

# USC VOICE CENTER

## ACID REFLUX

### What is acid reflux?

Acid reflux occurs when acidic stomach juices back up from the stomach into the esophagus. This acid sometimes spills into the larynx. There are two different kinds of acid reflux: **gastroesophageal reflux (GERD)** and **laryngopharyngeal reflux (LPR)**. A person can have one or both kinds of reflux.

**GERD** occurs when stomach acid flows up from the stomach into the esophagus. It usually occurs at night when people are laying down. **Symptoms may include:** heartburn, belching, regurgitation of stomach contents and swallowing difficulties.

**LPR** occurs when stomach acid travels up through the esophagus and spills into the larynx or pharynx (voice box). It can occur during the day or night. The acid irritates the vocal folds and surrounding tissues. As the acid moves quickly up through the esophagus into the larynx, patients with LPR often do not experience heartburn. **Symptoms may include:** hoarseness, excessive mucus (throat clearing), post-nasal drip, coughing, throat soreness or burning, choking episodes (can wake person up out of a sound sleep), difficulty swallowing or feeling of a lump in the throat.

### How is acid reflux treated?

Reflux can be treated through dietary and lifestyle modifications, medications—usually proton pump inhibitors (PPIs), and in some cases surgery. Certain foods are more likely to cause acid reflux. By removing or limiting these foods from your diet, you can reduce incidences of acid reflux.

**Lifestyle modifications:** Do not lie down or exercise directly after eating or wear clothing that is tight around the waist. Eat 3-4 small meals a day instead of 2-3 large ones. If you are overweight, try to lose weight. Tobacco can cause reflux, so reducing or stopping smoking can be helpful. Do not eat anything 2-3 hours before going to bed. If reflux is occurring at night, elevate the head of your bed 4-6 inches by putting phone books under the front legs or by buying a wedge pillow. Using 2 or more regular pillows can make reflux worse as it causes the body to curl.

**How to take reflux medication:** If you are taking one PPI a day, take it in the morning on an empty stomach 30 minutes to an hour before eating breakfast. If you take two PPIs a day, take one in the morning and the other one on an empty stomach 30 minutes to an hour before dinner.

### How long before I see an improvement?

It can take 4-6 weeks for acid burns in the esophagus and larynx to heal, so do not stop medication or dietary/lifestyle modifications without consulting your doctor. It can take 3-4 months for full resolution.

**What problems can acid reflux cause?** Long-term reflux in can cause laryngeal ulcers or granulomas, vocal fold scarring, pneumonia, Barrett's esophagus, and in some cases esophageal or throat cancer.

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Food Group	Foods Allowed	Foods to Avoid
Dairy Products	Skim mild, low-fat buttermilk, low-fat cottage cheese (1% milk fat), and cheeses made with part skim milk.	Whole milk, 2% milk, chocolate milk, cream, half and half, whole milk cheeses, and hot cocoa.
Meats and Protein Alternatives	Baked, boiled, broiled, stewed or roasted: beef, lamb, veal, fish, poultry; dried beans, peas or lentils (if tolerated).	Fried or fatty meats: pork, bacon, sausage, meat or fish packed in oil, luncheon meats, peanut butter, and frankfurters.
Eggs	Prepared any way without added fat. Egg whites as desired. Limit to one whole egg a day.	Fried eggs.
Vegetables	All prepared without added fat. Avoid vegetables which may cause gastrointestinal discomfort.	Avoid tomato sauce
Fruit	Avoid fruits which may cause gastrointestinal discomfort.	Avoid citrus.
Breads	Commercial whole grain or enriched bread, French bread, hamburger buns, hard or plain rolls, saltines,	Commercial sweet rolls, donuts, croissants, pastries.
Breads (continued)	graham crackers, melba toast, English muffins and bagels. <u>Homemade</u> biscuits, muffins, waffles and pancakes.	
Cereals	All cereals, hot or cold.	None.
Potatoes and Substitutes	Potatoes, rice, noodles, spaghetti and macaroni.	Fried potatoes or rice. Anything prepared with cheese or white sauces.
Fats	Butter, margarine, vegetable oils, mayonnaise, brown gravy and reduced calorie/mildly seasoned salad dressing.	Lard, bacon drippings, salt pork, meat drippings, regular gravies and salad dressing.
Beverages	Water, flavored water, decaffeinated coffee or tea and herbal tea.	Caffeinated coffee or tea, citrus juice (orange, grapefruit, lemonade, cranberry), caffeinated beverages, milkshakes, carbonated beverages and alcohol.
Soups	Consommé, fat-free broth, bouillon, packaged/dehydrated soup and soups made with skim milk.	Commercial cream soups, those made with whole milk, cream or added fat.
Desserts/Sweets	Fruit, gelatin, fruit whips prepared with skim milk, sherbet, fruit ices, meringues, angel food cake, jelly, jam, preserves, sugar, syrup, and honey.	Ice cream, commercial pies, cakes, cookies and puddings made with whole milk. Any dessert containing chocolate, nuts, cream, coconut or whole milk.
Seasonings and cough drops	Mild seasonings. Hard glycerine based candies.	Hot or spicy seasonings. Cough drops that contain menthol or are mint/peppermint flavor.

# ACID REFLUX

IT'S MORE COMMON THAN YOU MIGHT THINK



THERE ARE MORE THAN

**3 MILLION**

US CASES OF  
ACID REFLUX  
EACH YEAR.

KNOW  
WHAT  
FOODS  
TO AVOID



## FRUIT

**Foods Allowed** Avoid fruits which may cause gastrointestinal discomfort.  
**Foods to Avoid** Avoid citrus.



## MEATS AND PROTEIN ALTERNATIVES

**Foods Allowed** Baked, boiled, broiled, stewed or roasted; beef, lamb, veal, fish, poultry; dried beans, peas or lentils (if tolerated).  
**Foods to Avoid** Fried or fatty meats; pork, bacon, sausage; meat or fish packed in oil, luncheon meats, peanut butter, and frankfurters.



## POTATOES AND SUBSTITUTES

**Foods Allowed** Potatoes, rice, noodles, spaghetti and macaroni.  
**Foods to Avoid** Fried potatoes or rice. Anything prepared with cheese or white sauces.

## CEREALS

**Foods Allowed** All cereals, hot or cold  
**Foods to Avoid** None



## DAIRY PRODUCTS

**Foods Allowed** Skim milk, low-fat buttermilk, low-fat cottage cheese (1% milk fat), and cheeses made with part skim milk.  
**Foods to Avoid** Whole milk, 2% milk, chocolate milk, cream, half and half, whole milk cheeses, and hot cocoa.

## VEGETABLES

**Foods Allowed** All prepared without added fat. Avoid vegetables which may cause gastrointestinal discomfort.  
**Foods to Avoid** Avoid tomato sauce



## BEVERAGES

**Foods Allowed** Water, flavored water, decaffeinated coffee or tea and herbal tea.  
**Foods to Avoid** Caffeinated coffee or tea, citrus juice (orange, grapefruit, lemonade, cranberry), caffeinated beverages, milkshakes, carbonated beverages and alcohol.

## SOUPS

**Foods Allowed** Consommé, fat-free broth, bouillon, packaged/dehydrated soup and soups made with skim milk.  
**Foods to Avoid** Commercial cream soups, those made with whole milk, cream or added fat.



## EGGS

**Foods Allowed** Prepared any way without added fat. Egg whites as desired. Limit to one whole egg a day.  
**Foods to Avoid** Fried eggs.



## FATS

**Foods Allowed** Butter, margarine, vegetable oils, mayonnaise, brown gravy and reduced calorie/mildly seasoned salad dressing  
**Foods to Avoid** Lard, bacon drippings, salt pork, meat drippings, regular gravies and salad dressing.



## BREADS

**Foods Allowed** Commercial whole grain or enriched bread, French bread, hamburger buns, hard or plain rolls, saltines, graham crackers, melba toast, English muffins and bagels. Homemade biscuits, muffins, waffles and pancakes.  
**Foods to Avoid** Commercial sweet rolls, donuts, croissants, pastries.



## DESSERTS/SWEETS

**Foods Allowed** Fruit, gelatin, fruit whips prepared with skim milk, sherbet, fruit ices, meringues, angel food cake, jelly, jam, preserves, sugar, syrup, and honey.  
**Foods to Avoid** Ice cream, commercial pies, cakes, cookies, and puddings made with whole milk. Any dessert containing chocolate, nuts, cream, coconut or whole milk.



## SEASONINGS AND COUGH DROPS

**Foods Allowed** Mild seasonings. Hard candies.  
**Foods to Avoid** Hot or spicy seasonings. Cough drops that contain menthol or are mint/peppermint flavor.



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Eggs	Prepared any way without added fat. Egg whites as desired. Limit to one whole egg a day.	Fried eggs.
Vegetables	All prepared without added fat. Avoid vegetables which may cause gastrointestinal discomfort.	Avoid tomato sauce
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Breads	Commercial whole grain or enriched bread, French bread, hamburger buns, hard or plain rolls, saltines, graham crackers, melba toast, English muffins and bagels. <u>Homemade</u> biscuits, muffins, waffles and pancakes.	Commercial sweet rolls, donuts, croissants, pastries.
Cereals	All cereals, hot or cold.	None.
Potatoes and Substitutes	Potatoes, rice, noodles, spaghetti and macaroni.	Fried potatoes or rice. Anything prepared with cheese or white sauces.
Fats	Butter, margarine, vegetable oils, mayonnaise, brown gravy and reduced calorie/mildly seasoned salad dressing.	Lard, bacon drippings, salt pork, meat drippings, regular gravies and salad dressing.
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Soups	Consommé, fat-free broth, bouillon, packaged/dehydrated soup and soups made with skim milk.	Commercial cream soups, those made with whole milk, cream or added fat.
Desserts/ Sweets	Fruit, gelatin, fruit whips prepared with skim milk, sherbet, fruit ices, meringues, angel food cake, jelly, jam, preserves, sugar, syrup, and honey.	Ice cream, commercial pies, cakes, cookies and puddings made with whole milk. Any dessert containing chocolate, nuts, cream, coconut or whole milk.
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## SEASONINGS AND COUGH DROPS

**Foods Allowed** Mild seasonings.  
**Foods to Avoid** Hot seasonings.

