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INFORMATION ABOUT

BLOATING AND WIND

WHAT WHY
WILL HOW OR
IF WHEN

IN ASSOCIATION WITH:

core
FIGHTING GUT AND LIVER DISEASE

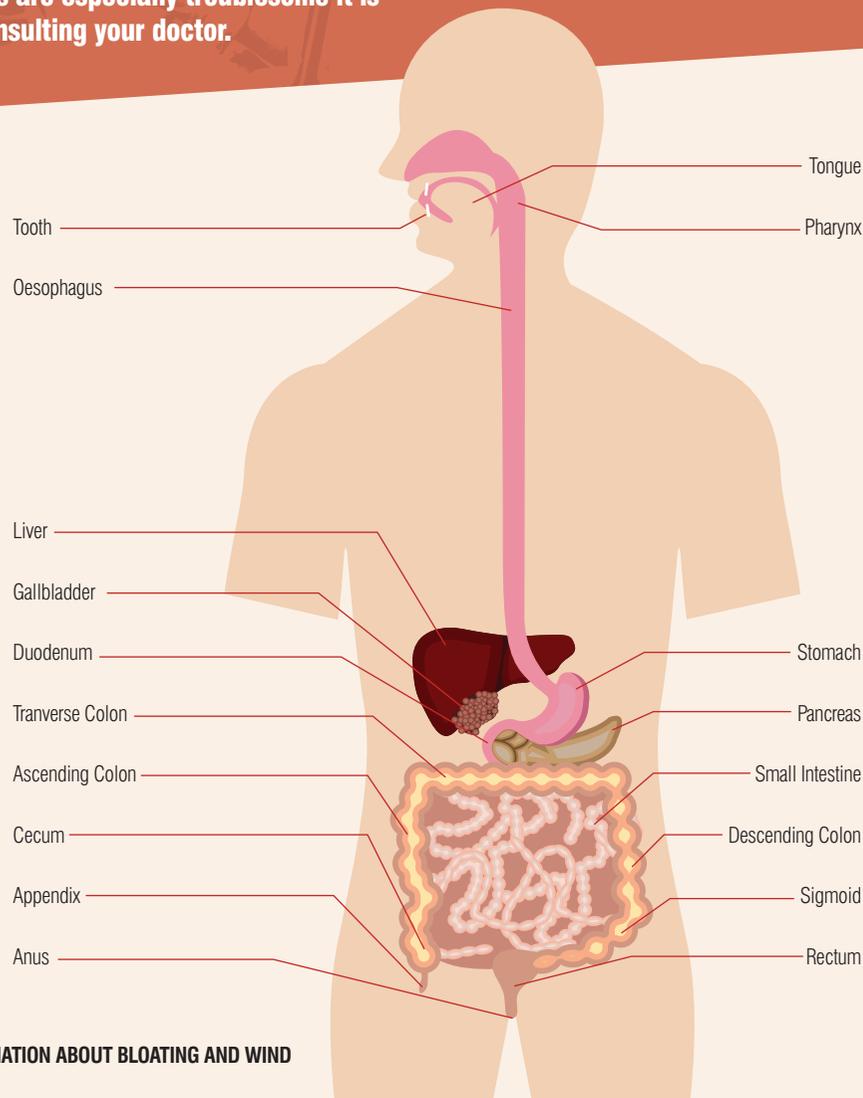
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BRITISH SOCIETY OF
GASTROENTEROLOGY



BLOATING AND WIND

Complaints about having too much wind or gas are very common. This leaflet provides a brief explanation of how windy symptoms are produced and where bowel gas comes from.

We hope that this pamphlet is helpful to you in understanding and dealing with your windy problems. If you are otherwise healthy, windy symptoms are not due to disease. But if they are severe or troublesome or if you are worried about them you should seek the help of your doctor. To date there is little proven treatment for these complaints: some patients get better with probiotics, but no specific medical evidence exists for one agent over another. In general if the symptoms are especially troublesome it is worth consulting your doctor.



WHAT IS THE GAS?

Over 90% of wind in the gut is made up of five gases – nitrogen, oxygen, carbon dioxide, hydrogen and methane: the remaining 10% contains small amounts of other gases.

WHERE DOES IT COME FROM?

The nitrogen and oxygen come from air, which is swallowed; the carbon dioxide is produced by stomach acid mixing with bicarbonate in bile and pancreatic juices. These gases get into the small intestine where most of the oxygen and carbon dioxide are absorbed into the blood stream and nitrogen is passed down the large bowel (colon). In other words, the vast majority of gut wind originates from swallowing or digestion, not from bacterial fermentation.

The small intestine is the place where the food we eat is digested and absorbed; the residues, such as dietary fibre and some carbohydrates, move to the large bowel. The colon contains different kinds of bacteria which are essential to good health and which ferment material from the small intestine, producing large volumes of gases such as hydrogen, methane, carbon dioxide. Most of these gases are absorbed into the blood stream and eventually excreted in the breath but the rest is passed as flatus.

Going from the top to the bottom of the gut, the principal windy complaints are:

Belching or burping (air eructation)

Every time we swallow we take some air into the stomach. A belch is an involuntary expulsion of wind (gas) by the stomach when it becomes distended from an excess of swallowed air. Eating rapidly which can occur when you eat hot foods, gulping food and drink, drinking a lot of liquid with meals, chewing gum, smoking or wearing loose dentures all promote air swallowing. Some people, when swallowing saliva to relieve heartburn, swallow air at the same time. Other people swallow air without noticing it, especially when they are tense. Fizzy drinks including beer cause belching because they release gas (carbon dioxide) into the stomach.

Chronic or repetitive burping (aerophagy)

In this case air is not swallowed into the stomach but sucked into the gullet and rapidly expelled. Repetitive belching like this can last for minutes at a time and is very embarrassing. The cure lies in realising the cause. Air cannot be sucked in when the jaws are separated, so repetitive belching can be temporarily controlled by firmly clenching something like a pencil between the teeth.

Some people develop air swallowing and belching in the hope of relieving chest or abdominal discomfort. In fact more air is swallowed than is belched, so worsening the situation. If you develop belching associated with chest discomfort – especially discomfort associated with exertion – or if you have difficulties in swallowing – you should seek medical advice.

Bloating

Abdominal bloating is a common complaint that is often blamed on excess gas in the bowel. In people with irritable bowel syndrome (IBS), that is not the case and the normal amount of gas causes discomfort because the gut is more sensitive to distension. As the muscular contractions of the gut are not co-ordinated, the contents do not pass along in an orderly fashion and this causes additional discomfort. Research has shown that when small amounts of gas are inserted into the intestine, people with irritable bowel syndrome (IBS) experience the bloating sensation and pain, whereas other people tolerate the same or even larger amounts of gas without any discomfort. Bloating may also be caused by rich, fatty meals which delay stomach emptying.

Bloating is often associated with abdominal distension so that clothing has to be loosened. This is usually due to relaxation of the abdominal muscles in an unconscious attempt to relieve discomfort. The distension usually disappears on lying flat or on contracting the abdominal muscles.

Bloating is difficult to treat. A high fibre diet can cause bloating in some people, but in others may relieve it. The fibre absorbs water in the gut and gently distends it, which can help to prevent the uncoordinated contractions that are partly responsible for bloating. Irritable bowel syndrome may be made worse by stress or anxiety so these may also be responsible for your bloating. Some people find that activated charcoal or defoaming agents (containing simethicone) are helpful. Avoiding gassy drinks may help.

If the bloating is severe your doctor may prescribe drugs that help to coordinate the contractions of the gut or prevent spasms.^{2,3}

If bloating is persistent or associated with weight loss, abdominal pain or diarrhoea you should see your doctor.

Rumblings/grumbings or noisy guts (borborygmi)

Bowel noises or borborygmi are produced when vigorous movements of the gut shuffle the liquid and gas contents of the intestine backwards and forwards. They may be produced by hunger, by anxiety or a fright and are very common in irritable bowel syndrome (IBS). Loud borborygmi or rumblings result from contractions of the intestines caused by diseases such as Crohn's Disease or bowel obstruction. These conditions are associated with other symptoms such as severe abdominal pain and should be reported to your doctor.

Flatus (fart)

The complaint of excessive flatus is made when a person believes he/she passes wind more often than previously. Often this is because an embarrassing incident like a loud or smelly fart in public has led to the belief that something is wrong.

A normal individual passes wind through the rectum on average 15 times per day (ranging between 3 and 40 times), depending on diet⁴.

A high fibre diet produces more wind than a low fibre diet or a low carbohydrate diet. So if you think you have excessive flatus, count every time you break wind – even the little silent ones – for a day or so. If you break wind fewer than 40 times a day then you are normal.

But whatever your count you may wish to reduce it. Most flatus is generated by the normal bacterial fermentation of food residues in the colon. On the principle 'no bugs – no gas' you might think that antibiotics would work, but they don't. Although the antibiotics kill off the bacteria, they quickly re-establish themselves. Also, antibiotics produce more flatus in most people.

A high fibre diet has mixed blessings. It produces a satisfying stool, protects against colon cancer, may protect against stroke and heart disease, can help people to lose weight and improves symptoms in irritable bowel syndrome. The downside is that a high fibre diet produces a lot of flatus⁵. However, it is possible to reduce flatus production, even on a high fibre diet, by avoiding the big gas producers. Beans are notorious gas producers – "beans, beans, the musical fruit, the more you eat the more you toot". They contain certain carbohydrates called oligosaccharides, which cannot be digested in the small intestine but are like food to bacteria in the colon. Cabbage, brussel sprouts, cauliflower, turnips, onions, garlic, leeks, lentils, pulses and some seeds such as fennel, sunflower and poppy all produce a lot of gas in the colon. Reducing the amount of these foods in the diet will reduce flatus. Sometimes activated charcoal seems to reduce the amount (and smell) of flatus.

Some otherwise healthy people lack the enzyme necessary to digest lactose, the sugar in cow's milk. As a result the lactose is fermented by the colon bacteria with the production of large amounts of carbon dioxide and hydrogen. The condition is called Lactose Intolerance and alongside gas production, may cause abdominal cramps. It occurs most commonly in people born in the Mediterranean area, but can occur anywhere. The 'cure' is to reduce milk intake to a level at which symptoms are controlled. Your doctor may carry out special tests to confirm the diagnosis. CORE produces a separate factsheet on lactose intolerance, available on our website.

Sorbitol, a sweetener used in diabetic diets and present in jams, sweets and sugarless chewing gum, is also not digested in the small intestine and can give rise to flatus for the same reason as lactose⁶.

Certain medical conditions such as Crohn's disease, coeliac disease and other disorders, which interfere with small bowel absorption of nutrients, cause excess flatus because of impaired digestion. These conditions are usually associated with symptoms such as abdominal pains, weight loss, anaemia and/ or persistent diarrhoea with pale, smelly stools that tend to float in the toilet pan⁷. These symptoms require medical investigation. CORE produces separate leaflets on Crohn's disease, Coeliac disease and irritable bowel syndrome.

Loud wind

Loud wind is produced by powerful contractions of the bowel wall forcing gas out through a narrow anus – the muscle at the bottom of the rectum that keeps the intestinal contents in their place. Not much can be done to prevent this, but measures to reduce flatus production may help symptoms.

Smelly wind

This is not your fault! It is caused by smelly chemicals like indoles, skatoles and hydrogen sulphide that are produced by bacterial fermentation in the colon. Garlic and onions, many spices and some herbs of the fennel family, particularly asafoetida which are used in Indian cooking, produce smelly gases. Beer, white wine and fruit juices give rise to smelly hydrogen sulphide in some people. Worse still, some of these smelly gases are absorbed into the blood stream and excreted in the breath as well. Reducing the intake of these foods may relieve symptoms. Eating a lot of fatty food can cause smelly wind, and it is worth cutting down on fat if this is a particular problem.

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- Supports important medical research that looks for cures and for ways of improving the lives of patients;
- Provides evidence-based information that enables patients and families to understand and control their condition;
- Works to raise awareness of these conditions, their symptoms and impact.

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You can find more information about digestive diseases and about Core's work by visiting our website at **www.corecharity.org.uk** or by calling **020 7486 0341** during office hours.

This leaflet was published by Core in 2014 and will be reviewed during 2016. If you are reading this after 2016 some of the information may be out of date. This leaflet was written under the direction of our Medical Director and has been subject to both lay and professional review.

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Please contact us if you believe any information in this leaflet is in error.

This information booklet is produced by Core, the only national charity fighting all digestive diseases. Show your support for Core by making a donation today or by joining us as a Core Friend.

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