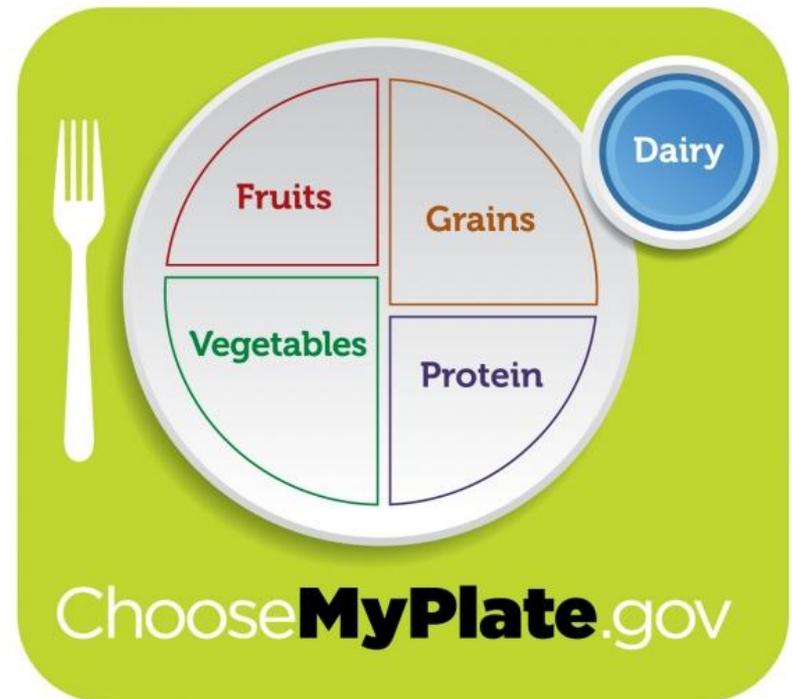
Minerals and MyPlate

- Minerals are found in all sections of the MyPlate.



Fats and MyPlate

- Fats are naturally found in the Dairy and Protein groups.



Protein and MyPlate

- Protein is found in the Protein group and the Dairy group. In the vegetable group, soy products also contain complete proteins.



For more fun-filled facts!

❖ <http://www.myplate.gov>

