

1  **Macro Minerals**

Semester A: Basics | Class # 3  
Oct 13, 2015

2  **"Elements" in Human Body**

- 96% of Our Body is made of:
  - Oxygen
  - Hydrogen
  - Carbon
  - Nitrogen
- 4% is made of Minerals  
There are more than 100 Elements in Nature

3  **Macro Minerals**

- Calcium
- Phosphorus
- Potassium
- Sulphur
- Sodium
- Chlorine
- Magnesium

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**Micro /Trace/Essential Minerals**

- Iron
- Zinc
- Selenium
- Manganese
- Iodine
- Copper
- Molybdenum
- Boron
- Cobalt
- Fluorine
- Vanadium
- Nickel
- Tin
- Silicone

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**Micro Non-Essential Minerals**

- Barium
- Arsenic
- Bromine
- Cadmium

There are many more.

The non-essential minerals are minerals that are not required for human nutrition. Many of them are considered toxic chemicals.

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### **Storage and Location of Minerals**

- Bone
- Muscle Tissues
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Micro Minerals are only 0.01% % of our body weight

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### **Role of Minerals (Major& Micro)**

As Co-Enzyme with Vitamins for Functions such as:

- Energy Production
- Growth
- Healing
- Enable use of Nutrients

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### **Role of Major Minerals**

- Regulating Body Fluids
- Formation of Blood and Bones
- Bone
- Muscle Function and Tone
- Heart Electrolytes
- Arterial Muscle Contraction

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### **1. CALCIUM**

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### **ROLE OF CALCIUM**

- Strong Bones and Teeth
- Healthy Gums
- Regulate Heart Beat
- Muscular Contraction
- Lowering Cholesterol & Preventing CVD
- Blood Clotting
- Prevent Cancer
- Activator for Digestive Enzymes
- Production of RNA and DNA
- Maintains Proper Cell Membrane Permeability
- Protects against ↑B/P

Note:

Moderate Exercise Improves Calcium Absorption but heavy exercise hinders it.

11  **CALCIUM SOURCES**

- Dairy Foods
- Broccoli
- Salmon (with bones)
- Sardines
- Sea food
- Kale
- Collards
- Dandelion Greens
- Dark Green Veggies
- Asparagus
- Mustard Greens
- Figs, Prunes
- Cabbage
- Cheese
- Dulse/Kelp
- Almonds
- Carob
- Oats
- Water Cress

## Herbs

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- Alfalfa
- Asparagus
- Hops
- Burdock Root
- Cayenne
- Nettle
- Chamomile
- Chickweed
- Paprika
- Horsetail
- Fenugreek
- Paprika
- Yarrow
- Red Clover
- Peppermint
- Fennel Seed
- Plantain
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12  **CALCIUM NOTES**

- LYSINE (an Amino Acid) Is required to absorb Calcium.
- Food Sources of Lysine:  
Cheese, eggs, fish, lima beans, milk, potatoes, red meat, soy products and brewers' yeast;

- Calcium and Iron will bind if taken together and none will be absorbed.
- Hi Fibre food will bind with minerals and reduce their absorption.
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### 13 **MAGNESIUM**

UBIQUITOUS – Plays a role in ALL bodily systems, some of them are:

- Function as a CO-ENZYME, particularly in the production of Cellular Energy
- Muscle Relaxant
- Helps in Calcium and Potassium uptake
- Maintain pH Balance
- Maintain Body Temperature
- Normalizes BP & Protects ARTERY Linning BP change damage
- Bone Formation
- Dissolves Calcium-Phosphate Kidney stones
- Heart Muscle Contraction
- Insulin Production

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### 14 **MAGNESIUM Notes**

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- MORE MAGNESIUM REQUIRED FOR:  
High levels of Alcohol, Zinc, Vit D, Diuretics, Diarrhea

The following decreases Magnesium Absorption:

- Foods High in Fat
- Fat Soluble Vitamins (D, A, Cod Liver Oil)
- High Intake of Protein

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### 15 **MAGNESIUM SOURCES**

- Fish, Sea Food, Meat
- Dairy Products
- Fruits: Apples, Apricots, Bananas, Cantaloupe, Grapefruit,
- Vegetables: Avocados, Black Eyed Peas, Green Leafy Veg, Water Cress, Garlic, Dandelion Greens, Lima Beans, Dulse/Kelp,
- Dried Fruits, Nuts & Seeds: Millet, Figs, Sesame seeds. Misc: Tofu, Brewers Yeast, Brown Rice

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### 16 **MAGNESIUM SOURCES Herbs**

- Alfalfa

- Catnip
- Cayenne
- Chickweed
- Chamomile
- Eyebright
- Hops
- Mullen
- Nettle
- Paprika
- Parsley, Sage
- Yarrow
- Bladder wrack
- Fennel Seed
- Lemon Grass
- Licorice Root
- Peppermint
- Spring Horsetail
- Oat Straw
- Raspberry Leaf
- Red Clover
- Shepherd's Purse
- Yellow Dock

17  **POTASSIUM**

- Has Greatest Intra-cellular concentration
- Important for chemical reaction inside cells
- Major heart Electrolyte
- Essential for Nerve function
- Prevents strokes
- Helps control BP
- Regulates nutrient transfer in cell membranes

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**Signs of POTASSIUM Deficiency**

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- Abnormally dry skin
- Chills
- Acne
- Cognitive impairment
- Depression
- Constipation
- Diarrhea
- Edema
- Poor reflex function
- Nervousness
- Extreme thirst

- Glucose Intolerance
- Heartbeat arrhythmia
- Insomnia
- Growth Impairment
- Low BP
- Muscular Fatigue
- Weakness
- Nausea & Vomiting
- Salt retention

19 **POTASSIUM Notes**

- Consider potassium influence on Inter-cellular and biochemical functions. When beginning any protocol which potentially "Skews" the body's normal function in any way, such as:
  - Diet programs
  - Exercises
  - Ph Balance (Bodily acid/alkaline balance)

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Take special care when taking any Rx for:

- BP
- Kidney problems
- Heart problems
- Certain antibiotics

21 **POTASSIUM  
Food Sources**

- Minor Sources
  - Dairy products
  - Fish, meat and poultry
  - All fruits and Vegetables Kidney problems

22 **POTASSIUM  
Food Sources**

- High Sources
  - Fruits: apricots, bananas, dates, figs, dried fruits, raisings,
  - Vegetables: garlic, squash, yams, spinach, Dulse/Kelp, potatoes
  - Beans and Grains: Wheat bran, lima beans, brown rice,

23 **POTASSIUM Food Sources - 2**

High Sources: Miscellaneous

- Nuts
- Torula yeast
- Blackstrap molasses
- Brewers' yeast
- Yogurt

Herbs

Catnip, hops, nettle, sage, horsetail (spring), red clover, plantain, skullcap

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#### 24 Depletion of POTASSIUM

- Frequent Diuretics
- Laxatives or Diarrhea (without laxatives)
- Tobacco
- Caffeine
- Excessive Licorice (root)

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#### 25 4. SODIUM

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##### **Need for SODIUM**

- Proper water balance
- Maintain blood pH balance
- Function: Stomach, nerves, muscle

Considered as a partner to Potassium  
Important part of your Electrolytes

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#### 27 **Need for SODIUM**

**Virtually all foods contain Sodium, a deficiency of Sodium (very rare) can result in the following:**

- Abnormal cramps
- Dehydration
- Hallucination

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28  **PRESENTATION BY PHIL FEILDS**

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