

Understanding
**Indigestion
and Ulcers**

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IMPORTANT

This book is intended not as a substitute for personal medical advice but as a supplement to that advice for the patient who wishes to understand more about his or her condition.

Before taking any form of treatment
YOU SHOULD ALWAYS CONSULT YOUR MEDICAL PRACTITIONER.

In particular (without limit) you should note that advances in medical science occur rapidly and some information about drugs and treatment contained in this booklet may very soon be out of date.

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Introduction

A very common symptom

Virtually everyone has had indigestion at some time, and for most people it's simply a minor nuisance. More often than not, it happens when you've overindulged in food or alcohol or eaten something that doesn't agree with you, and it lasts for only a relatively short time.

In these situations, you can either wait for the symptoms to subside or treat yourself with a remedy from the pharmacist without needing to see a doctor.

For some people, however, the symptoms can be persistent and so severe that they interfere with everyday life. They may be caused by some undiagnosed problem within the digestive system that needs to be properly identified and, if necessary, treated by a doctor.

This book will help you distinguish between minor symptoms that you can safely treat yourself with the advice of a pharmacist and those that need further investigation.

The word 'indigestion' means different things to different people, but mostly it is used to describe discomfort in the central upper abdomen related in some way to eating or swallowing. Other common symptoms include:

- pain in the chest or abdomen
- a burning sensation in the chest (heartburn) often linked with food or liquid coming up into the throat or the back of the mouth (known medically as gastro-oesophageal reflux)
- belching or burping gas or wind into the mouth.

Treating indigestion

If you get such symptoms only occasionally, you should ask your pharmacist about over-the-counter treatments, which can be used safely to treat the odd bout of indigestion. You should also read the section in this book on lifestyle changes (see page 16) and make any necessary changes to reduce your chances of further attacks. Simple measures like these will usually be all that is needed to solve your problem, but in certain circumstances it is best to see your GP:

- If you have difficulty swallowing, unintentional weight loss, abdominal swelling, persistent vomiting or vomiting blood, you should make an urgent appointment to see your GP.
- If you have indigestion and are taking certain types of drugs, either prescribed or bought from the chemist, you should make a routine appointment to see your GP (the types of drugs that may cause indigestion are described in detail on pages 72–4).

- If your indigestion does not get better with simple over-the-counter remedies, you should make a routine appointment to see your GP.

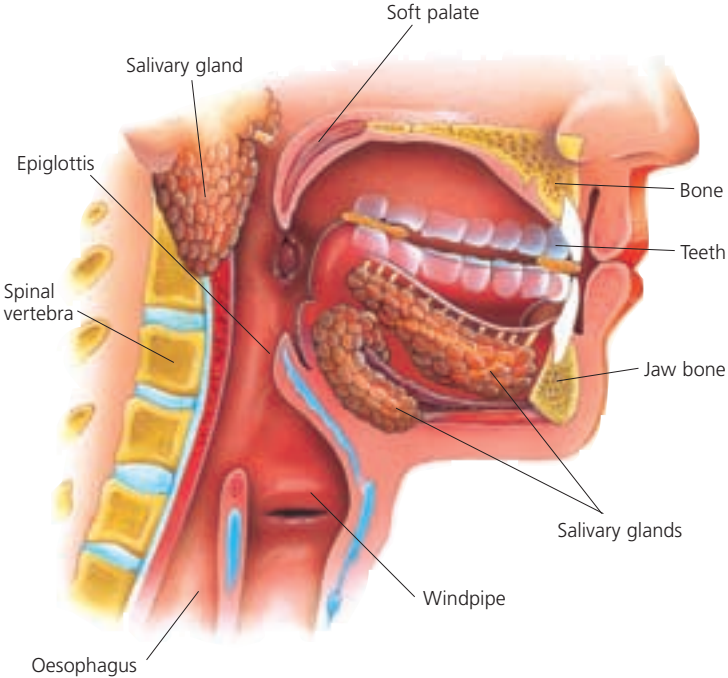
Whether or not to see your GP is discussed in detail on pages 13–15. Remember, if self-help doesn't work, or if you are worried, it is always best to see your GP.

KEY POINTS

- Indigestion is extremely common, affecting most people at some time in their life
- Symptoms are usually minor and can easily be treated at home
- Some symptoms are more important and require evaluation by a doctor
- This booklet will help you to treat yourself and also help you decide if it is necessary to see your doctor

The structure of the mouth

The tongue, teeth and saliva work together to start the process of digestion. There are three pairs of salivary glands that aid the tasting, chewing and swallowing of food.



move food round your mouth to chew it, and it also contains an enzyme called salivary amylase that starts to digest carbohydrates such as sugars and starches. It is slightly acid and, when you're not actually eating, it goes on being produced and helps to keep your mouth and teeth clean and stop plaque developing on your teeth. People who have conditions in which salivary production is reduced often experience a dry mouth, difficulty swallowing and increased tooth decay.

Normal digestion

How the digestive system works

Many people sometimes have only a vague idea of the size, shape, position and function of the stomach and other digestive organs. This section of the book gives a brief outline of the normal process of digestion and what each of the main parts of the digestive system does. If this is all familiar to you, just skip this account and move straight on to page 10, where the main types of indigestion are described.

To extract nutrients from the food that we eat we need to digest it. First the food has to be changed into a liquid or semi-liquid form. Then, complex substances such as fats and proteins have to be broken down into smaller chemical units that can be absorbed through the walls of the intestine into the bloodstream.

The mouth

The process of digestion begins in your mouth, where the teeth and tongue chop large pieces of food into smaller ones. The salivary glands release saliva into the mouth to mix with the food. Saliva makes it easier to

The stomach and intestines

Once the food is chewed and softened in the mouth, the tongue pushes it to the back of the throat, where muscles propel it down the oesophagus (or gullet). The food passes from the oesophagus into the stomach through a muscular one-way valve, the lower oesophageal sphincter, which prevents the contents of the stomach from being forced back into the chest when the stomach contracts or when you lie flat.

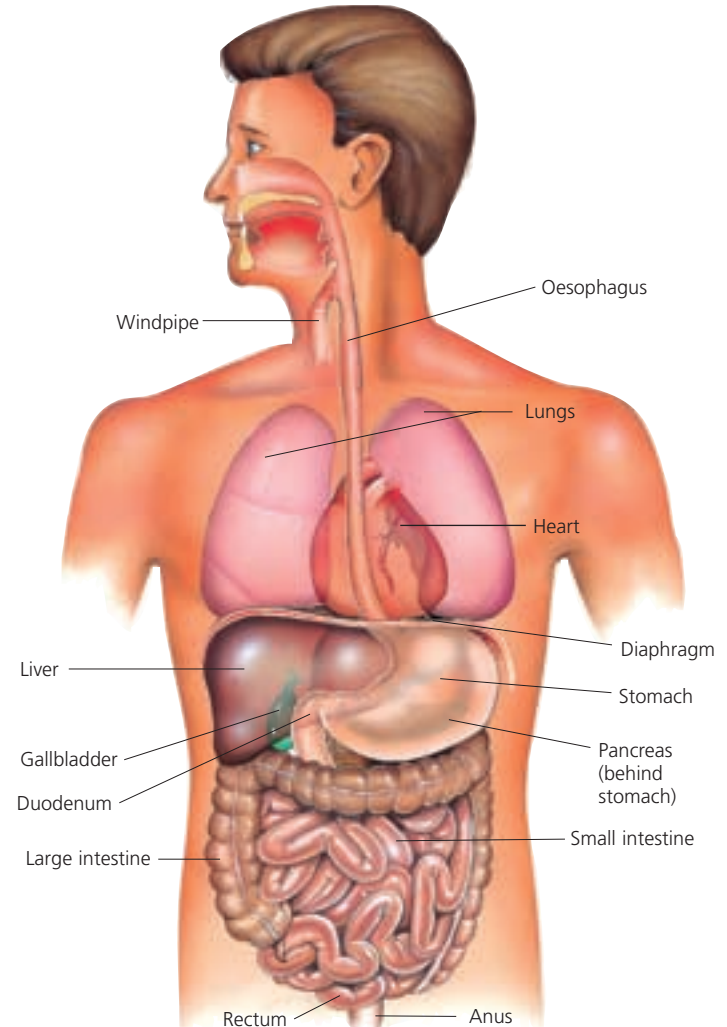
Functions of the stomach

The stomach is a muscular J-shaped sac that forms the widest part of the digestive tract. It has three main functions in the digestive process:

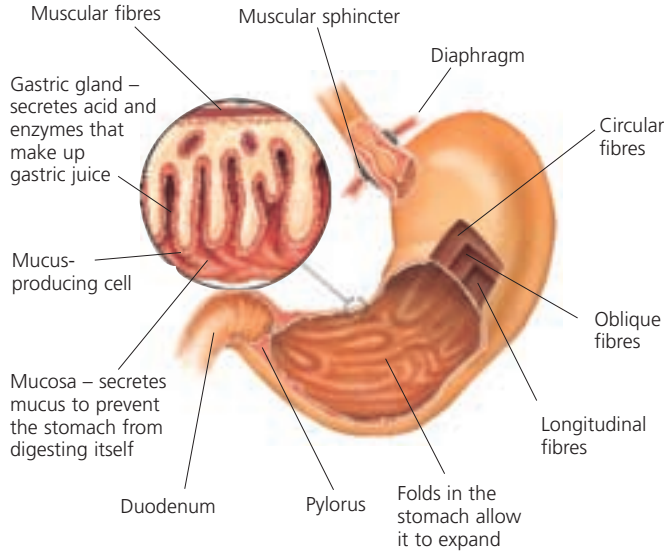
1. It acts as a storage container, so that within a few minutes we can swallow all the food needed for many hours.
2. It plays a large part in the physical and chemical processes of digestion. Food in the stomach is churned and crushed, although you notice this only when the activity is excessive because your stomach does not contain the same number of sensory nerves as other parts of the body, such as the skin. Glands within the stomach lining produce a powerful acid and enzymes that help break down the constituents of food into simpler chemical compounds. The walls of the stomach are normally protected against acid attack by a layer of protective mucus, but, if this is reduced or damaged, it may lead to ulcer formation. The oesophagus doesn't have this protective lining and so is more easily damaged by acid.

The major abdominal organs and digestion

Ingested food passes down the oesophagus and into the stomach, where it is churned and mixed thoroughly with digestive juices secreted by the stomach lining. Further digestive enzymes are added to the food in the duodenum.



Section through stomach wall

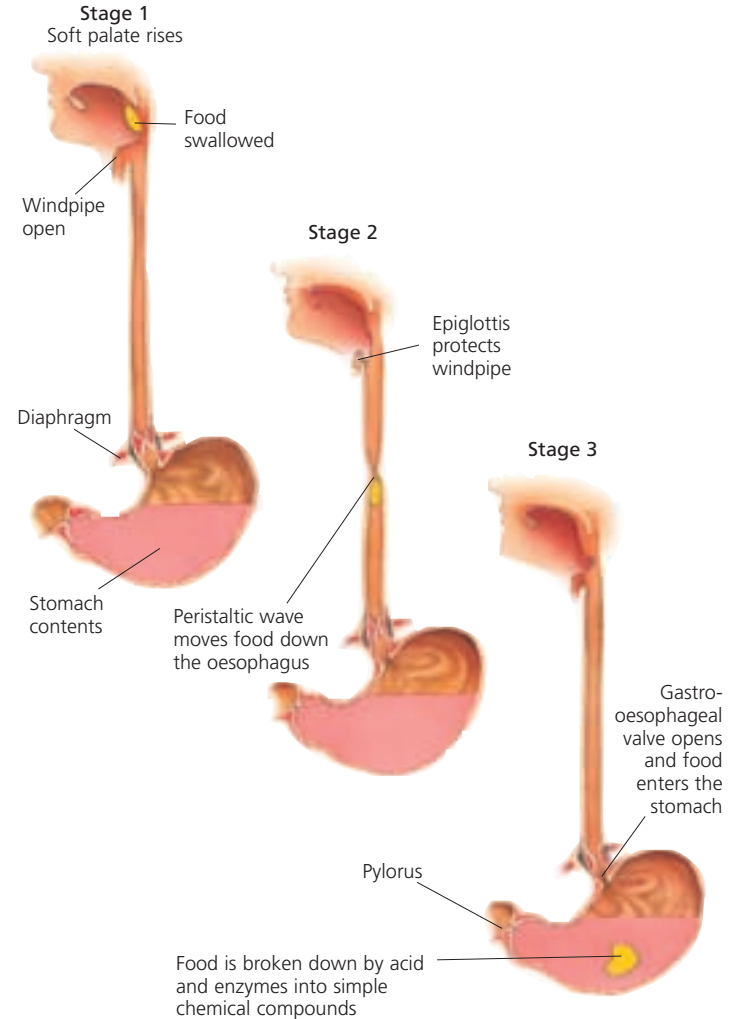


- Food may stay in the stomach for several hours, during which time the acid will destroy most of the bacteria and other micro-organisms that may have contaminated it. Very little is absorbed directly into the bloodstream through the stomach walls, apart from a few substances such as alcohol and aspirin.

When the stomach has done its work the liquidised food is then pushed onwards through another valve, the pylorus, into the duodenum – the first few inches of the small intestine. Here further chemicals are added to neutralise the stomach acid, together with enzymes from the pancreas to help digest carbohydrates, fats and proteins, and bile from the liver to help digest fats.

The swallowing process

To allow you to swallow food safely, two involuntary events occur: the soft palate rises to close off the nasal cavity and the epiglottis tilts to seal the windpipe.



The digested food then passes into the remaining 20 feet (six metres) of small intestine, so called because, although it is long, its diameter is smaller than that of the large intestine. The chemical breakdown is completed in the small intestine and the chemical constituents of the meal are absorbed into the blood and lymphatic vessels.

The main tasks of the large intestine are to reabsorb the water that is used in digestion and to eliminate the undigested food and fibre.

What can go wrong?

Almost everyone experiences occasional attacks of indigestion, which are usually quite brief. We may feel blown out or distended after a large meal, and get some relief when we bring up wind. Most of the wind that we bring up is a result of swallowing air as we eat, but some is produced by a chemical reaction in the stomach or from carbonated, fizzy drinks. The solutions are to eat less, eat more slowly and go easy with fizzy drinks. You may have discovered for yourself that certain foods – fried onions, for example – give you an uncomfortable sensation in the upper abdomen that lasts for only an hour or so. Again the answer is obvious: don't eat those foods, or avoid them where possible.

Causes of indigestion

More persistent indigestion is usually linked with the acid produced by the stomach. If the valve at the lower end of the oesophagus becomes weak or defective, the acid juices in the stomach may be pushed back upwards into the oesophagus, causing a burning sensation (heartburn). This is often troublesome at night, when you lie flat. The underlying condition is

called gastro-oesophageal reflux and is described in more detail on pages 43–60.

Stomach acid may also cause problems if it attacks the lining of the stomach itself, known as peptic ulcer disease, described in detail later (see page 61). Our understanding of peptic ulcer disease has changed greatly in recent years, thanks to the discovery of an infective agent called *Helicobacter pylori* – you'll find out more about this later (see page 64).

The third common cause of indigestion, called non-ulcer dyspepsia, is something of a puzzle. This is the diagnosis given to people who have persistent symptoms of indigestion but in whom the tests for gastro-oesophageal reflux and stomach ulcers are normal. Dyspepsia is actually just the medical name for indigestion. Some people with this type of indigestion are eventually found to have a disorder affecting another part of the digestive system, such as gallstones or the irritable bowel syndrome. In others, the pain is found to be caused by some disorder of the lower ribs and muscles of the abdominal wall. Most people with non-ulcer dyspepsia, however, seem to have sensitive stomachs that cause symptoms at times of emotional stress. The condition is described in greater detail on pages 87–92.

Very occasionally, indigestion may be the first symptom of a more serious condition such as stomach cancer. Stomach cancer is becoming less common than in the past and it occurs far less frequently than peptic ulcer disease or gastro-oesophageal reflux. It is described in greater detail on pages 93–9.

KEY POINTS

- During the normal digestion process, food is broken down so that it can be absorbed into the body
- The stomach produces acid and pepsin to help in this process
- If the lining of the stomach is weakened, or if acid production is altered, then indigestion can occur

Do you need to see your doctor?

Assessing the seriousness of your condition

Probably three of every four people who suffer from indigestion never seek medical advice: they relieve their symptoms by a few changes to their lifestyle and by taking over-the-counter treatments, such as antacids or acid-blocking drugs, bought from the chemist every now and then.

One of the aims of this book is to help you decide whether and when to consult your doctor. You should make an appointment if any of the three following situations applies to you.

Sinister symptoms

See your GP without delay if you have any symptoms of the kind that doctors call 'sinister', by which they mean symptoms that might be caused by a serious disease such as stomach cancer. Early diagnosis and treatment give the best chance of a cure, so get prompt medical advice if you have any of the following symptoms:

- unintentional weight loss
- difficulty swallowing
- abdominal swelling
- persistent vomiting
- vomiting blood or material that looks like coffee grounds
- passing altered blood in the motions (this makes your stools look like tar).

Medicine interactions

Make a routine appointment to see your GP if you develop indigestion while taking any of the following drugs or tablets:

- certain blood pressure drugs known as calcium channel antagonists (nifedipine, amlodipine and verapamil are examples)
- nitrate drugs for treatment of angina (such as isosorbide mononitrate)
- asthma drugs such as theophyllines
- bisphosphonate drugs used for the treatment of osteoporosis (alendronate and risedronate are examples)
- steroid tablets
- non-steroidal anti-inflammatory drugs such as ibuprofen, naproxen and diclofenac.

Prolonged indigestion

Make a routine appointment to see your GP if your indigestion does not go away despite the use of

over-the-counter medicines or if you need to take these medicines for a prolonged period of time.

Your doctor may need to arrange various tests and investigations before beginning treatment – this is covered on pages 28–41.

KEY POINTS

- You should see your doctor if:
 - you have lost weight unintentionally
 - you have lost your appetite
 - you have difficulty swallowing
 - you have vomited blood or material that looks like coffee grounds
 - you have passed altered blood in your motions
 - you are over 40 and have indigestion for the first time
 - your indigestion has not responded to simple measures
 - you have indigestion while taking non-steroidal anti-inflammatory drugs