Module 1: Introduction to Nutrition

Introduction

Nutrition Choices

Food is everywhere, from ads on television, to fast food, to your dining room table. The choices you make can affect your health during your lifetime. Good nutrition choices can help prevent diseases such as diabetes, heart disease, obesity, high blood pressure, certain cancers, and osteoporosis. On the other hand, poor food choices can actually contribute to the development of the previously mentioned, as well as other diseases.

Good nutrition prevents:

- Diabetes
- Heart Disease.
- Obesity.
- High Blood Pressure.
- Certain Cancers.
- Osteoporosis.

Digestion

We all need a variety of food in our diets to provide the nutrients we need to maintain life. After eating, food is digested. Digestion is when food is broken down into nutrients and then absorbed and carried to cells in the body.

Mouth

To understand digestion, you need to take a closer look. Digestion takes place in the digestive tract which contains the mouth, stomach, and intestines. Let's first take a look at the mouth.

- Chewing crushes food then moisturizes it with saliva.
- Saliva contains an enzyme called amylase, which begins to break down food before it leaves the mouth.
- Swallowing then moves the food from the mouth to the stomach.

Stomach

Once in the stomach, food is mixed with fluid that liquefies and then digests it.

- The stomach empties in one to four hours.
- Carbohydrates digested most rapidly, followed by proteins and then fats.
- Liquids always digest faster than solids.

Intestines

The liquefied food then moves from the stomach to the small and then large intestines, where it's mixed with more digestive juices.

- Absorption - takes place when nutrients are passed into the blood stream through the cells that make up the walls of the intestines.
- Most absorption takes place in 3 – 10 hours.
- Large intestines then eliminate any undigested food, bacteria, and waste.

Enzymes

Enzymes are another important part of the digestive system because they increase the rate of chemical reaction.

- Total time for our system to digest food takes 3 – 24 hours.

Metabolism

Once food is digested and absorbed, it then undergoes metabolism. Metabolism is converting food into useful energy.

Nutrients

Digestion changes food into nutrients. Nutrients are substances your body needs for:

- Energy.
- Growth.
- Maintenance.
- Repair of body tissue.
- Regulation of body functions.

Types of Nutrients

Calories

Calories are the units used to measure energy in the body. Some sources of calories Include:

- Protein –contains 4 calories per gram.
- Carbohydrates – contain 4 calories per gram.

Fat – contains 9 nine calories per gram.

- Alcohol – contains 7 calories per gram (unlike other sources of calories, alcohol provides no useful nutrients for our bodies).

Energy Balance

A person maintains energy balance when the number of calories eaten is the same as the number used. Several factors can affect this balance including:

- Body size.
- Age.
- Gender.
- Level of activity.
- Health.
- Special factors including pregnancy, growth and breastfeeding, which requires more calories.

How Much of Each Nutrient is Needed?

Now that we know that we need nutrients, how much do we need? We all need the same nutrients, but in different quantities. The quantities vary depending on

- Age.
- Gender.
- Body size.

To help you, the Recommended Dietary Allowances and the Dietary Reference Intakes were created to give people guidelines for the amount of daily nutrients needed based on several factors.

Carbohydrates

Carbohydrates, or "carbs," provide you with two main things: Energy for your body and fuel for your brain. There are three types of carbohydrates: **sugars**, **starches**, and **fiber**.

Sugars

Sugars – Some come naturally in foods, like apples, and some have added sugars, like chocolates. Either way, you body can't tell the difference between the two types. It treats all sugars basically the same way. View the chart below for types of common sugars.

COMMON SUGARS	
Sucrose	The same thing as table sugar. Sucrose comes from plants such as beets, sugar cane, and corn.
Lactose	The main sugar in milk. Some people have trouble digesting Lactose, which is known as lactose intolerance.
Fructose	The sweetest of all sugars. It occurs naturally in fruits and honey. It is commonly added to foods, in the form of high-fructose corn syrup (HFCS).
Glucose	Found in the blood, so it's often called blood sugar. Glucose is the main source form of carbohydrate that cells use to produce energy. Glucose is present in some foods such as fruits, vegetables, corn syrup, and honey.
Others	When you look at ingredients on a food label, you'll find all kinds of terms referring to sugars. A food is likely to be high in sugars if one of these names appears first or second on the ingredient list

Empty Calorie Foods

Empty calories are calories from foods that contain very few healthy nutrients. These foods typically contain a lot of sugar. View the chart below for examples of common empty calorie foods.

COMMON EMPTY CALORIE FOODS	
Food	**Added Sugar (approx.)**
Candy (1 oz)	5 tbs
Cake, frosted (1/16 of 9' cake)	8 tbs
Cookies, commercial (4-5)	5 tbs
Doughnut, yeast, glazed (1)	5 tbs
Fruit punch (8 oz)	6 tbs
Fruit rolls (1 roll)	3 tbs
Granola bar (1 bar)	4 tbs
Lemonade (8 oz)	6 tbs
Pastry, pan dolce (1)	5 tbs
Fruit pie (1/16 of 9' pie)	5 tbs
Popcorn, caramelized (1 cup)	5 tbs
Popsicle (1)	4 tbs
Sherbet (1/2 cup)	7 tbs
Soft drinks (12 oz)	9 tbs
Sweetened fruit drinks (12 oz)	12 tbs

Starches

Another type of carbohydrate is starch. When you think starches, think of grains such as wheat, rice, corn, and oats, also legumes, dry beans, peas and starchy veggies such as and potatoes and yams. High-starch foods usually have more vitamins, minerals, and fiber than high-sugar foods.

Hidden Starches

- Less obvious.
- These starches are added to foods during cooking.
- Some examples are adding flour to gravy to thicken it, and breading on meats and poultry, such as fried chicken or nuggets.

Fiber

The final type of carbohydrate is fiber. Our bodies don't have the enzymes needed to break fiber down into smaller units for absorption. This means fiber cannot be used for energy. There are two types of fiber:

Insoluble Fiber (or roughage)

- Doesn't dissolve in water, but it does absorb water.
- Creating bulkier, softer stool makes it easier for your small intestine and colon to push waste through.
- This extra bulk reduces constipation and may help prevent diseases, such as colorectal cancer.
- Whole-wheat flour, wheat bran, nuts and many vegetables are good sources of insoluble fiber.

** **Whole grains** are a good source of fiber. A whole grain is the entire edible portion of a grain. A whole seed contains three parts: the endosperm, the bran and the germ. When whole grains are made into flour, only the endosperm remains, removing most of the fiber, along with much of the protein, vitamins, and minerals. If a grain is "enriched," it means that iron, thiamin, riboflavin, and niacin were added back to the grain. However, other nutrients that were lost, such as magnesium, vitamin B6, zinc, vitamin E, and fiber, are not restored, sole grain breads and cereals have more fiber, vitamins, and minerals than enriched or refined products.*

Soluble Fiber

- Soluble fiber dissolves in water to form a gel-like, gummy material
- It can help lower blood cholesterol and glucose levels.
- Soluble fiber is found in oats, peas, beans, apples, citrus fruits, carrots, and barley.

HEALTH BENEFITS OF FIBER	
Problem	**Possible Health Benefit of Increasing Fiber Intake**
Constipation	Fiber holds water, which increases bulk of stool, producing softer stools and reducing constipation.
Hemorrhoids	Larger, softer stools reduce straining during bowel movements.
Diverticulosis	Larger, softer bowel movements maintain the health of the colon to prevent formation of tiny sacs that may become infected.
Obesity	Increased feeling of fullness from high-fiber food, resulting in less food eaten.
Heart Disease	Eating certain kinds of fiber reduces heart disease risk.
Colorectal Cancer	Large, soft stools may dilute carcinogens: faster time through colon reduces contact of carcinogen with intestinal wall.

Increasing Fiber Intake

- Not quite sure how to increase fiber in your diet? Use these strategies:
- Eat a variety of plant-based foods.
- Eat plenty of fruits and vegetables.
- Look for 'bran', 'whole grain', or 'whole wheat flour' on food labels.
- Choose whole grains for at least half of your grain.
- Eat beans and legumes often.
- Choose cereals with 5 or more grams of dietary fiber per serving.
- Eat brown rice rather than white rice.
- Leave the skins on your fruit and vegetables.
- Choose whole fruit over juice.
- Substitute higher fiber ingredients in cooking (such as adding bran or oatmeal).

Fats

Another major class of nutrients found in foods is fat.

- Fats have more calories than carbohydrates and proteins, and eating large amounts of fat can lead to weight gain and obesity.
- Our bodies need fat to carry out certain essential functions, such as the absorption of vitamins A, D, E, and K.
- Fats are also what give our food its flavor, aroma, and texture and make us feel full.

- Eating too much of certain types of fat can lead to clogged arteries, heart disease, and other chronic diseases.
- Fats come in three types: saturated, unsaturated (monounsaturated and polyunsaturated), and trans fats.

Saturated Fats

- Saturated fats are the least healthy and can raise cholesterol levels in the blood.
- They are typically solid at room temperature.
- Usually come from animal sources, like meat, milk, cheese, butter, egg yolks, and cream.

FOODS HIGH IN SATURATED FATS	
Animal Sources	**Plant Sources**
Certain cuts of beef and pork	Coconut oil
Chicken and turkey skins	Palm kernel oil
Whole-milk dairy products	Palm oil
Butter	Cocoa butter
Lard	Chocolate
	Some hydrogenated shortenings

Unsaturated Fats

- Unsaturated fats are usually liquid at room temperature.
- They almost always come from plant sources.
- Unsaturated fats can be either monounsaturated or polyunsaturated.

MONO AND POLYUNSATURATED FAT	
Polyunsaturated	**Monounsaturated**
Safflower oil	Canola oil
Sunflower oil	Olive oil
Corn oil	Peanut butter
Soybean oil	Avocado
Fatty seafood	Nuts

- Omega-3 fats are polyunsaturated fats.
- Health benefits include: reducing the risk of cardiovascular disease and their role in brain and eye development in infants.
- Main sources of Omega-3s are cold water fish, like albacore tuna,

mackerel and salmon.
- Flaxseed, soybean, and canola oils and walnuts are also high in Omega-3s.

Trans Fats

- Trans fat, should be limited or avoided as it increases the risk of cardiovascular disease.
- Trans fats are often found in fried items, like french fries, and baked goods, like cookies and crackers.

Recommendations for Fat in Your Diet

For those over two years of age:

- Limit the total fat you eat to 20-35 percent of your total calories
- Most fat should come from foods high in polyunsaturated and monounsaturated fats, and finally,
- Limit saturated and trans fats in your diet.

TO KEEP FAT AT AN ACCEPTABLE LEVEL:	
Use lean meats (removing visible fat) and skim or low-fat dairy products.	Bake, broil, steam, and grill, rather than frying
Use liquid unsaturated vegetable oils, like olive oil or canola for cooking instead of lard or shortening.	Eat plenty of fruits, vegetables, and whole grains, the foods naturally low in total fat and high in starch and fiber.
Enjoy fish or beans as a main dish.	Limit egg yolks.
Watch portion sizes. Consume high fat foods in moderation.	Add flavor using herbs and spices instead of fat.

Cholesterol

- Waxy, fat-like substance found in every cell in your body.
- Cholesterol is not fat; it has a different chemical structure and performs different functions in the body than fat.
- It isn't necessary to get cholesterol in your diet, because your liver makes it if you don't eat foods containing it.
- **Blood Cholesterol** - made by your liver
- **Dietary Cholesterol** - cholesterol from food is called dietary cholesterol.

Cholesterol Functions

Just like oil and water, cholesterol and blood don't mix. To help cholesterol move through your blood, it's coated with a layer of protein, called a lipoprotein.

- Low-density lipoproteins (LDLs).
- High- density lipoproteins (HDLs).
- Both are made only in the body and are not found in foods.

LDL carries most of your blood cholesterol to cells where it is used.

- If too much LDL cholesterol is in the blood, it can start to build up on the walls of your arteries, increasing your risk for heart disease.
- We call LDL cholesterol 'bad' cholesterol because of its potential to increase the risk of heart disease.

HDL, on the other hand, helps remove cholesterol from the blood and prevent fatty buildup.

- This reduces your risk of heart disease, which is why it's called 'good' cholesterol.
- You can remember that HDL is the good cholesterol by thinking of the 'H' as 'hero.'

Dietary Cholesterol

- Dietary cholesterol is found only in foods from animals.
- High-fat foods like nuts, peanut butter, vegetable oil, and avocados contain fat, but they don't contain cholesterol because they come from plants, not animals.
- Too much dietary cholesterol can raise blood cholesterol levels, increasing risk for heart disease.
- You don't need to stop eating foods containing cholesterol, but just be aware of how much total cholesterol you're taking in. Click the chart to compare cholesterol amounts in foods.

HIGH CHOLESTEROL FOODS		
Food	**Cholesterol (mg)**	**Saturated Fats (g)**
Liver (3 ounces, cooked)	331	1.9
Egg (1 yolk)	213	1.6
Beef (3 ounces, cooked)	76	7
Whole milk (1 cup)	33	5.6
Cheddar cheese (1 ounce)	30	6
Bacon (3 medium slices)	16	3.3
Lard (1 tbsp.)	12	5
Skim milk (1 cup)	4	0

Proteins

In addition to carbohydrates and fats, another major class of nutrients found in foods is protein. Proteins are made up of amino acids; when amino acids are put together in different combinations, they make up the thousands of different proteins in the body.

- Proteins perform all sorts of functions, such as:
- Build and maintain body tissue.
- Part of enzymes and hormones.
- Repair cells.
- Help transport nutrients and oxygen through the body.
- Provide energy when there are not enough carbohydrates and fats available.

Who needs more protein?

- We need more protein during periods of rapid growth.
- Children, as well as pregnant and breastfeeding moms, need more protein in their diets.
- Foods that come from both plants and animals contain protein.

PROTEIN IN FOODS	
Food	**Protein (g = grams)**
Dairy (8 oz. milk, 1-1/ 2 oz. cheese)	8g
Meat (1 oz. meat/poultry, 1/2 cup legumes)	7g
Grains (1 slice bread, 1 portion cereal)	3g
Vegetables (1/ 2 cup cooked, 1 cup raw)	2g
Fruits	0g

Vitamins

Vitamins are essential nutrients that your body needs in very small amounts. All of the vitamins that our bodies need can be found in the different types of foods we eat. Vitamin supplements can be taken when it is not possible to consume enough of one or more of these essential vitamins in the typical diet.

- Partner with other nutrients to build, maintain and repair our body tissue and regulate body processes.
- Vitamins don't provide energy themselves, but they do help you get energy from carbohydrates, fats, and proteins.
- 13 essential vitamins your body needs to remain healthy.

Two Categories of Vitamins

Fat Soluble

- Dissolve in fat, not water, and then are stored in your body.
- They include vitamins A, D, E and K.
- Fat soluble vitamins are stored in your body and consuming too much can have toxic effects.

Water Soluble

- Dissolve in water and are not stored in significant amounts in your body.
- Water-soluble vitamins include: vitamin C and eight B-complex vitamins.

Vitamin Supplements

A well-balanced and varied diet provides all the vitamins most people need to stay healthy. However, there are reasons to take vitamin supplements such as:

- During rapid growth in infants and teens.
- Stress to the body.
- Pregnancy or breastfeeding.
- Those recovering from illness.
- Those on a weight-loss diet.
- In Oregon, where sunshine is not a dependable source for our bodies to make vitamin D so use of a supplement is recommended.

** Again, always remember, nutrition experts believe supplements should never replace a healthy diet.*

- Many people don't get enough of the key vitamins that are crucial to the growth of healthy tissue.
- Important to pregnant and breastfeeding women, infants, and adults.

Vitamin A

- Helps your body resist infection.
- Keeps the eyes, skin, and internal organs healthy.

VITAMIN A FOODS	
Food	**Serving Size**
Sweet potato, cooked	1 medium (5 in. long)
Carrot, raw	1 medium (6 in. long)
Spinach, cooked	1/2 cup cooked
Cantaloupe	1 cup cubes
Mango	1/ 2 medium
Winter squash, cooked	1/ 2 cup cubes
Spinach, raw	1 1/ 2 cups
Red bell pepper, raw	1/ 2 cup sliced
Vegetable juice, canned	6 oz.

Vitamin C

- Also known as ascorbic acid or ascorbate.
- Helps your body resist infection.
- Increases iron absorption, helps heal wounds.
- Gives structure to blood vessels.
- Helps mend broken bones.

HOW TO GET THE MOST VITAMIN C IN FOODS
• Avoid soaking vegetables in water. • Steam vegetables or cook them in small amounts of water for a short time. • Cook potatoes in their skins. • Cover and refrigerate juices. • When choosing produce, choose items that are freshest • Grow your own fruits and vegetables • Choose either fresh produce that is in season or frozen produce.

Folic Acid

- Also called folate.
- Helps your body make new cells.
- Helps form hemoglobin.
- Protects against heart disease.
- Reduces the risk of neural tube birth defects.

FOLIC ACID-RICH FOODS	
Food	**Serving Size**
Lentils	1/ 2 cup
Pinto beans	1/ 2 cup
Garbanzo beans	1/2 cup
Black beans	1/2 cup
Spinach	1/ 2 cup cooked
Asparagus	1/ 2 cup
Orange juice	1 cup from frozen conc.
Romaine lettuce	1 cup shredded
Sunflower seeds	1/ 4 cup

Facts about Folic Acid

- While folic acid may not be as well known as the other vitamins, it's every bit as important.
- Folic acid is naturally present in green leafy vegetables, orange juice, dried beans, peanuts, avocados, and enriched grain products.
- Folic acid is sensitive to heat, so you should use raw vegetables in your diet or limit vegetable cooking time to 5 to 10 minutes.

Women and Folic Acid

- Essential for women during child bearing years.
- The recommended dosage is 400 micrograms of a daily supplement along with folic acid found in foods.
- Medications such as aspirin and interfere with folic acid in the body making it even more important that women get their daily dosage.

Folic Acid and Birth Defects

- Folic acid helps prevent birth defects known as neural-tube defects, or NTDs.
- With these birth defects, the babies' brains or spinal cords don't develop properly.
- Spina bifida is an NTD.

Antioxidants

Antioxidants are vitamins and minerals in foods that prevent damage or repair damage to body cells

- Essentially they "take the hit" to protect healthy cells.
- Antioxidants improve your immune function.
- May lower risk of infection and cancer.

Minerals

Minerals are micronutrients, so like vitamins, only small amounts are needed to accomplish a great deal.

- Minerals do not contain calories.
- Unlike vitamins, they aren't destroyed by heat, so cooking doesn't affect the content. When food is burned down to ash, the ash remaining is the food's mineral content.

Multitasking Minerals

- Minerals are part of the cells in your body including red blood cells, bones, teeth, nails, and muscle structure.
- Minerals regulate chemical reactions in your body, including maintaining water levels inside and outside the cells, keeping a regular heartbeat, helping nerves respond normally, allowing blood clotting in wounds, and regulating the release of energy from food.

Types of Minerals

- Major minerals – calcium, phosphorus, potassium, magnesium, sodium, chlorine and sulfur.
- Trace minerals – iron, iodine, fluoride, zinc, manganese, chromium, molybdenum, copper and selenium.

Calcium

- Helps to form and maintain bones.
- As your body uses calcium, you must replace the calcium with calcium-rich food.

CALCIUM-RICH FOODS		
Food	**Serving Size**	**Calcium (mg)**
Total cereal	3/4 cup	1000
Calcium-fortified orange juice	8 oz.	350
Low fat yogurt	1 cup	300
Cheddar cheese	1.5 oz.	300
Skim milk	1 cup	265
Canned sardines with bones	3 oz.	200
Pudding made with milk	1/2 cup	150
Spinach, cooked	1/2 cup	120

Calcium Food Sources

- Milk and milk products are the best source of calcium.
- Dairy products offer protein, vitamin D and phosphorus.
- Individuals with milk allergies or those on special vegetarian diets, can get calcium from fortified soy milk, firm tofu, fish with edible bones, fortified foods.

Risk Groups Calcium Deficiency

Since calcium is such a crucial part of a balanced diet, there are several groups at risk for calcium deficiency.

- Children – calcium deficiency can interfere with growth and affect bone density and bone loss.
- Women, girls, and post-menopausal women – may limit their dairy intake because of fears of weight gain from calories and fat.
- Strict vegetarians – calcium levels can be maintained with careful dietary planning. Lactose intolerant – limit their dairy intake, so calcium levels should be evaluated.

Calcium Supplements

- May be recommended by physicians.
- Should never replace a healthy diet.
- Can interfere with iron absorption.
- Excess calcium from supplements may cause kidney problems
- Drinking milk does not result in excessive calcium intake.

Fluoride

Fluoride strengthens developing tooth enamel and protects teeth from decay.

- Water is the main source of dietary fluoride.
- Fluoride may be naturally present or added to the community water supply.
- Fluoride levels may vary from one area to another.
- Fluoride supplements are recommended in Oregon in areas where fluoride is not added to the water supply.

Iron

- Trace mineral.
- Helps prevent and fight infections.
- Promotes brain development.
- Part of the hemoglobin, which carries oxygen to the body's cells.
- Children and pregnant women going through rapid growth periods need extra iron.

IRON-RICH FOODS		
Food	**Serving Size**	Iron (mg)
Total cereal	3/4 cup	18.0
Soybeans, cooked	1/2 cup	4.0
Blackstrap molasses	1 tbsp.	3.5
Potato, baked with skin	1 medium	2.7
Beef (ground, extra lean, cooked)	3 oz.	2.2
Pinto beans, cooked	1/2 cup	2.2
Figs, dried	5 medium	2.2
Tofu, firm	1/2 cup	1.8
Apricots, dried	10 halves	1.6

Two Forms of Iron in Food

- **Heme Iron** - comes from animal products and is found in meats like chicken, beef, pork and seafood.
- **Non-heme Iron** - comes from plants and is found in dried beans and vegetables, tofu, dried fruits and fortified cereals.

Tips Increasing Intake

- Include food rich in vitamin C when planning meals.
- Cook foods in iron pots and pans.
- Include meat as part of the meal – iron from the meat is easily absorbed and helps your body absorb iron from plants.
- Be aware some things may hinder iron absorption - excess amounts of foods such as caffeinated drinks, spinach, chocolate, and fiber, as well as antacids and calcium supplements, may negatively affect absorption.

Poor Iron Intake

- Children who eat iron-poor foods, replacing iron rich foods.
- Children who drink too much milk, replacing iron-rich foods.
- Infants weaned to cow's milk before one year may have poor iron intake.
- Women and teenage girls on calorie restricted diets may also have poor iron intake.

Results Poor Iron Intake

- Can contribute to iron-deficiency anemia.
- Can cause irritation to stomach lining/blood loss.
- Hinders iron absorption from foods.

Excess Iron

- Can be harmful.
- Overdoses of iron in children can be dangerous, even fatal.
- Keep multivitamins and iron supplements out of children's reach.

Sodium

Sodium, known as sodium chloride, is another important mineral for our bodies. Both sodium and potassium are electrolytes, meaning they transmit electrical currents in the body.

- Some sodium comes from table salt.
- The majority, 77% comes from sodium added during manufacturing process.
- Most Americans get too much sodium in their diets.
- In healthy people, sodium is excreted.
- With sodium sensitivity, high sodium intake increases blood pressure.

TIPS FOR LOWERING SODIUM INTAKE
• Read the food label to check the sodium content of processed foods, especially frozen dinners, packaged mixes, soups, salad dressings, and sauces. Salt content varies greatly between manufacturers and processing methods. Choose fresh, frozen, or low sodium canned vegetables, rather than regular canned vegetables. • Rinse canned vegetables to reduce sodium content by 23 to 45 percent (note some B vitamins will also be lost). • Choice fresh or frozen meat, poultry, and seafood rather than canned, cured, or smoked meats. • Limit salty condiments (soy sauce, mustard, pickles, etc.). • Replace salt with spices and herbs to enhance the flavor in food. • Taste food before salting it. • Leave the salt shaker in the cupboard.

Water

You've heard it's important to drink plenty of water, but water not only quenches your thirst, it's essential for your health and survival.

- Our bodies are about 45 to 75 percent water.
- We get water by drinking it, by drinking other beverages, and in solid foods rich with water, such as juicy fruits and vegetables.

Bodies Don't Store Water

- Drink water on a daily basis to replenish loss.
- Beverages like milk and juice contain water.
- Some solids contain water.
- Fluids from caffeinated and non-caffeinated beverages count towards water intake.

Factors that Increase Fluid Needs

- Pregnancy.
- Breastfeeding.
- Old age.
- Stress.
- High fiber diets.
- Illness.
- Exposure to extreme temps.
- Strenuous exercise.

Dehydration

- Occurs when the body loses so much water that function are affected.
- People who work or play outdoors or in hot climates are at risk.
- Dehydration can be caused by diarrhea, vomiting and fever.

Avoiding Dehydration

- Take water breaks.
- Keep a water pitcher with water in the refrigerator.
- Keep a water bottle with you.
- Include water, soup, or some other beverage.
- Be sure to drink some water before, during, and after physical activity.
- Enjoy fruits and vegetables that have a high water content.

Summary

You just learned about basic nutrition concepts, such as:

- how food is digested in the body
- the different classes of nutrients found in food
- how each of these affects your health.

You now know about the role these elements play in your body as well as in which foods these nutrients are found:

- carbohydrates
- fats
- proteins
- vitamins
- minerals
- water