

Nutrition Basics The Balancing Act



The Oregon Home Care Commission

In 2000, the citizens of Oregon voted to amend the state constitution to create the Oregon Home Care Commission. The Commission is responsible for ensuring the quality of homecare services that were funded by the Department of Human Services for seniors and people with disabilities. The Commission has four major responsibilities:

- To define the qualifications of homecare workers and ensure that high quality, comprehensive home care services are provided to the elderly and people with disabilities;
- 2. To create and maintain a statewide registry of homecare workers;
- 3. To provide training opportunities for homecare workers and consumers; and
- 4. To serve as the "employer of record" for purposes of collective bargaining for homecare workers whose pay comes from public funds.

Nine commissioners are appointed by the governor for three-year terms. Five are consumers of homecare services. The other four represent the Department of Human Services (DHS), the Governor's Commission on Senior Services, the Oregon Disabilities Commission, and the Oregon Association of Area Agencies on Aging and Disabilities. The Commission meets on the first Thursday of each month in Salem and meetings are open to the public.

Nutrition Basics: A Balancing Act.

Nutrition Basics provides a foundation of sound nutrition information and application using person-centered tools and practices. The course covers the six nutrient categories, meal balance, sensory concerns (a.k.a. picky or selective eating), oral motor issues and texture modifications, the marriage of eating and behavior, use of the person-centered strategies for supporting a person around food, and more.

At the end of this course, participants will be able to:

- List the six nutrient categories and their main role in nutrition.
- Create a balanced menu given food selected by someone else
- Describe the role of the PSW or HCW role in the trust model for supporting good nutrition.
- Describe the impact of meal timing on blood glucose and behavior.
- List the four most common nutrition-related concerns experienced by people who are aging and those who with intellectual and developmental disabilities.
- Describe the impact of sensory dysfunction or sensory changes due to aging on food choices.
- Understand the importance of preparing appropriate food textures for chewing and swallowing skills.

Mealtime is a spacer.

It's such a nice way to travel

between each of the other moments in life.

It's a breath between getting from and going to,

And at the same time, it's somewhere to be.

Marc and Ronna Gold as cited in Perske, Clifton, McLean, and Stein, 1986

Food.

It's one of the most basic parts of life. It is the fuel for our bodies. Without it, our body cannot work. Food is also one of the great connections in every community. When people come together, there is food. When we celebrate, there is food. When we are sad, there is food. When we share experiences with others, there is food. And food is one of the key elements to meal time.

There are times, though, when food is more foe than friend:

- When it hurts to eat,
- When it reminds a person of a frightening moment,
- When it's hard to chew,
- When we are just too tired to eat,
- When food is what makes us sick, or
- When we are no longer able to eat the foods we love the way we love them.

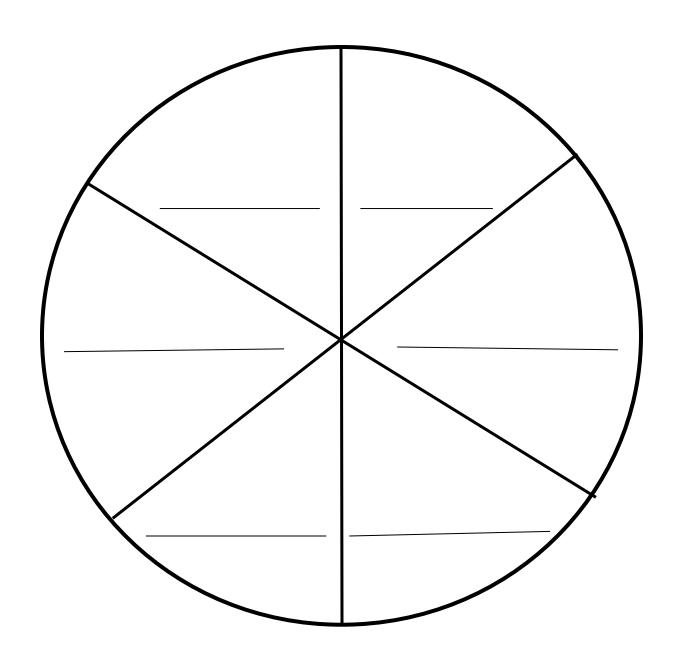
Sometimes, even when food brings trauma or drama, **meal time** is still welcome. It's not just about the food.

As you support individuals who hire you, do not lose sight of the magic that food, and mealtime, can bring to each person, each day.

What is Wellness?

What is "wellness" to you?	
What does wellness to you for the people you support?	
What is your role in supporting wellness for them?	

What is Wellness?



Nutrition

What is, "nutrition"?

It's the study of food: What's in it, what it does for our bodies, and how the nutrients in food work together in our body.

What it is not is a "diet," or a specific way of eating. By studying food and how it works in the body, we have learned ways to use food to live well, to treat – and sometimes prevent – diseases or illnesses.

The elements of food are broken into two main categories: macronutrients and micronutrients.

Macronutrients

There are six nutrient categories. Three of them provide calories (energy) and three of them do not. The three that provide calories are called Macronutrients.

Carbohydrate

Main Role: !! Energy !!

Provides Calories? Yes No

Calories/1 gram of Carbohydrate

Other important information:

There are two types of carbohydrates:

- 1. Simple Carbohydrates sugar: glucose, lactose (milk sugar), fructose (natural sugar in fruit), sucrose (table sugar). Simple carbohydrates are the first source of energy the body receives from a meal.
- 2. Complex Carbohydrates starch, bread, starchy vegetables, fruits. It takes a little longer to convert complex carbohyrdates to energy the body can use. They are the second source of energy the body receives from food.

Fiber

Fiber is a very important nutrient. It is considered a carbohydrate. Therefore, any energy that the body is able to get from fiber will provide 4 calories/ 1 gram.

There are two types of fiber: soluble and insoluble. Each serves a very important role.

Soluble Fiber: Dissolves in water.

Role of soluble fiber:

Soluble fiber draws water to it in your gut and forms a gel.

Soluble fiber:

• Helps lower "bad" cholesterol by drawing it in with the water.

Adds a feeling of fullness.

Good sources of soluble fiber:

Oatmeal	Other oat products	Apples
Fresh Oranges	Pears	Lentils
Fresh Strawberries	Nuts	Flaxseeds
Dried beans/legumes	Blueberries	Psyllium
Cucumbers	Celery (not the string)	Carrots

Insoluble Fiber: Does **not** dissolve in water, or in your gut.

Role of insoluble fiber:

Insoluble fiber adds bulk to the waste products of your food. This helps it pass through your gut. Insoluble fiber plays an important role in managing constipation –or keeping you "regular." It's what keeps things moving!

Good sources of insoluble fiber:

Whole Wheat Foods	Whole Grains	Wheat Bran
Corn Bran	Nuts	Barley
Brown Rice	Zucchini	Broccoli
Cabbage	Onions	Carrots
Cucumbers	Green Beans	Dark Leafy Greens
Raisins	Grapes	Fruit
Root Vegetables Skins	Celery (the string)	Peel of fresh fruits
(such as potato skins)		(apples, pears, etc)
Chia seeds		

Protein

Main Role: Growth, maintenance, and repair.

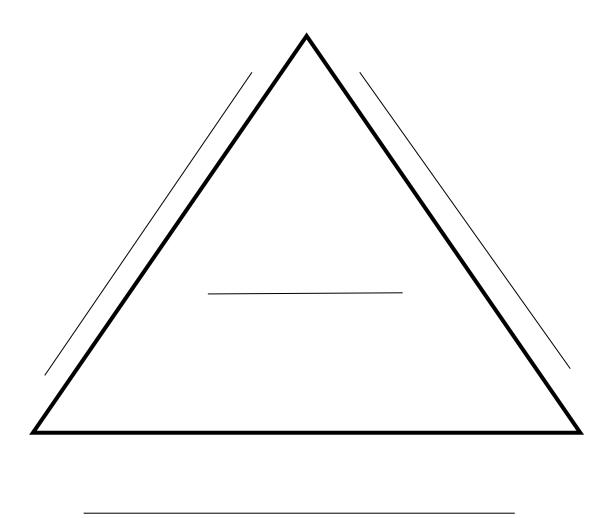
Provides Calories? Yes No

Calories/1 gram of Protein _____

Other important information:

- Protein needs increase after age 50
 - o Increase is at least 1 ½ ounces of meat depending on weight.
- Protein needs increase during illness (even a cold!)
- Protein is a secondary source of energy.
 - o If you have used all the energy from carbohydrates eaten, your body will convert protein to energy next.

Complementing Proteins



Proteins are made from amino acids. There are 20 required amino acids for every protein your body creates. Nine (9) of those 20 amino acids cannot be found naturally in your body. They must come from food sources. They are called essential amino acids.

You can get a complete protein, with all nine essential amino acids from an animal sources. Other foods have some, but not all of the essential amino acids. You can combine foods to make sure you have them by using the triangle. Combine any two sides of the triangle to complete all nine essential amino acids.

It is not necessary to "complete" proteins at every meal. It is good to understand so that people who do not eat meat or animal products understand the importance of eating a variety of foods.

Fill in the blanks above to complete the chart.

Fat Main Role: Calories, flavor, smoother mouthfeel, and transporting the fat soluble Vitamins (D, E, K). Provides Calories? Yes. No.
Provides Calories? Yes No
Calories/ 1 gram of Fat:
Other important information:
 Fat provides more than twice the calories per gram than the other two. Some fats are "essential." Our brain is fueled by fat. The last source of energy used by the body from the foods we eat. Though fat is how we store energy, dietary fat (what we eat) does not go directly to storage. Fats are filtered through the liver. The extra fats, or waste product, leaves through our skin or in a bowel movement.
"Good" Fat and "Bad" Fat There are different types of fat in our diet. They all have the same number of calories/gram They all transport the fat-soluble vitamins. What is different is how they behave in our body after we eat them. Some are necessary for our body to work! Fats are generally put into categories related to heart health. Some are considered "good" and others "bad."
Alcohol
Provide Calories? Yes No
In which Macronutrient group does alcohol belong?

Calories/1 gram: _____

Carbohydrate Protein Fat







- Hydrogenated Oils
 - & **Trans** Fats

Saturated Fats

- Can lower good cholesterol levels Can raise bad cholesterol levels
- Can increase risk of heart disease & stroke Can increase risk of type 2 diabetes

Can increase risk of heart disease & stroke

· Can provide essential fats that your body

needs but can't produce itself

· Can lower risk of heart disease & stroke

Can lower bad cholesterol levels

Polyunsaturated Fats

Monounsaturated &

G005

· Can lower good cholesterol levels

Can raise bad cholesterol levels

Processed foods made with partially hydrogenated oils

Most saturated fats come from animal sources, including meat and dairy, and from tropical oils

Plant-based liquid oils, nuts, seeds and fatty fish

EXAMPLES

Partially Hydrogenated

// Butter

Beef, Pork & Chicken Fat

Avocados

Oils (such as canola, olive, peanut, safflower and sesame)

Some Baked Goods

Fried Foods

Margarine // Stick of

Tropical Oils (such as coconut, palm kernel and palm oils)

(such as whole milk cheeses) Cheese

Nuts & Seeds (such as flaxseed,

0

(such as tuna, herring, lake trout, mackerel, salmon and sardines)

Fatty Fish

sunflower seeds

and walnuts)

Eat a healthy dietary pattern that: Includes American Heart Association Recommendation

good fats

Limits Saturated fats

Keeps trans fats as **LOW** as possible For more information, go to heart.org/fats

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Micronutrients

The next three nutrient categories do **not** provide energy. Many, however, are necessary for your body to be able to convert and use the energy from the Macronutrients.

Vitamins

Vitamins are micronutrients are essential for your body to work. Each one contributes to a different set of functions, such as building bones, releasing energy, producing energy, and more.

Provides Calories? Y N

Other important information
There are two types of vitamins: Water soluble and Fat soluble.
Which vitamin is needed for bone health? Vitamin
Which vitamins are important for energy release? Vitamin
Which vitamin is needed more in those who are older and vegans and <u>must</u> come
from an animal source? Vitamin

Key Vitamins

Vitamin D

Role of Vitamin D:

- Works with Calcium to build and maintain strong bones.
- Carries messages between your brain and other body parts.
- Cow's milk is enriched with Vitamin D to ensure it has equal parts to calcium. This enriching process is legally mandated.
- It's a hot research topic right now!

Good sources of Vitamin D:

Sunshine!	Tuna	Salmon
Mackerel	Liver	Cheese
Egg Yolks	Enriched Dairy Products	Enriched Cereals
Other Enriched Products		

B Vitamins

Role of the B-Vitamins: the B Vitamins are water soluble. The B Vitamins are important for releasing energy from the food you eat. Flour, cereals, and other wheat products are enriched with B-Vitamins. For wheat and rice products, this enrichment is required by law. Other types of flours are not required to be enriched.

Good sources of B-Vitamins:

- When in doubt, choose dark, leafy green!
- Dairy products
- Legumes (dry beans, peas, and lentils)
- Vitamin B-12 is the is found only in animal products.
- Avocado
- Eggs

Minerals

Main Role: One of the main tasks of minerals is to maintain the balance of water in the body. They are also an important key to unlock reactions between nutrients in your body to do things such as building bones.

Provides Calories? Y N

Other important information

Minerals are water soluble. They include nutrients such as Calcium, Magnesium, Phosphorus, Sodium, zinc, selenium, and Potassium.

Calcium

Role of Calcium:

- Works with Vitamin D to build and maintain strong bones.
- Carries messages between the brain and other parts of the body.
- Is a needed element to release important hormones and enzymes.

Good sources of Calcium:

Dairy Products	Kale	Broccoli
Dark Leafy Green	Fish (with soft bones that	Foods that are fortified
	you eat, such as sardines	with Calcium.
	and salmon)	

A note about Calcium supplements:

Many people take Calcium supplements to help prevent or reduce osteopororsis. Here are some things to consider:

- Keep the amount to 500mg of Calcium at a time.
- Take Calcium carbonate with food.
- If you use antacid pills such as Tums® to get Calcium, you need to eat 4-6 in a day to meet your Calcium needs.
- Calcium **citrate** can be taken with or without food and is easier for your body to absorb.
- Calcium supplements can cause gas, bloating and constipation.
 - This can be reduced by spreading out the amount of the supplement over the day.

Water

Main Role: Water is an essential element for your body. There is no reaction that happens in your body that does not require or produce water!

Provides Calories? Y N

Dehydration

Dehydration is an issue for everyone. Even more so for the people supported by personal support and homecare workers. People can become dehydrated for many reasons including a change in condition or feeling unwell.

Early signs of dehydration:

- Thirst.
 - You are already mildly dehydrated when you feel thirst.
- Sleepiness or feeling "tired."

More moderate symptoms of dehydration:

- Headache
- Constipation
- Dizziness
- Muscle Cramps

Signs of serious dehydration:

- Irritability
- Confusion
- Pounding headache
- Sunken-looking eyes
- Feeling warm (almost like a low fever)

Here are some interesting facts about the process of dehydration:

- 1% Feeling of thirst
- 2% Stronger thirst, discomfort, loss of appetite
- 3% Dry mouth. Reduced physical performance
- 4% Apathy and nausea
- 5% Trouble concentrating
- 6% Trouble with temperature regulation
- 8% Dizziness, breathing is harder, and weakness.
- 10% Wakefulness, confusion, muscle spasms and cramps, swollen tongue
- 11% Begins to affect organs such as kidneys and blood circulation

Amount of Water in Fruits and Vegetables

Fruits	Percent Water
Strawberries	92
Watermelon	92
Grapefruit	91
Cantaloupe	90
Peach	88
Cranberries	87
Orange	87
Pineapple	87
Raspberries	87
Apricot	87
Blueberries	86
Plum	85
Apple	84
Pear	84
Cherries	81
Grapes	81
Banana	74

Vegetables	Percent Water
Cucumber	96
Iceberg Lettuce	96
Celery	95
Radish	95
Zucchini	95
Red Tomatoes	94
Green Tomatoes	93
Green Cabbage	93
Red Cabbage	92
Cauliflower	92
Eggplant	92
Sweet peppers	92
Spinach	92
Broccoli	91
Carrots	87
Green Peas	79
White Potato	79

Fruits and vegetables with 85% or more water are good choices for improving hydration.

Adapted from Water Content of Fruits and Vegetables prepared by Sandra Bastin, Foods and Nutrition Specialist and Kim Henken, Extension associate for ENRI. Food content information from Bowes & Church's Food Values, 1994.

Nutrients to Watch

Though everyone has unique needs, there are some nutrients that are common nutrients to watch for the those you support: seniors, people with physical disabilities, people of all ages who experience intellectual and developmental disabilities, and those with mental health concerns. When supporting someone with meals, food choices, and shopping consider what you have learned about these nutrients:

- Fiber
 - Soluble fiber
 - Insoluble fiber
- Vitamin D
- Calcium
- B Vitamins including Vitamin B-12
- Protein

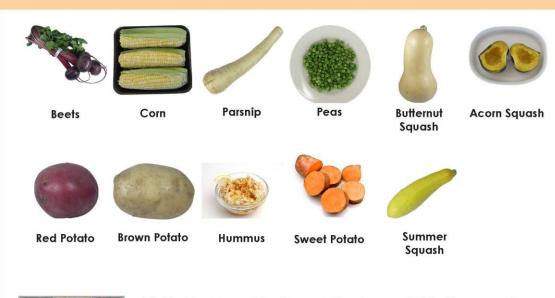
What is a Non-Starchy Vegetable?

You need to be able to answer that question to follow the Choose My Plate method. Here are some nonstarchy vegetables.



What is a Starchy Vegetable?

Starchy vegetables are foods that are in the vegetable group, but have calories like the grain group. That means they have more calories than Non-Starchy Vegetables. When you put them on your plate, they go in the orange, grain area.





All dried beans and lentils are a starchy vegetable. They are also used as a protein for non-meat meals.

Hint:

Beans and lentils are a starchy vegetable if meat is also served.

Names of beans include: Black Beans, Red Beans, Garbanzo Beans, Navy Beans, and Kidney Beans.

There are many colors of Lentils: brown, black, green, orange, and red!

Dairy G	roup
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Notes of Interest

Fruit Group

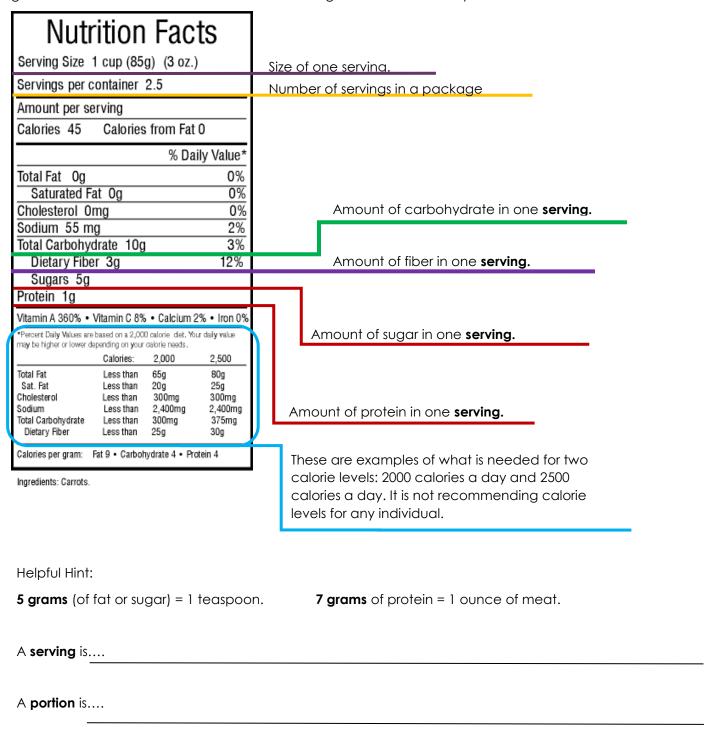
Notes of Interest

Grain Group

Notes of Interest

The Anatomy of a Nutrition Label

The food label is a great resource for you. Use it to discover if a packaged item meets your employer's nutrition goals. Note: the food label is scheduled to change over the next five years.



Person-Centered Strategies

Person-Centered Strategies are more than putting a person's interests first. It's a promise to listen with the intention of hearing what the person has to say and to act on what you hear. Sometimes that's hard to do. You may want to do something else because you can see it will be a better option. You might be right. However, being person-centered means acting on what the person you are supporting is telling you – because they are the one making the choices, unless it leads to an unsafe situation.

Person-centered strategies are built on a trust relationship.

Division of Responsibility and Feeding

Ellyn Satter, MSW, RD, created a way of looking at the relationship between parents and children to divide the responsibilities and reduce the fighting around food. It is now called "the trust model" for feeding. She presented that,

Parents are responsible for what, where, when, and how food is presented.

Children are responsible for whether or not the food is eaten.

Homecare and Personal Support Workers can use this same trust model when working with children in the following way:

Support Providers are responsible for **what**, **when**, **where**, and **how** food is presented within the parameters of the **family's values** as long as it does not cause an unsafe situation.

The supported **child** is responsible for **whether or not** the food is eaten.

What this means is that when you are supporting someone, if the person and the family follow a particular type of diet or style of eating, it is your job to follow that process.

Trust Model for Adults Receiving Support

As the person grows, it is the role of the parents and supports to begin to shift the responsibility for deciding what, where, when, and how food is presented to the teenager or adult. As this happens, your role as a homecare or personal support person becomes one of being an engineer, mentor, and support.

You will provide support by assisting with shopping, creating menus together, making food selections, modeling the expected behavior, exploring new ideas, and more. All of this by listening to what the person is telling you about their food and acting on what you hear to provide the supports necessary for them to reach their goal.

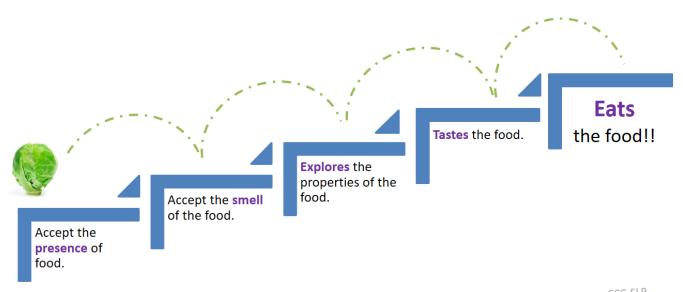
Informed Choices

All of this is important to provide person-centered supports that lead to informed choices. Making informed choices is a process of education over time. There's no right or wrong choice. The goal for an informed choice is to support your employer in choosing between all the options available.

An informed choice is one in which a person:

- Knows what the choices are,
- Understands the impact of the choices available, and
- Is one that a reasonable person would make.

Sensory Stages to Food Acceptance



Adapted from "Steps to Eating" Kay Toomey, CCC-SLP

What can you do as a Homecare or Personal Support Worker to support your employer's sensory needs around food?

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•	
•	
•	

Meal Balance and Meal Timing

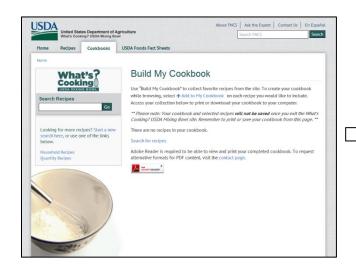
It's not necessary to eat perfectly balanced every moment of every day. Most people don't. You may think it isn't possible for the person you support to eat well when following the trust model and using person-centered strategies. Everyone chooses for different reasons. There are some tools to use to help guide people to choose balanced meals.

One is to look at meal balance in terms of the macronutrients: Carbohydrate, Protein, and Fat. Each one has different primary roles. The body needs a little of each to be able to fuel itself, obtain vitamins and minerals, and to repair tissues and grow.

What is one way to define a balanced med	eal?
Meal Timing	
How many hours between meals?	
	Carbohydrate Protein Fat
	1 2 3 4 5
	Hours
	Hous
Why is this important?	

Cookbook Resources

USDAS Recipe Finder: http://www.whatscooking.fns.usda.gov/

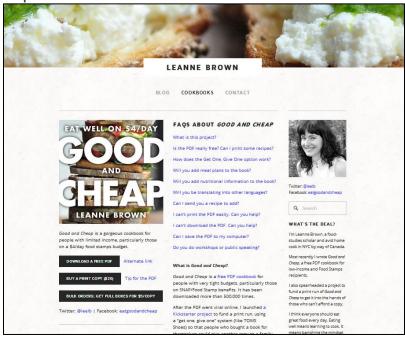




Good and Cheap. Eat Well on \$4 a Day.

By Leanne Browne

http://www.leannebrown.com



Common Modified Diets

A modified diet is one that has a specific twist to it. In this course, you learn the basics of nutrition. The following are common changes to basic nutrition information that you may see as a personal support or homecare worker:

- Mechanical Soft or Easy Chew.
- Puree
- Dysphagia
- Thickened Liquids
- Low Salt
- Diabetic
- DASH Diet
- Mediterranean Diet (Heart Healthy)
- Low fat
- Gluten Free
- Gluten Free/Dairy Free

Many times the people you support will make these changes on their own – rather than due to the recommendation of a doctor or dietitian. That's Ok. You may also learn from the information provided to you from the personal agent or case manager, a specific diet modification has been ordered by the doctor. If so, ask the person you work with to assist you in understanding what to do to meet those modifications.

Nutrition-Related Concerns

Nutrition is also more than food! The food a person eats effects how the body works. As we age, and for those who have disabilities – both intellectual/developmental disabilities and physical disabilities – there are conditions that are more common. Many of these have been covered in earlier sections. These include:

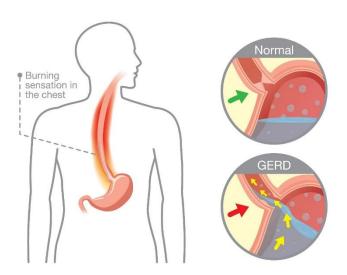
- Gastro-Esophageal Reflux Disease (GERD or "reflux"),
- · Constipation,
- Dehydration,
- Aspiration, and
- Sleep.

Gastro-Esophageal Reflux Disease

Gastro-Esophageal Reflux Disease is also called "reflux" or "GERD." It is also often called, "heartburn." It is something many, if not most, seniors experience at some time and to some degree. Many people with disabilities also experience reflux due to differences in muscle tone, digestion, and other issues.

Simply put, reflux is when the contents of your stomach (acid) pushes backwards up your esophagus toward your mouth. The "burn" is the feeling of the acid against the sphincter between your esophagus and your stomach.

Reflux is often "silent" until there is a crisis. That crisis can be pain or damage. Many times, especially for individuals with developmental disabilities, the pain is communicated through behavior.



Physical Symptoms of GERD

Some physical symptoms of GERD include:

- persistent cough 30 minutes after eating,
- "retching,"
- Someone says they are having a "second taste of the meal,"
- Hoarseness,
- Difficulty swallowing food,
- Loss of enamel on teeth,
- Poor sleep,
- If not treated, appetite may decrease.

Common Behavioral Symptoms of GERD

Sometimes reflux becomes apparent because of behavioral signs. You may observe something, or they may complain about something that is considered "behavioral." Here are some examples of behavioral Symptoms of GERD.

- Not being able to sit still for 30-45 minutes after meals.
 Sitting can force food to push against the esophagus more than it does when standing. What you will see is someone who avoids sitting after meals for about an hour, or can sit only for 5-10 minutes at a time before needing to walk around. This may be accompanied by burping.
- Irritability especially for the hour after meals.
 This is due to pain or discomfort that the person may or may not be aware they feel. Chronic pain can make you grumpy!
- Withdrawal, depression, or "regression."

 A common description of anyone experiencing chronic pain who also experiences challenges with communication is withdrawing, or seeming to "lose" skills. More often than not, a "loss of skills" or "withdrawal" from activities has a medical cause such as pain.
- Poor sleep.
 Not being able to sleep at night because of heartburn is one of the most common and obvious signs of reflux.

What You Can Do to Support Someone Who is Experiencing Reflux

- Encourage and teach appropriate portions.
 - **Goal:** encourage the person you support to reduce overeating at a meal.
- Evaluate activity and eating habits to reduce weight. Reach and maintain an appropriate body weight.

Goal: support the person you work with to be active by engaging in an activity of their choice. Activity will reduce reflux.

Goal: support the person you work with to reduce their weight, if appropriate, and if they choose, and in the manner in which they choose.

Watch for trigger foods.

Goal: Once you both learn the trigger foods, encourage the person you support to make informed choices about whether or not to include them in the menu.

- Keep an eye on caffeine a common trigger.
- Keep an eye on carbonated beverages a common trigger.
- Spend time with the person before bed time or make a list of things to do at night that encourage sleep and do not include food.

Goal: Eliminate late night snacks.

 Encourage the person you support to eat foods that are high in fiber, drink plenty of water and other fluids, and be active.

Goal: to keep constipation under control. It can trigger reflux.

Aspiration

Aspiration is when food or liquid is inhaled is inhaled into the lungs. Aspiration is often "silent," for those who have lower muscle tone or trouble swallowing. This can lead to a type of pneumonia.

People who are at higher risk of for aspiration include those who

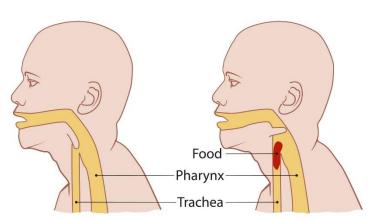
- Experience seizures,
- Have lower muscle tone that affects chewing and swallowing,
- Experience GERD,
- Eat too fast,
- Do not chew foods fully,
- "Stuff" or "pocket" foods in their mouth,
- Take medications that lower muscle tone or sensitivity in the mouth,
- Who are eating in an unsafe position.



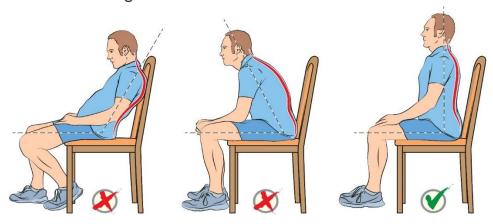
Some foods are notorious choking hazards for people who have trouble swallowing or are learning to swallow foods. They include:

- Corn,
- Carrots (even cooked if cut in a circle shape),
- Round foods like hot dogs,
- · Whole grapes,
- Cherry tomatoes,
- Nuts,
- · Chewing gum,
- Mixed textures.





Position Matters When Eating



Seating plays a big role in reducing the risk of aspiration. The position in which a person sits when eating determines the position of their head and neck when swallowing.

- Sit at table with feet on floor (or provide a foot stool). Avoid slouching.
- Neck should not be tilted up or down when swallowing.
- If sitting in bed or a recliner, ask them to sit up (not lean back) during meal time.
- If providing feeding assistance, utensil should go in parallel to the floor (straight) and not at an angle.
 - o Person you are assisting should not be looking up to receive bite of food or drink.
- Those with low muscle tone in their core (their main body area) may need a more supportive chair.
 - o If sitting in a recliner for more trunk support, ask them to sit up when eating or drinking.
 - o Younger children often sit with a trunk support.
 - Individuals who experience cerebral palsy may have specialized chairs or head support for eating.

Notes

Notes