Trace Minerals
Iron, Zinc, Copper, Iodine, Selenium, Fluoride
Presentation Notes – Trace Minerals

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Trace Minerals

- Need less than 100 mg a day
- Sometimes called microminerals
- Serve vital functions

Trace minerals include iron, zinc, copper, iodine, selenium and fluoride.
Iron

Functions
• Makes hemoglobin that carries oxygen to all body cells
• Helps your cells use oxygen

Food Sources
• Meat, fish, shellfish
• Egg yolks
• Dark green, leafy vegetables
• Dry beans and peas
• Enriched and whole-grain products
• Dried fruits

Deficiencies and Excesses

Effects of getting too little
• iron-deficiency Anemia – having too few red blood cells
• often tired
• weak
• short of breath
• pale
• may feel cold

Effects of getting too much
• nausea
• heat problems
Zinc

Functions
• Helps enzymes do their work
• Aids the immune system
• Helps wounds heal
• Helps children grow

Food Sources
• Meat, liver, poultry, fish, shellfish
• Dairy products
• Dry beans and peas, peanuts
• Whole-grain breads and cereals
• Eggs
• Miso (fermented soybean paste)

Deficiencies and Excesses
Effects of getting too little
• poor development
• rash
• decreased taste
• hair loss
• decreased immunity

Effects of getting too much
• diarrhea
• decreased copper usage
• depressed immunity
• cramps
Copper

Functions
- Helps enzymes do their work
- Helps form hemoglobin and collagen

Food Sources
- Whole-grain products
- Seafood
- Variety meats
- Dry beans and peas
- Nuts and seeds

Deficiencies and Excesses

Effects of getting too little
- Blood problems
- Poor growth

Effects of getting too much
- Nervous system disorders
Iodine

Functions
- Stored in the thyroid gland
- Produces substances needed for growth and development

Food Sources
- Saltwater fish
- Iodized salt

Deficiencies and Excesses

Effects of getting too little
- Goiter on thyroid gland
- Mental retardation

Effects of getting too much
- Poor thyroid function
Selenium

Functions
- Works as an antioxidant
- Maintains muscles, red blood cells, hair and nails
- May protect against certain cancers

Food Sources
- Whole-grain breads and cereals
- Vegetables (amount varies with content in soil)
- Meat; variety meats
- Fish; shellfish

Deficiencies and Excesses

Effects of getting too little
• vulnerable to other physical problems

Effects of getting too much
• nausea
• hair loss
• rash
Flouride

**Functions**
• Helps prevent tooth decay and strengthen bones

**Food Sources**
• Water supplies in many communities (added to help improve dental health)
• Also in some bottled waters

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**Deficiencies and Excesses**

**Effects of getting too little**
• tooth cavities

**Effects of getting too much**
• in children: mottled teeth and bones
Questions?
References and Resources

Images:
- Microsoft Office Clip Art: Used with permission from Microsoft.

Textbook

Website: