Gastroenteritis

Gastroenteritis is an infection of the gut (intestines) with viruses, bacteria or other microbes. You may develop diarrhoea and vomiting, tummy (abdominal) pain and other symptoms.

What is gastroenteritis?

Gastroenteritis is an infection of the gut with microbes, which usually causes a mild tummy upset for a day or two. It can also be called 'stomach flu'.

However, there is a more severe form of gastroenteritis that sticks around for several days. Apart from the watery poo and throwing up, you get blood in the poo and tummy pains for no extra charge. Sometimes a high temperature (fever), aching limbs and headache are added extras.

There is a separate article on Gastroenteritis in Children.

Gastroenteritis symptoms

Diarrhoea and being sick (vomiting) are the two main symptoms of gastroenteritis. This may cause lack of fluid in the body (dehydration), so consult a doctor quickly if you suspect you are becoming dehydrated.

Mild dehydration is a common gastroenteritis symptom and is usually easily reversed by drinking lots of fluids. Severe dehydration can be fatal unless quickly treated because the organs of your body need a certain amount of fluid to function.

Symptoms and signs of dehydration in adults include:

- Tiredness.

- Dizziness or light-headedness.

- Headache.

- Muscular cramps.

- Sunken eyes.

- Passing little urine.

- A dry mouth and tongue.

- Weakness.

- Becoming irritable.

Symptoms of *severe* dehydration in adults include:

- Weakness.

- Confusion.

- Rapid heart rate.

- Coma.

- Producing very little urine.

Severe dehydration is a medical emergency and immediate attention is needed.

Dehydration in adults with gastroenteritis is more likely to occur in:

- Elderly or frail people.

- Pregnant women.

- People with severe vomiting and diarrhoea. In particular, if you are not able to replace the fluid lost with enough drinks.

How long does gastroenteritis last?

Viral gastroenteritis symptoms tend to appear 1-3 days after infection and can vary in severity. Typically, gastroenteritis symptoms last anywhere between a day or two, to up to 14 days.

What causes gastroenteritis?

Infection with noroviruses and adenoviruses are common causes of gastroenteritis in adults in the UK. However, other viruses can also be the cause.

Food poisoning from eating contaminated food causes some cases of gastroenteritis. Many different types of microbes can cause food poisoning. Common examples of bacterial infection are called campylobacter, salmonella and Escherichia coli.

Poisons (toxins) produced by bacteria can also cause food poisoning. Another group of microbes called parasites can also be a cause. Food and Water contaminated by bacteria or other microbes is another common cause, particularly in countries with poor sanitation. See the separate leaflet called Food Poisoning for more details.

Is gastroenteritis contagious?

Yes, gastroenteritis is contagious so it can be easily passed on from person to person. You can catch gastroenteritis when tiny particles of faeces or vomit from an infected person enter your mouth.

There are a number of ways this can happen:

- By touching contaminated surfaces and then your mouth or face.

- By eating food contaminated by an infected person.

- By eating food that hasn't been prepared correctly or stored at the right temperature.

- By close contact with an infected person, as their breath may contain small particles of vomit carrying the virus or bacteria that causes gastroenteritis.

Viruses are easily spread from one person to another by close contact. This is often because of the virus being present on people's hands after they have been to the toilet. Surfaces or objects touched by the infected person can also allow transmission of the virus.

The virus can also be passed on if the infected person prepares food. Outbreaks of a virus causing gastroenteritis in many people can occur - for example, in schools, hospitals or nursing homes

People with gastroenteritis are most contagious from the moment their symptoms begin to 48 hours after they've gone away. However, they may be infections slightly before and after this period.

Is gastroenteritis dangerous?

Gastroenteritis can become dangerous if you become dehydrated, you're throwing up a lot and can't keep fluids down, you have blood in your poo or sick (vomit), or you have severe tummy pains. If this happens, seek medical advice.

A persistent high temperature (fever) or diarrhoea or puking that lasts longer than expected are other reasons to contact the doc. Also, if you're elderly, have a long-term condition such as diabetes, are pregnant or have trouble with your immune system, don't hesitate to get in touch with a health professional.

Gastroenteritis is common. About 1 in 5 people in the UK will develop an episode of gastroenteritis in a year. Most people have a mild form of gastroenteritis and do not need to seek medical advice or to visit their doctor.

- The main symptom is diarrhoea, often with being sick (vomiting) as well. Diarrhoea means loose or watery stools (faeces), usually at least three times in 24 hours. Blood or mucus can appear in the stools with some infections.

- Crampy pains in your tummy (abdomen) are common. Pains may ease for a while each time you pass some diarrhoea.

- A high temperature (fever), headache and aching limbs sometimes occur.

Can gastroenteritis have long-term effects?

If vomiting occurs, it often lasts only a day or so but sometimes longer. Diarrhoea often continues after the vomiting stops and commonly lasts for several days or more. Slightly loose stools may continue for a week or so further before a normal pattern returns. Sometimes the symptoms last longer.

When to see a doctor for gastroenteritis

Seek medical advice in any of the following situations, or if any other symptoms occur that you are concerned about:

- If you suspect that you are becoming lacking in fluid in the body (dehydrated).

- If you are being sick (vomiting) a lot and unable to keep fluids down.

- If you have blood in your diarrhoea or your sick (vomit).

- If you have severe tummy (abdominal) pain.

- If you have severe symptoms, or if you feel that your condition is getting worse.

- If you have a persisting high temperature (fever).

- If your symptoms are not settling - for example, vomiting for more than 1-2 days, or diarrhoea that does not start to settle after 3-4 days.

- Infections caught abroad.

- If you are elderly or have an underlying health problem such as diabetes, epilepsy, inflammatory bowel disease (IBD), or kidney disease.

- If you have a weakened immune system because of, for example, chemotherapy treatment, long-term steroid treatment, or HIV infection.

- If you are pregnant.

How is gastroenteritis diagnosed?

Most people with gastroenteritis recognise this from their typical symptoms and they do not usually need to see a doctor or to seek medical advice. Symptoms are often quite mild and commonly get better within a few days without any specific treatment.

However, in some circumstances, you may need to see a doctor when you have gastroenteritis. The doctor may ask you questions about recent travel abroad, if you have been in contact with someone with similar symptoms, or if you have recently taken antibiotic medication or been admitted to hospital. This is to look for possible causes of your gastroenteritis.

The doctor will also usually check you for signs of lack of fluid in the body (dehydration). They may check your temperature, pulse and blood pressure. They may also examine your tummy (abdomen) to look for any tenderness

Tests are not usually needed. However, if you are particularly unwell, have bloody stools (faeces), have recently travelled abroad, are admitted to hospital, or your symptoms are not getting better, your doctor may ask you to collect a stool sample. This can then be examined in the laboratory to look for the cause of the infection

Gastroenteritis treatment

Symptoms often settle within a few days or so as your immune system usually clears the infection. Occasionally, admission to hospital is needed if symptoms are severe, or if complications develop.

The following are commonly advised until symptoms ease.

Fluids - have lots to drink
If you suspect that you are dehydrated, you should contact a doctor.

- As a rough guide, drink at least 200 mls after each bout of diarrhoea (after each watery stool).

- This extra fluid is **in addition** to what you would normally drink. For example, an adult will normally drink about two litres a day but more in hot countries. The above advice of 200 mls after each bout of diarrhoea is in addition to this usual amount that you would drink.

- If you have been sick (vomited), wait 5-10 minutes and then start drinking again but more slowly. For example, a sip every 2-3 minutes but making sure that your total intake is as described above.

- You will need to drink even more if you are dehydrated. A doctor will advise on how much to drink if you are dehydrated.

For most adults, fluids drunk to keep hydrated should mainly be water. It is best not to have drinks that contain a lot of sugar as they can sometimes make diarrhoea worse.

Rehydration drinks are recommended for people who are frail, or over the age of 60, or who have underlying health problems. They are made from sachets that you can buy from pharmacies. (The sachets are also available on prescription.) You add the contents of the sachet to drinking water. Oral rehydration solutions provide a good balance of water, salts and sugar.

The small amount of sugar and salt helps the water to be absorbed better from the gut (intestines) into the body. They do not stop or reduce diarrhoea. Home-made salt/sugar mixtures are used in developing countries if rehydration drinks are not available but they have to be made carefully, as too much salt can be dangerous. Rehydration drinks are cheap and readily available in the UK and are the best treatment.

Eat as normally as possible

It used to be advised not to eat for a while if you had gastroenteritis. However, now it is advised to eat small, light meals if you can. Be guided by your appetite. You may not feel like food and most adults can do without food for a few days.

Eat food as soon as you are able - but don't stop drinking. If you do feel like eating, avoid fatty, spicy or heavy food at first. Plain foods such as wholemeal bread and rice are good foods to try eating first.

See the separate article What to eat when you have gastroenteritis for more details.

Medication

Antidiarrhoeal medicines are not usually necessary. However, you may wish to reduce the number of trips that you need to make to the toilet. You can buy antidiarrhoeal medicines from pharmacies. The safest and most effective is loperamide.

The adult dose of this is two capsules at first. This is followed by one capsule after each time you pass some diarrhoea up to a maximum of eight capsules in 24 hours. It works by slowing down your gut's activity. You should not take loperamide for longer than five days.

Note: do not give antidiarrhoeal medicines to infants and young children aged less than 12 years. Also, do not use antidiarrhoeal medicines if you pass blood or mucus with the diarrhoea or if you have a high temperature (fever). People with certain conditions should not take loperamide. Therefore, read the leaflet that comes with the medicine to be safe. For example, pregnant women should not take loperamide.

Paracetamol or ibuprofen is useful to ease the distress that might accompany a high temperature or headache.

As explained, if symptoms are severe, or continue for more than several days, your doctor may ask for a sample of the diarrhoea. This is sent to the laboratory to look for infecting microbes (bacteria, parasites, etc).

Sometimes an antibiotic or other treatments are needed if certain bacteria or other infections are found to be the cause. Antibiotics are not needed for gastroenteritis caused by viruses and may even make things worse.

See the separate feature Advice for recovering from gastroenteritis.

What are the possible complications of gastroenteritis?

Gastroenteritis complications are more likely if you have an ongoing (chronic) condition such as diabetes or if you have a weakened immune system. For example, if you are taking long-term steroid medication or you are having chemotherapy treatment for cancer.

Possible complications include the following:

Lack of fluid (dehydration) and salt (electrolyte) imbalance in your body

This is the most common complication. It occurs if the water and salts that are lost in your stools (faeces), or when you have been sick (vomited), are not replaced by you drinking adequate fluids.

If you can manage to drink plenty of fluids then dehydration is unlikely to occur, or is only likely to be mild and will soon recover as you drink. Severe dehydration can lead to a drop in your blood pressure. This can cause reduced blood flow to your vital organs. If dehydration is not treated, kidney failure may also develop.

Some people who become severely dehydrated need a drip of fluid directly into a vein. This requires admission to hospital.

Reactive complications

Rarely, other parts of the body may react to an infection that occurs in the gut (intestines). This can cause symptoms such as joint inflammation (arthritis), skin inflammation and eye inflammation (either conjunctivitis or uveitis). Reactive complications are uncommon when a virus causes gastroenteritis.

Spread of infection

The infection can spread to other parts of your body such as your bones, joints, or the meninges that surround your brain and spinal cord. This is rare. If it does occur, it is more likely if gastroenteritis is caused by salmonella infection.

Persistent diarrhoea syndromes

Persistent diarrhoea may develop, but this is uncommon.

Irritable bowel syndrome (IBS)

IBS is sometimes triggered by a bout of gastroenteritis.

Lactose intolerance

A lactose intolerance can sometimes occur for a while after gastroenteritis. This is known as secondary or acquired lactose intolerance. Your gut lining can be damaged by the episode of gastroenteritis. This leads to lack of a chemical (enzyme) called lactase that is needed to help your body digest a sugar called lactose that is in milk.

Lactose intolerance leads to bloating, tummy (abdominal) pain, wind and watery stools after drinking milk. The condition gets better when the infection is over and the gut lining heals. It is more common in children.

Haemolytic uraemic syndrome
This is another potential complication. It is rare and is usually associated with gastroenteritis caused by a certain type of E. coli. It is a serious condition where there is anaemia, a low platelet count in the blood and kidney failure. It is more common in children. If recognised and treated, most people recover well.

Reduced effectiveness of some medicines
During an episode of gastroenteritis, certain medicines that you may be taking for other conditions or reasons may not be as effective. This is because the diarrhoea and/or vomiting means that reduced amounts of the medicines are taken up (absorbed) into your body.

Examples of such medicines are medicines for epilepsy, diabetes and contraception. Speak to your doctor or practice nurse if you are unsure of what to do if you are taking other medicines and have gastroenteritis.

How to prevent gastroenteritis

If you have gastroenteritis, the following are recommended to prevent the spread of infection to others:

- **Wash your hands thoroughly after going to the toilet**. Ideally, use liquid soap and water but any soap is better than none. Dry properly after washing.

- **Don't share towels and flannels**.

- **Don't prepare or serve food or drink for others**.

- Regularly **clean the toilets that you use with disinfectant.** Wipe the flush handle, toilet seat, bathroom taps, surfaces and door handles with hot water and detergent at least once a day. Keep a cloth just for cleaning the toilet (or use a disposable one each time).

- **Stay off work, college, etc, until at least 48 hours after the last episode of diarrhoea** or being sick (vomiting).

- Rotavirus is a common cause of diarrhoea and vomiting in babies and young children. A **rotavirus vaccination** is routinely offered to children.

- Food handlers: if you work with food and develop diarrhoea or vomiting, you must **immediately leave the food-handling area**. For most, no other measures are needed, other than staying away from work until at least 48 hours after the last episode of diarrhoea or vomiting. Some special situations may arise and sometimes longer time off is needed. Specialist advice may be needed for some uncommon causes of gastroenteritis. If in doubt, seek advice from your employer or GP.

- If the cause of gastroenteritis is known to be (or suspected to be) a microbe called , **you should not swim in swimming pools for two weeks** after the last episode of diarrhoea.

Can food poisoning cause gastroenteritis?

Even when we are not in contact with someone with gastroenteritis, we can still catch it from poor storage, preparation and cooking of food, so good hygiene can help to prevent gastroenteritis too.

In particular, always wash your hands:

- After you go to the toilet.

- Before you touch food.

- Between handling raw meat and food ready to be eaten. (There may be some germs (bacteria) on raw meat.)

- After gardening.

- After playing with pets (even healthy animals can carry certain harmful bacteria).

The simple measure of washing hands regularly and properly is known to make a big difference to the chance of developing gastroenteritis.

You should also take extra measures when in countries which have poor sanitation. For example, avoid drinking contaminated water and other drinks that may not be safe and avoid eating food washed in unsafe water.

Further reading

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