West Virginia Bureau of Senior Services

Food and Fitness

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What are Electrolytes and What do They Do?

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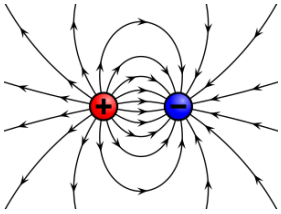

Electrolytes are vital for conducting electricity and relaying electrical signals for the body to properly function. Electrolytes are minerals that conduct electrical charges within the body. Those charges can be positive or negative. We get electrolytes by the foods and beverages we eat and drink. Our body distributes the electrolytes to places like urine, blood, other bodily fluids, and soft tissues.

Electrolytes are composed of five essential minerals: sodium, chloride, potassium, magnesium, and calcium. Other electrolytes include phosphate and bicarbonate. These minerals are responsible for many of the body's functional roles such as pH Balance, nerve function, muscle contraction, and many others.

Sodium: Sodium is one electrolyte that is less likely to be deficient due to the usage of table salt. While in the American diet, most consume more sodium then is recommended by the Dietary Guidelines for Americans. Sodium's main roles, as an electrolyte, are to help in the process of water balance in and outside of the cells, maintain blood pressure, and nerve and muscle function. Foods that are high in sodium include lunch meats, fried foods, processed foods, canned foods, and much more. Noting that eating foods high is sodium would not be better for electrolyte function. Eating two serving of canned vegetables would provide enough sodium for electrolyte function and that's not counting any other foods consumed throughout the day.

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What are Electrolytes and What do They Do?

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Chloride: Just like sodium, chloride comes right along with table salt. It can also be found in other foods like seaweed, rye, tomatoes, lettuce, celery, and olives. The roles of chloride in the body are helping to regulate other electrolyte levels, balancing your bodies pH level, aid in digestion, impacts blood pressure, plays a role in a healthy heart, and is found in several bodily fluids. More research on chloride is needed to fully understate its roles in the human body.

Potassium: Foods high in potassium include bananas, oranges, cantaloupe, spinach, broccoli, potatoes, mushrooms, peas, and cucumbers. A diet rich in potassium can lower the risk of cardiovascular disease, improve bone health, stop the development of kidney stones, and prevent water retention. The main functions of potassium are nerve function and muscle contraction.

Magnesium: Magnesium rich foods include dark chocolate, avocados, nuts, seeds, legumes, tofu, whole grains, some fatty fish like salmon, bananas, and leafy greens. Some of magnesium's responsibilities are muscle function, nerve function, maintaining blood sugar levels, heart rhythm, immune function, and regulating blood pressure. Magnesium is also important for making proteins, bones, RNA, and DNA.

Calcium: Calcium can be found in foods like dairy products (milk, cheese, yogurt), leafy greens, fish with bones, and items like breads that have been fortified. Calcium is the most abundant mineral in the human body. The most known function of calcium is maintaining strong bones and teeth. Calcium also communicates with our brain to other parts of our body and helps with blood clotting.

Electrolytes are vital to most of our body's normal bodily functions. Electrolytes come from a wide range of foods and food groups. Not only do they come from foods, some beverages contain electrolytes like coconut water, milk, smoothies, infused waters, sports drinks, and Pedialyte. If consuming too little or too many electrolytes it can have a negative impact on bodily functions. Eating a wide range of foods and beverages from all the food groups can help to create the right balance.

What You Should Know About Electrolytes

Electrolytes are minerals that take on an electric charge and relay electrical signals throughout your body.

Some key functions electrolytes carry out include ensuring an appropriate volume of water in your body, balancing your pH levels, and maintaining the healthy functioning of your nerves, muscles (including your heart!) and brain.

Having an electrolyte imbalance, due either to too many or too few minerals, can cause serious problems.

7 Essential Electrolytes

- Sodium
- Chloride
- Potassium
- Magnesium
- Calcium
- Phosphate
- Bicarbonate

The underlying cause of an electrolyte imbalance will affect what symptoms appear. Some common symptoms are nausea, lethargy and fluid retention.

3 Common Symptoms and 3 Common Causes of an Electrolyte Imbalance

Symptoms

- Nausea
- Fatigue
- Fluid retention

Causes

- Intense physical exertion
- Vomiting and diarrhea
- Conditions that affect organ function

Some common causes of electrolyte imbalances include extreme physical exertion, vomiting, diarrhea and conditions that affect organ function.

While you can get many of the minerals that function as electrolytes from the food you eat, it may be helpful to give your body a boost if your levels are low.

Electrolyte drinks like Gatorade are the best known method for replenishing your electrolytes, but studies show the most effective approach is to pair amino acids and electrolytes.

Fruit—Figs

When thinking about the fruit figs, the first thought that comes to mind is the fig newton cookies. However, figs are much more than just the cookie that comes to mind.

Figs are fruits that grow on trees. They grow in areas that are dry and sunny. The figs are native to the Mediterranean and the Middle East. The Black Mission and Brown Turkey are the two most common varieties of figs.

Figs can only be found fresh twice a year because of the growing season. Early summer and late summer to early fall are the two times a year you could potentially find a fresh fig. Figs that are harvested in the late summer or early fall have thicker skins and are sweeter. When selecting figs to purchase, choose a soft plum fruit that is intact with minor damage. Avoid buying fresh figs that appear to be dry or with cracks.

Figs can be eaten both cooked or raw. A fresh, ripe fig has a soft jam like texture and is said to have a honeyed flavor. Most often, figs can be found dried rather then fresh. The fig is full of tiny seeds which gives it a unique texture. Most fresh figs are very sweet and are often paired with savory flavored foods like cheese.

Figs are a good source of dietary fiber. They also contain notable amounts of manganese, potassium, vitamin B6, and Thiamin.

When the fig season comes around, keep your eyes out to see what a fresh fig is all about.

Caloric Ratio Pyramid What is this?

Caloric Ratio Pyramid for Figs, raw

This feature requires Flash player to be installed in your browser. Download the player here.

94%	3%	3%
Carbs	Fats	Protein

NutritionData's Opinion What is this?

Weight loss:	★★★☆☆
Optimum health:	★★★½☆
Weight gain:	★★★☆☆

The good: This food is very low in Saturated Fat, Cholesterol and Sodium. It is also a good source of Dietary Fiber.

The bad: A large portion of the calories in this food come from sugars.

Estimated Glycemic Load

4

0 250

Typical target total is 100/day or less

What is this?

Figs, raw

Serving size: 1 large (2-1/2" dia) (64g)

NUTRITION INFORMATION

Amounts per 1 large (2-1/2" dia) (64g)

Calorie Information

Amounts Per Selected Serving		%DV
Calories	47.4 (198 kJ)	2%
From Carbohydrate	44.1 (185 kJ)	
From Fat	1.6 (6.7 kJ)	
From Protein	1.6 (6.7 kJ)	
From Alcohol	0.0 (0.0 kJ)	

Carbohydrates

Amounts Per Selected Serving		%DV
Total Carbohydrate	12.3 g	4%
Dietary Fiber	1.9 g	7%
Starch	0.0 g	
Sugars	10.4 g	

More details

Fats & Fatty Acids

Amounts Per Selected Serving		%DV
Total Fat	0.2 g	0%
Saturated Fat	0.0 g	0%
Monounsaturated Fat	0.0 g	
Polyunsaturated Fat	0.1 g	
Total trans fatty acids	~	
Total trans-monoenoic fatty acids	~	
Total trans-polyenoic fatty acids	~	
Total Omega-3 fatty acids	~	
Total Omega-6 fatty acids	92.2 mg	

Learn more about these fatty acids and their equivalent names

More details

Protein & Amino Acids

Amounts Per Selected Serving		%DV
Protein	0.5 g	1%

More details

Vitamins

Amounts Per Selected Serving		%DV
Vitamin A	90.9 IU	2%
Vitamin C	1.3 mg	2%
Vitamin D	~	~
Vitamin E (Alpha Tocopherol)	0.1 mg	0%
Vitamin K	3.0 mcg	4%
Thiamin	0.0 mg	3%
Riboflavin	0.0 mg	2%
Niacin	0.3 mg	1%
Vitamin B6	0.1 mg	4%
Folate	3.8 mcg	1%
Vitamin B12	0.0 mcg	0%
Pantothenic Acid	0.2 mg	2%
Choline	3.0 mg	
Betaine	~	

More details

Minerals

Amounts Per Selected Serving		%DV
Calcium	22.4 mg	2%
Iron	0.2 mg	1%
Magnesium	10.9 mg	3%
Phosphorus	9.0 mg	1%
Potassium	149 mg	4%
Sodium	0.6 mg	0%
Zinc	0.1 mg	1%
Copper	0.0 mg	2%
Manganese	0.1 mg	4%
Selenium	0.1 mcg	0%
Fluoride	~	

Recipe–Oatmeal Fig Bars

Ingredients

For the Oatmeal Layers

- 1 and 1/4 cup oat flour*
- 1 and 1/4 cup rolled oats
- 1/2 tsp baking soda
- 1/4 tsp salt
- 1/4 cup maple syrup
- 1/3 cup oil
- 1 tsp vanilla
- 1 egg

For the Fig Filling

- 10 ounces dried figs, about 2 cups
- 3 tbsp maple syrup
- 1 cup water
- 1 tbsp orange or lemon zest
- pinch of salt

Directions

1. Cut off the stems of the dried figs then place them in a small saucepan with 1 cup water, a pinch of salt, and lemon zest. Bring to a boil then reduce to a simmer and cook for 30 minutes. Set aside to cool for about 15 minutes. Once cooled, transfer to a food processor, add maple syrup and blend until pureed into a paste.
2. Next preheat the oven to 350°F and then line an 8 x 8" baking dish with parchment paper. Combine the dry ingredients (flour, oats, salt, and baking soda) in a bowl then set aside.
3. In a separate bowl, combine the wet ingredients (syrup, vanilla extract, egg, and oil) and stir together. Add the dry ingredients to wet and stir until just combined.
4. Spoon half of the batter into the lined baking dish and press it firmly to form a base layer. The dough will be sticky- using another layer of parchment paper to press down will help to keep it from sticking to your hands.
5. Next, scoop out the fig paste from the processor and press it into a thin layer using the sheet of parchment paper on top to prevent sticking. Drop parts of the remaining oatmeal batter on top to form a crumble. Gently press into the fig layer.
6. Bake in the oven for 25-30 minutes until the edges are light golden brown. Remove from the oven and allow to cool completely. Store leftovers in an airtight container in the refrigerator for up to 4 days.

*Note you can purchase oat flour or you can make it by adding it to a food processor and processing it until fine.

Recipe Adapted From: www.makingthymeforhealth.com/oatmeal-fig-newton-bars/

BOGGLE GAME WITH VALENTINE BONUS WORDS

How to Play Boggle

Players can write down words they find in the grid that match the following rules:

- The letters in the words must be connected in the same order in the grid.
- The letters can be connected by an edge or a corner.
- The word doesn't have to appear in a straight line. It can be tangled around.
- Each letter in the word must uniquely appear in the grid. For example, if the word is ERASE, the letter E must appear twice in the grid. The word can't just loop back and re-use the same E.
- Words must be at least 3 letters long
- Words cannot be a proper noun, such as a name or place.

L	R	A	E
T	O	V	H
S	A	I	D
C	S	R	K

February 2021

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1 National Freedom Day	2 Ground Hog Day	3 Feed the Birds Day	4 Stuffed Mushroom Day	5 Bubble Gum Day	6 National Chopstick Day
7 Superbowl Sunday	8 Boy Scout Day	9 National Pizza Day	10 Umbrella Day	11 Make a Friend Day	12 Plum Pud-ding Day	13 Get a Dif-ferent Name Day
14 Valentine's Day	15 President's Day	16 Mardi Gras/Fat Tuesday	17 Ash Wednesday	18 National Drink Wine Day	19 National Chocolate Mint Day	20 Cherry Pie Day
21 Card Read-ing Day	22 Walk the Dog Day	23 Tennis Day	24 National Tortilla Chip Day	25 Pistol Pa-tent Day	26 National Pistachio Day	27 Polar Bear Day
28 National Chili Day						

Monthly Observances

- American Heart Month
- An Affair to Remember Month
- Black History Month
- Canned Food Month
- Creative Romance Month
- Great American Pie Month
- National Bird Feeding Month
- National Cherry Month
- National Children's Dental Health Month
- National Grapefruit Month
- National Weddings Month
- Spunky Old Broads Month

Health Motivator Tips

February

The Benefits of Biotin

By Jamie Mullins, WVU Extension Agent – Calhoun and Gilmer Counties

Monthly Challenge: When planning your meals for the week, look for opportunities to start your day off on the right foot by including one or two foods that are high in biotin. This assures your body can convert the carbs, fat and protein you eat throughout the day into energy. Consider an egg omelet, a sweet potato hash, or oatmeal with banana and almonds!

Health Motivator Talking Points

- Biotin, also known as vitamin B7, is one of the eight essential vitamins that make up the vitamin B complex.
- This vitamin helps assure the body can convert food into energy and is vital to cell reproduction.
- According to Lauren Graff, clinical dietitian for Montefiore Einstein Cardiac Wellness Program, "Biotin is important for hair, skin and nails. Low levels of biotin can lead to brittle nails and thinning hair."
- Other benefits of biotin include improving energy and mood, increasing metabolism, promoting fetal development, lowering cholesterol, protecting the brain and stabilizing blood sugar.
- The Food and Nutrition Board recommends 30 micrograms of biotin per the average adult.
- Biotin occurs naturally in meats, salmon, pork chops, some seeds and nuts, hamburgers, eggs, cauliflower, sweet potatoes, spinach, broccoli, mushrooms, avocados and bananas.
- Some cooking methods can drain foods of their biotin content. Dehydrating can destroy the biotin that occurs naturally in some raw fruits, vegetables and meats.
- Biotin is water soluble, meaning the body does not store it for extended periods of time. If someone ingests more than their body needs in a day, the body will flush it out through urine.

Chuckle of the Month:

What did the sweet potato say to the potato?

"I think, therefore I yam!"

Quick Club Activity:

Play an old-fashion game of Hot Potato! Have members stand in a circle. One member starts passing a sweet potato to the right. When the leader says "stop" (or turns off music), whoever has the potato is out and has to share how they like to eat their sweet potato.

For additional fun, add an avocado to the circle. Again, whoever is holding the avocado when the leader calls "stop" is eliminated and must share how they like to eat the avocados.

Learn More

BIOTIN: Fact sheet for health professionals, National Institutes of Health, *ods.od.nih.gov/factsheets/Biotin-HealthProfessional/*

What is biotin?, LiveScience, *www.livescience.com/51696-biotin-vitamin-b7.html*

Which foods provide biotin?, Medical News Today, *www.medicalnewstoday.com/articles/320222*

West Virginia Bureau of Senior Services

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February Biotin Recipe

Broccoli Chicken Frittata

(Serving Size: ¼ of the recipe, Yield: 4 Servings)

Ingredients

- 2 teaspoons butter
- 1 cup finely chopped, fresh broccoli florets
- 1 cup diced red pepper
- 6 ounces of boneless, skinless chicken breasts, cooked and finely diced
- ¼ cup diced onions
- ¼ teaspoon each of dried thyme and oregano
- ⅛ teaspoon black pepper
- ¼ cup grated reduced-fat cheddar cheese
- 8 eggs, beaten

Directions

1. In a large skillet, heat butter over medium heat until melted.
2. Add broccoli florets, red pepper, chicken, onions, thyme, oregano and black pepper to the skillet, sautéing until vegetables are tender and chicken is heated through (about 5 to 6 minutes).
3. Sprinkle grated cheddar cheese evenly over surface of the vegetable mixture.
4. Pour eggs evenly over all ingredients.
5. Cover and cook for 8 to 10 minutes or until firm.
6. Cut into four wedges and serve.

Source: WVU Extension Service Dining with Diabetes Program