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## Flatulence

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### Summary

- Intestinal gas is a normal part of digestion.
  - Excessive flatulence can be caused by lactose intolerance, certain foods or a sudden switch to a high-fibre diet.
  - Flatulence can be a symptom of some digestive system disorders, including irritable bowel syndrome.
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Flatulence, commonly referred to as 'farting', is caused by gas in the bowel. Ordinarily, the intestines produce between 500 and 2,000mls of gas, which is passed out of the anus at regular intervals. The gas, or 'flatus', consists of a number of gases including methane, nitrogen and carbon dioxide. The varying smell depends on the ratio of gases, which is influenced by the foods we eat.

Flatus is generated by swallowed air, digestion, high-fibre foods and the by-products of intestinal bacteria. Some digestive system disorders, such as irritable bowel syndrome, can produce excess gas.

### Symptoms of flatulence

Passing wind is normal, but the amount varies between individuals and depends on a number of factors including diet. Some people pass wind only a handful of times per day, others up to 40 times, while the average seems to be about 15. Symptoms of excessive (or embarrassing) flatulence include:

- passing wind often
- smelly flatus
- loud flatus
- abdominal distension and discomfort
- rumblings in the lower abdomen.

### Causes of flatulence

Intestinal gas is a normal part of digestion. The gas is produced by different means, including:

- **Swallowed air** – the mouth isn't vacuum-sealed, so small quantities of air are swallowed along with food and liquid. The oxygen and nitrogen from the swallowed air is absorbed into the bloodstream from the small intestine, and any excess is allowed to continue its journey through the bowel for expulsion. 'Air-swallowing' often occurs in people who are anxious.
- **Normal digestion** – stomach acid is neutralised by pancreatic secretions, and the resulting interaction creates gas (carbon dioxide) as a by-product.
- **Intestinal bacteria** – the bowel contains a host of bacteria that help digestion by fermenting some of the food components. The process of fermentation produces gas as a by-product. Some of the gas is absorbed into the bloodstream and breathed out by the lungs. The remainder is pushed along the bowel.
- **High fibre foods** – fibre is essential to the health of the digestive system, but it can create excessive gas. The small intestine can't break down certain compounds, which means extra work for the gas-producing intestinal bacteria, and accompanying flatus. High-fibre diets should be introduced slowly to allow the bowel sufficient time to adjust.
- **Lactose intolerance** – the body's inability to digest the particular sugars found in cows milk will produce excessive amounts of intestinal gas. This is because the bacteria of the gut digest the sugars by fermentation, a gas-creating process.
- **Intolerance of short-chain carbohydrates** other than lactose – certain people may be susceptible to gas production from fermentation of other carbohydrates such as fructose, present in many foods including honey,

corn syrup and some fruits. These short-chain carbohydrates together are now known as FODMAPS.

### **Common complaints with flatulence**

Some of the more unpleasant or embarrassing problems with flatulence include:

- Loud flatus – this is caused by the muscles of the bowel forcing air through the tight ring of muscle at the anus. Suggestions include passing the air with less power, and reducing the amount of intestinal gas by making dietary adjustments.
- Smelly flatus – the gas produced by bacterial fermentation can smell, depending on the food eaten. Suggestions include limiting common culprits such as garlic, onions, spicy foods and beer.
- Excessive flatus – this is caused by swallowing air, eating high-fibre foods, lactose intolerance or some digestive disorders. Suggestions include reducing the amount of intestinal gas by making dietary adjustments and seeking medical advice.

### **Foods to limit to reduce flatulence**

A healthy diet requires plenty of variety. Foods that tend to produce large amounts of flatus also contain essential nutrients and shouldn't be eliminated. Limiting their consumption is a better option. Examples of foods that commonly cause flatulence include:

- dairy products – such as milk, if lactose intolerance is present
- dried fruit – raisins and prunes
- fruit – apple, apricot, peach and pear
- foods high in insoluble fibre – particularly seeds and husks
- legumes – beans, peas, chickpeas, soybeans and nuts
- vegetables – carrot, eggplant, onion, Brussels sprouts and cabbage.

### **Laxatives and flatulence**

Many laxatives, including lactulose, sorbitol and some fibre preparations, also cause flatulence and should not be used regularly, except with medical advice.

### **Reducing intestinal gas**

Suggestions to reduce the amount of flatus include:

- Limit common food culprits.
- Don't suddenly increase the amount of fibre in your diet.
- Reduce milk consumption if lactose intolerance is a problem.
- Consider taking charcoal products or other over-the-counter preparations.

### **Seek medical advice for excessive flatulence**

Some digestive system disorders, such as irritable bowel syndrome, can produce a sensation of excessive flatus. See your doctor if you experience unusual flatulence, abdominal pain, changes to toilet habits, or any other uncomfortable symptom associated with digestion.

Lactose intolerance can be diagnosed by a biopsy of the small intestine. This procedure is done by a specialist using an endoscope (camera attached to a thin flexible tube). The person is given a sedative. Intolerance to short-chain carbohydrates (FODMAPS) can be diagnosed by a breath hydrogen test. A test carbohydrate is ingested, and a series of breath samples are obtained over two to three hours to detect if abnormal fermentation is taking place.

### **Where to get help**

- Your doctor
- Dietitian

### **Things to remember**

- Intestinal gas is a normal part of digestion.

- Excessive flatulence can be caused by lactose intolerance, certain foods or a sudden switch to a high-fibre diet.
- Flatulence can be a symptom of some digestive system disorders, including irritable bowel syndrome.

**This page has been produced in consultation with and approved by:**

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