

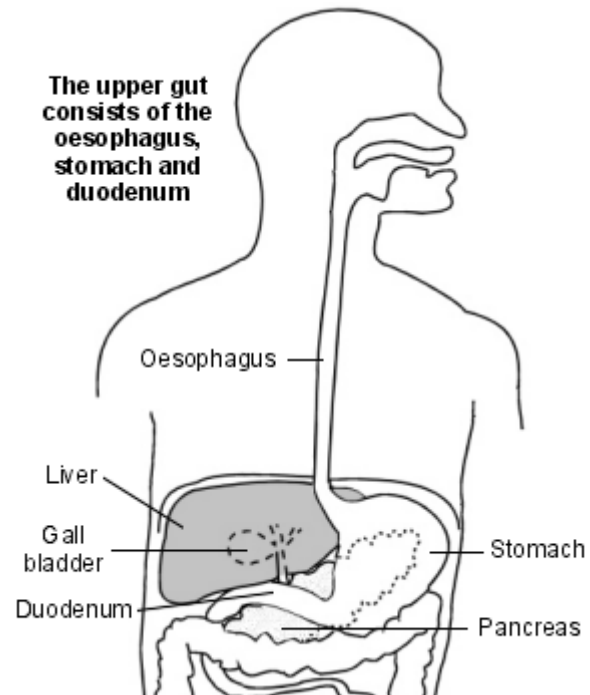
# Dyspepsia (Indigestion)

Dyspepsia (indigestion) is a term which describes pain and sometimes other symptoms which come from your upper gut (the stomach, oesophagus or duodenum). There are various causes (described below). Treatment depends on the likely cause.

## Understanding digestion

Food passes down the oesophagus (gullet) into the stomach. The stomach makes acid which is not essential, but helps to digest food. Food then passes gradually into the duodenum (the first part of the small intestine).

In the duodenum and the rest of the small intestine, food mixes with enzymes (chemicals). The enzymes come from the pancreas and from cells lining the intestine. The enzymes break down (digest) the food. Digested food is then absorbed into the body from the small intestine.



## What is dyspepsia?

Dyspepsia is a term which includes a group of symptoms that come from a problem in your upper gut. The gut or 'gastrointestinal tract' is the tube that starts at the mouth, and ends at the anus. The upper gut includes the oesophagus, stomach, and duodenum.

Various conditions cause dyspepsia. The main symptom is usually pain or discomfort in the upper abdomen. In addition, other symptoms that may develop include: heartburn (a burning sensation felt in the lower chest area), bloating, belching, quickly feeling 'full' after eating, feeling sick (nausea) or vomiting. Symptoms are often related to eating.

Symptoms tend to occur in 'bouts' which come and go, rather than being present all the time. Most people have a bout of dyspepsia, often called indigestion, from time to time. For example, after a large spicy meal. In most cases it soon goes away and is of little concern. However, some people have frequent bouts of dyspepsia which affects their quality of life.

## What causes dyspepsia?

### Common causes

Most cases of recurring dyspepsia are due to one of the following:

- **Non-ulcer dyspepsia.** This is sometimes called 'functional' dyspepsia. It means that no known cause can be found for the symptoms. That is, other causes for dyspepsia such as duodenal ulcer, stomach ulcer, acid reflux, inflamed oesophagus (oesophagitis), gastritis, etc, are not the cause. The inside of your gut looks normal (if you have an endoscopy - see below). It is the most common cause of dyspepsia. About 6 in 10 people who have recurring bouts of dyspepsia have non-ulcer dyspepsia. The cause is not clear, although infection with a bacterium (germ) called *H. pylori* may account for some cases (see below). See separate leaflet called '*Dyspepsia - Non-ulcer (Functional)*' for more detail.

- **Duodenal and stomach (gastric) ulcers.** An ulcer is where the lining of the gut is damaged and the underlying tissue is exposed. If you could see inside your gut, an ulcer looks like a small, red crater on the inside lining of the gut. These are sometimes called peptic ulcers. See separate leaflets called '*Duodenal Ulcer*' and '*Stomach (Gastric) Ulcer*' for more detail
- **Duodenitis and gastritis** (inflammation of the duodenum and/or stomach) - which may be mild, or more severe and a precursor to an ulcer.
- **Acid reflux, oesophagitis and GORD.** Acid reflux is when some acid leaks up (refluxes) into the oesophagus from the stomach. Acid reflux may cause oesophagitis (inflammation of the lining of the oesophagus). The general term gastro-oesophageal reflux disease (GORD) means acid reflux, with or without oesophagitis. See separate leaflet called '*Acid Reflux & Oesophagitis*' for more detail.
- **Hiatus hernia.** This is where the top part of the stomach pushes up into the lower chest through a defect in the diaphragm. The diaphragm is a large flat muscle that separates the lungs from the abdomen. It helps us to breathe. A hiatus hernia commonly causes GORD. See separate leaflet called '*Hiatus Hernia*' for more detail.
- **Infection with *H. pylori*** - see below.
- **Medication.** Some drugs may cause dyspepsia as a side-effect.
  - **Anti-inflammatory drugs** are the most common culprits. These are drugs that many people take for arthritis, muscular pains, sprains, period pains, etc. For example: aspirin, ibuprofen, and diclofenac - but there are others. Anti-inflammatory drugs sometimes affect the lining of the stomach and allow acid to cause inflammation and ulcers.
  - **Various other drugs** sometimes cause dyspepsia, or make dyspepsia worse. They include: digoxin, antibiotics, steroids, iron, calcium antagonists, nitrates, theophyllines, bisphosphonates. (Note: this is not a full list. Check with the leaflet that comes with your medication for a list of possible side-effects.)

### ***H. pylori* and dyspepsia**

*Helicobacter pylori* (commonly just called *H. pylori*) is a bacterium (germ). It can infect the lining of the stomach and duodenum. It is one of the most common infections in the UK. More than a quarter of people in the UK become infected with *H. pylori* at some stage in their life. Once you are infected, unless treated, the infection usually stays for the rest of your life.

Most people with *H. pylori* have no symptoms and do not know that they are infected. However, *H. pylori* is the most common cause of duodenal and stomach ulcers. About 3 in 20 people who are infected with *H. pylori* develop an ulcer. It is also thought to cause some cases of non-ulcer dyspepsia, duodenitis and gastritis. The exact way *H. pylori* causes problems in some infected people is not totally clear. In some people this bacterium causes inflammation in the lining of the stomach or duodenum. This causes the defence mucus barrier to be disrupted in some way (and in some cases the amount of acid to be increased) which seems to allow the acid to cause inflammation and ulcers. See separate leaflet called '*Helicobacter Pylori & Stomach Pain*' for more detail.

### **Other uncommon causes of dyspepsia**

Other problems of the upper gut such as stomach cancer and oesophageal cancer can cause dyspepsia when they first develop.

There are separate leaflets which describe the above conditions in more detail. The rest of this leaflet gives an overview of what might happen if you see your doctor about 'dyspepsia'.

## **What is normally done if you develop dyspepsia?**

Your doctor is likely to do an initial assessment by asking you about your symptoms and examining your abdomen. The examination is usually normal if you have one of the common causes of dyspepsia. Your doctor will want to review any drugs that you take in

case one may be causing the symptoms or making them worse. Following the initial assessment, depending on your circumstances such as the severity and frequency of symptoms, your doctor may suggest one or more of the following plans of action.

### **Antacids taken as required**

Antacids are alkali liquids or tablets that can neutralise the stomach acid. A dose may give quick relief. There are many brands which you can buy. You can also get some on prescription. If you have mild or infrequent bouts of dyspepsia you may find that antacids used 'as required' are all that you need.

### **A change or alteration in your current medication**

This may be possible if a drug that you are taking is thought to be causing the symptoms or making them worse.

### **Test for *H. pylori* infection and treat if it is present**

A test to detect *H. pylori* is commonly done if you have frequent bouts of dyspepsia. As mentioned, it is the underlying cause of most duodenal and stomach ulcers, and some cases of gastritis, duodenitis and non-ulcer dyspepsia.

Various tests can detect *H. pylori* and your doctor may suggest one:

- A 'breath test' can confirm that you have a current *H. pylori* infection. A sample of your breath is analysed after you take a special drink. Note: prior to this test you should not have taken any antibiotics for at least four weeks. Also, you should not have taken a proton pump inhibitor or H2 blocker drug for at least two weeks. (These are acid suppressing drugs - discussed further below.) Also, you should not eat anything for six hours before the test. The reason for these rules is because they can affect the test result.
- An alternative test is the 'stool antigen test'. In this test you give a pea-sized sample of your faeces (stools) which is tested for *H. Pylori*. Note: prior to this test you should not have taken any antibiotics for at least four weeks. Also, you should not have taken a proton pump inhibitor or H2 blocker drug for at least two weeks. (These are acid suppressing drugs.)
- A blood test can detect antibodies to *H. pylori*. This is sometimes used to confirm that you are, or have been, infected with *H. pylori*. However, it takes six months or more for this test to become negative once the infection has cleared. So, it is no use to confirm whether treatment has cleared the infection (if this needs to be known). If needed, the breath test or stool antigen test are usually used to check if an infection has cleared following treatment.
- Sometimes a biopsy (small sample) of the lining of the stomach is taken if you have a gastroscopy (endoscopy). The sample can be tested for *H. pylori*.

If you are found to be infected with *H. pylori* then treatment may cure the symptoms. Briefly, to clear *H. pylori* infection you need to take two antibiotics at the same time. In addition, you need to take a drug to reduce the acid in the stomach. This allows the antibiotics to work well in the stomach. You need to take this 'combination therapy' for a week. It is important to take all the drugs exactly as directed, and to take the full course. (See separate leaflet called '*Helicobacter Pylori* & *Stomach Pain*' which deals with the treatment of *H. pylori* in more detail.)

Note: After 'combination therapy', a test may be advised to check that *H. pylori* has gone (has been eradicated). This test will usually be a breath test or a stool antigen test (described earlier). If a test is done it needs to be done at least four weeks after the course of combination therapy has finished. In most cases, the test is 'negative' meaning that the infection has gone. If it has not gone, and you still have symptoms, then a repeat course of combination therapy with a different set of antibiotics may be advised.

Some doctors say that for most situations, this 'confirmation of eradication' test is not necessary if symptoms have gone. The logic is that if symptoms have gone it usually

indicates that whatever was causing the dyspepsia has gone. But, some doctors say it is needed to play safe. Your own doctor will advise if you should have this test following treatment to clear *H. pylori*.

### **Acid suppressing medication**

A one month trial of full dose medication which reduces stomach acid may be considered. In particular, if:

- Symptoms are more suggestive of acid reflux or oesophagitis. *H. pylori* does not cause these problems.
- If infection with *H. pylori* has been ruled out.
- If *H. pylori* has been treated but symptoms persist.

There are two groups of drugs which reduce stomach acid - 'proton pump inhibitors (PPIs)' and 'H2 blockers'. They work in different ways to block the cells in the stomach lining from making acid. There are several brands in each group. A proton pump inhibitor (such as omeprazole, lansoprazole, pantoprazole, rabeprazole, or esomeprazole) is usually better and is usually tried first.

Reducing acid in the stomach can help in many cases of dyspepsia, whatever the underlying cause. If acid-suppressing medication works, then symptoms should go. If symptoms return at a later date, once the medication is stopped, then further courses may be advised. Many people take acid suppressing medication 'as required'. That is, waiting for symptoms to develop, and then taking a short course of treatment to clear the symptoms. Some people take them regularly if symptoms occur each day. If this is the situation, you should aim to find the lowest dose of medication that keeps symptoms away.

### **Prokinetic drugs**

These are drugs that speed up the passage of food through the stomach. They include domperidone and metoclopramide. They are not commonly used but help in some cases, particularly if you have marked bloating or belching symptoms. They tend to be used only if acid suppressing medication has not helped much.

### **Further tests**

Further tests are not needed in most cases. One or more of the above options often sort the problem. Reasons why further tests may be advised include:

- If additional symptoms suggest that your dyspepsia may be caused by a serious disorder such as stomach or oesophageal cancer, or a complication from an ulcer such as bleeding. For example, if you:
  - Pass blood with your faeces (blood can turn your faeces black).
  - Vomit blood.
  - Lose weight unintentionally.
  - Feel generally unwell.
  - Have difficulty swallowing (dysphagia).
  - Vomit persistently.
  - Develop anaemia.
  - Have an abnormality when you are examined by a doctor such as a lump in the abdomen.
- If you are aged over 55 and develop persistent or unexplained dyspepsia.
- If the symptoms are not typical and may be coming from outside the gut. For example, to rule out problems of the gall-bladder, pancreas, liver, etc.
- If the symptoms are severe and do not respond to treatment.
- If you have a known 'risk-factor' for stomach cancer. For example, if you have Barrett's oesophagus, dysplasia, atrophic gastritis, or had ulcer surgery over 20 years ago.

Tests advised may include:

- Endoscopy (gastroscopy). In this test a doctor or nurse looks inside your oesophagus, stomach and duodenum. They do this by passing a thin, flexible telescope down your oesophagus. See separate leaflet called '*Gastroscopy (Endoscopy)*' for more detail.
- Blood test to check for anaemia. If you are anaemic, it may be due to a bleeding ulcer, or to a bleeding stomach cancer. You may not notice the bleeding if it is not heavy as the blood is passed out unnoticed in your faeces (stools).
- Tests of the gall bladder, pancreas, etc, if the cause of the symptoms is not clear.

Treatment depends on what is found or ruled out by the tests.

### Lifestyle changes

There is no clear evidence that lifestyle factors affect dyspepsia. However, some people find that some things seem to make a difference. For example:

For all types of dyspepsia:

- **Some foods and drinks** may make symptoms worse in some people. It is difficult to be certain how much foods contribute. Let common sense be your guide. If it seems that a food is causing dyspepsia or making symptoms worse, then try avoiding it for a while to see if symptoms improve. Foods and drinks that have been suspected of making symptoms worse in some people include: peppermint, tomatoes, chocolate, spicy foods, hot drinks, coffee, and alcoholic drinks.
- **Smoking.** Some smokers find that symptoms improve if they give up smoking.
- **Weight.** If you are overweight then losing some weight may ease the symptoms.

For dyspepsia which is likely to be due to acid reflux - when heartburn is a major symptom - the following may also be worth considering.

- **Posture.** Lying down or bending forward a lot during the day encourages reflux. Sitting hunched or wearing tight belts may put extra pressure on the stomach which may make any reflux worse.
- **Bedtime.** If symptoms recur most nights, the following may help:
  - Go to bed with an empty, dry stomach. To do this, don't eat in the last three hours before bedtime, and don't drink in the last two hours before bedtime.
  - If you are able, try raising the head of the bed by 10-20 cms (for example, with books or bricks under the bed's legs). This helps gravity to keep acid from refluxing into the oesophagus. If you do this do not use additional pillows, because this may increase abdominal pressure.

## References

- [Dyspepsia - unidentified cause](#), Clinical Knowledge Summaries (2008)
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- [Shah R](#); Dyspepsia and Helicobacter pylori. BMJ. 2007 Jan 6;334(7583):41-3.
- [Dyspepsia: Managing dyspepsia in adults in primary care](#), NICE Clinical Guideline (2004)

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Comprehensive patient resources are available at [www.patient.co.uk](http://www.patient.co.uk)

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