

# Gas in Your Digestive Tract

## General Information

Everyone has gas. Most of us produce about 1 to 3 pints a day and pass the gas about 14 times a day. Gas is released through your mouth or rectum.

Gas is made mostly of odorless vapors: carbon dioxide, oxygen, nitrogen, hydrogen and methane. Odor from gas comes from bacteria in the large intestine that release small amounts of gases that contain sulfur.

## Causes of Gas

Gas comes from 2 sources: swallowed air and a breakdown of undigested foods.

- **Air you swallow:** You swallow small amounts of air when you eat and drink. If you eat or drink quickly, chew gum, smoke or wear loose dentures, you can take in more air. Swallowed air contains nitrogen, oxygen and carbon dioxide. The most common way air leaves your stomach is by burping or belching. The rest of the gas moves to your large intestine, where it is released through your rectum.
- **Breakdown of certain undigested foods:** Your small intestine does not digest and absorb some carbohydrates. The undigested food passes from your small intestine to your large intestine where normal bacteria breaks down the food. This makes hydrogen, carbon dioxide and methane. These gases leave your body through your rectum. Some common bacteria in the large intestine can destroy the hydrogen that other bacteria produce. The balance of the 2 types of bacteria explains why some people have more gas than others.

## Foods That Cause Gas

Foods that cause gas in one person may not cause gas in another person. Most foods that contain carbohydrates cause gas. Fat and proteins cause little gas.

Foods that cause gas include.

- **sugars.** The sugars that cause gas are:
  - raffinose: beans, cabbage, brussels sprouts, broccoli, asparagus, other vegetables and whole grains
  - lactose: milk products such as cheese and ice cream, bread, cereal and salad dressing
  - fructose: onions, artichokes, pears and wheat
  - sorbitol: fruits, including apples, pears, peas and prunes. It is also used to sweeten sugar-free candies and gums.
- **starches.** Potatoes, corn, noodles and wheat produce gas as they are broken down in your large intestine. Rice is the only starch that does not produce gas.
- **fiber.** Fiber that dissolves in water (soluble fiber) is broken down in the large intestine where digestion causes gas. Soluble fiber is found in oat bran, beans, peas and most fruits. Fiber that doesn't dissolve in water (insoluble fiber) passes through your intestines basically unchanged and produces little gas. Insoluble fiber is found in wheat bran and some vegetables.

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## Symptoms and Problems of Gas

The most common symptoms of gas are belching, flatulence, abdominal bloating and abdominal pain. Not everyone has these symptoms.

- **belching:** A belch during or after meals is normal. This is a way for you to release gas when your stomach is full. If you belch too much, you may be swallowing too much air. If you belch often (chronic), you may have an upper gastrointestinal disorder.
- **flatulence:** It is normal to pass gas through your rectum 14 to 23 times a day. Too much gas may be the result of overactive bacteria in your colon or other problems.
- **abdominal bloating:** If you have bloating from gas, you likely have a normal amount and distribution of gas. You may actually be unusually aware of gas in your digestive tract. Bloating may be the result of an intestinal disorder such as irritable bowel syndrome.

This type of disorder has an increased sensitivity to gas because of abnormal movements and contractions of intestinal muscles. Bloating may also have other causes such as Crohn's disease, colon cancer or a diet rich in fatty foods.

- **abdominal pain:** This pain indicates that gas is present in your intestine. When gas collects on the left side of the colon, pain can be confused with heart disease. When gas collects on the right side of the colon, pain can feel like gallstones or appendicitis.

## How to Diagnose Too Much Gas

Gas symptoms may be caused by a serious disorder, so they should be checked by a health care provider who may review your diet and symptoms. They may also ask you to count the number of times a day you pass gas.

If you have bloating, your health care provider may examine your abdomen for swelling and to listen for the sound of fluid movement.

Your health care provider may suggest other tests to check for colon cancer. If you have chronic belching, your health care provider will look for signs or causes of extra air swallowing. You may need tests to rule out certain diseases.

## How to Treat Gas

There are 3 common ways to reduce the discomfort of gas:

- **diet changes.** Your health care provider may suggest you limit high-fat foods or eat fewer foods that cause gas. This will likely be a trial and error process to see how much of which foods your body can handle.
- **over-the-counter medicines.** There are many over-the-counter medicines to help reduce your symptoms. You may want to look for antacids with simethicone. Talk with your health care provider or pharmacist for suggested brands.
- **prescription medicines.** You may be prescribed medicine to help reduce your symptoms, especially if you have a motility disorder such as irritable bowel syndrome.
- **reduce swallowed air.** If you have chronic belching, your health care provider may tell you to avoid chewing gum and hard candy, and eat at a slow pace.

Extra gas may be uncomfortable and embarrassing, but it is not life-threatening.

**Information adapted from the National Institute of Diabetes and Digestive and Kidney Diseases.**