



# Water



- **Main Functions:**

- -Helps to dissolve the nutrients the animal eats.
- -Helps to control the temperature of the body.
- -Is a carrier of nutrients
- -Causes chemical reactions.

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- **Notable Facts:**

- -40%-80% of water makes up an animal. Younger animal are higher.

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- **How can it be obtained or what are the sources/examples?**

- -ponds
- -lakes
- -streams
- -oceans
- Fountains, tanks, puddles, and other supplies of water

# Carbohydrates

- **Main Functions:**

- -Gives energy to the animal.
- -Powers muscular movement such as the heartbeat, walking, breathing, and digestive contractions.
- -Produces body heat and keeps the animal warm.

- **Notable Facts:**

- -Made of sugars, starches, cellulose, and lignin.
- -Are chemically composed of carbon, hydrogen, and oxygen.
- 75% of feed is carbs.
- -Easily digested.

- **How can it be obtained or what are the sources/examples?**

- -Cereal Grains
- -Corn
- -Wheat
- -Oats
- -Barley
- -Rye
- -Sorghum



# Fats/Lipids



- **Main Functions:**

- -Provide energy and body heat
- -Carry fat-soluble vitamins

- **Notable Facts:**

- -Have 2.25 times the energy of carbs.
- -Are easily digested.
- -Are chemically composed of carbon, hydrogen, and oxygen.

- **How can it be obtained or what are the sources/examples?**

- -Oils
- -Cereals
- -Corn gluten meal
- -Dried grains
- -Wheat middling
- -Fat soluble vitamins
- -Animal sources.

# Proteins

- **Main Functions:**

- -Build body tissues
- -Form ligaments, hair, hooves, horns, skin, internal organs, and muscles.

- **Notable Facts:**

- -Is essential in fetal development
- -10 essential amino acids
- -Mono-gastrics need to have it
- -2 types- crude and digestible

- **How can it be obtained or what are the sources/examples?**

- Veggies
- -Soybean Meal
- -Meat
- -Fish Meal



# Minerals



- **Main Functions:**
- -Provide materials for growth of bones, teeth, and tissue.
- -Regulate many of the vital chemical processes of the body.
- -Aid in muscular activities, reproduction, digestion, repair or body tissues, formation of new tissue and release of energy for body heat.
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- **Notable Facts:**
- -inorganic
- (Trace and micro) minerals and (macro and major) are the same thing.
- -If you don't have enough you'll have a deficiency or disease.
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- **How can it be obtained or what are the sources/examples?**
- -Put into feed

# Vitamins

- **Main Functions:**

- -Helps develop bones
- -minerals balance in blood
- -Helps reproduction and muscle development
- -Helps gut body function

- **Notable Facts:**

- -organic
- -Water soluble and fat soluble

- **How it can be obtained or what are the sources/examples?**

- -Hay
- -Pastures
- -Sunlight
- -Supplements

