Diarrhoea Causes & Management Guide

Compiled from diarrheacauses.com • Co-branded with Anonamed

Medical information only. Not personal medical advice.

Seek urgent care now for blood/black stool, high fever, severe pain, dehydration, persistent vomiting, confusion/collapse, or high-risk status (infants, older adults, pregnancy, immunosuppression, asplenia).

DiarrheaCauses.com

Causes of Diarrhoea

A practical, safety-focused guide for patients and families Co-branded with Anonamed — privacy-first emergency medical record

What this site is for

Diarrhoea is extremely common. Most episodes are short-lived and harmless, but a small number can lead to serious dehydration, infection, or sepsis, especially in vulnerable people.

This site is designed to help you:

- manage diarrhoea safely at home when appropriate
- recognise red flags early
- avoid unnecessary tests and antibiotics
- not miss serious disease

It is written by a gastroenterology perspective and follows modern clinical practice.

DiarrheaCauses.com: a 60-second safety check

Before reading anything else, answer these four questions:

1. Can fluids stay down?

- Are you able to keep fluids down without persistent vomiting?
- Is urine output reduced, dark, or absent?

2. Is there blood, black stool, or high fever?

- Fresh red blood or dark/black stool
- Fever above 38.5°C (101.5°F)
- Severe or worsening abdominal pain

3. How long has it lasted?

- 0–14 days → usually acute diarrhoea
- 14–28 days → persistent diarrhoea
- ≥4 weeks → chronic diarrhoea (needs structured evaluation)

Duration matters more than stool frequency alone.

4. Are you in a higher-risk group?

Lower thresholds for assessment apply if you are:

- an infant or young child
- over 65 years old

- pregnant
- immunosuppressed (biologics, steroids, chemotherapy, transplant)
- without a spleen (asplenia)
- living with significant heart, kidney, or liver disease

The single most important principle

Early oral rehydration prevents most complications. Antibiotics rarely help and often make outcomes worse when used incorrectly.

Common patterns — and what they usually mean

What not to do

- Do not start antibiotics “just in case”
- Do not use loperamide if there is fever or blood
- Do not ignore dehydration because stool frequency seems mild
- Do not delay care if symptoms worsen rapidly

Where to go next on this site

- Timeline: What to expect — day-by-day guidance to reduce anxiety
- When to seek medical attention — clear red flags
- Rehydration & symptom relief — ORS, vomiting strategies, safe medication use
- Testing & investigations — stool PCR, blood tests, imaging, colonoscopy cautions
- Antibiotics — when they help, when they harm
- Traveller’s diarrhoea — prevention and hospital thresholds
- Chronic diarrhoea — structured causes and investigations

A note on emergencies and privacy (Anonamed)

If diarrhoea becomes severe — particularly while travelling — clinicians need to know:

- drug allergies (especially anaphylaxis)
- immunosuppression
- prior C. diff
- major abdominal surgery

Carrying this information securely and privately can be life-saving. This site is co-branded with Anonamed for that reason.

Acute diarrhoea

Acute diarrhoea

Causes, first steps, testing thresholds, and when antibiotics help

What is acute diarrhoea?

Acute diarrhoea is diarrhoea lasting up to 14 days. The majority of cases are self-limited and resolve with supportive care.

The main risks are dehydration, electrolyte disturbance, and missing a small number of serious infections.

Common causes

1. Viral gastroenteritis

Typical features: watery diarrhoea, nausea/vomiting, cramping, multiple contacts unwell. Antibiotics do not help.

2. Toxin-mediated food poisoning

Typical features: very rapid onset (hours), prominent vomiting, short duration (<48h). Fluids and rest only.

3. Bacterial gastroenteritis

Common organisms: Campylobacter, Salmonella, Shigella, enterotoxigenic E. coli. Fever and/or blood may occur.

4. Parasitic infection

More likely when symptoms persist >7–10 days, after travel, or untreated water exposure. Examples: Giardia, Entamoeba, Cryptosporidium.

5. Medication-related diarrhoea

Common culprits include antibiotics, metformin, magnesium supplements, PPIs, SSRIs, chemotherapy/immunotherapy, GLP■1 receptor agonists.

First priorities in all patients

1. Rehydration comes first

Early use of Oral Rehydration Solution (ORS) prevents most complications. Start ORS immediately and continue even if diarrhoea persists.

2. Symptom control (when safe)

- Loperamide: use only if no fever and no blood.
- Avoid if dysentery or suspected C. diff.
- Antiemetics can allow successful ORS intake.

When to seek medical review

Urgent review is required if blood/black stool, high fever, severe pain, dehydration, persistent vomiting, or high-risk status.

When to test stool

Testing is appropriate when severe, fever/blood, not improving by ~72 hours, persists >7 days, high-risk, or recent travel/antibiotics.

Modern practice favours multiplex PCR stool testing.

Antibiotics in acute diarrhoea — key rules

Antibiotics may be considered when:

- Severe traveller's diarrhoea
- Dysentery with fever
- Suspected cholera with severe dehydration
- High-risk hosts with significant illness

Antibiotics should be avoided when:

- Illness is likely viral
- Symptoms are mild and improving
- Shiga-toxin producing E. coli is suspected, due to the risk of haemolytic uraemic syndrome (HUS)

Common mistakes that cause harm

- Starting antibiotics "just in case"
- Using loperamide in febrile or bloody diarrhoea
- Ignoring dehydration
- Delaying assessment in high-risk patients

What happens if symptoms do not settle?

Persistence beyond 14 days suggests parasites, early IBD, or post-infectious gut dysfunction. See Chronic diarrhoea and Timeline.

Rehydration & symptom relief

Rehydration and symptom relief in diarrhoea

What helps, what harms, and how to use treatments safely

The primary goal

Diarrhoea itself is rarely dangerous. Dehydration is the main cause of complications.

Oral Rehydration Solution (ORS)

Oral Rehydration Solution (ORS) is the treatment of choice for most people with diarrhoea.

Practical ORS guidance

- Start ORS early
- Take small, frequent sips
- Continue ORS even if stools remain loose
- Combine with light food as tolerated

ORS is far more effective than plain water.

Vomiting: how to still rehydrate

Effective strategy: 5–10 mL every 2–3 minutes, gradually increase, restart after vomiting.

When intravenous (IV) fluids are needed

- Persistent vomiting preventing intake
- Moderate to severe dehydration
- Confusion or drowsiness
- Minimal or absent urine output
- Circulatory compromise

Anti-diarrhoeal medications

Loperamide

May reduce stool frequency but must be used cautiously.

- May be used if no fever and no blood.
- Must NOT be used if fever, blood/mucus, suspected C. diff, or suspected STEC (HUS risk).

Diphenoxylate–atropine (Lomotil)

Limited role; similar cautions to loperamide; generally avoided in infectious diarrhoea.

Antiemetics (anti-nausea medication)

Antiemetics can be the key intervention that allows successful rehydration.

Ondansetron

Commonly used and effective for nausea/vomiting associated with diarrhoeal illness.

Orally disintegrating wafers (ODT / wafers)

Ondansetron orally disintegrating wafers (e.g. ZAPID and equivalent) dissolve on the tongue.

- Absorbed through the oral mucosa
- Do not rely on gut absorption
- Less likely to be vomited back up
- Often work faster and more reliably than swallowed tablets

Practical use

- Allow the wafer to dissolve fully on the tongue
- Restart ORS with small, frequent sips once nausea improves

Safety notes

- Generally well tolerated; constipation/headache can occur
- Rare QT prolongation — caution in those with risk factors
- Use in children and pregnancy should follow medical advice

Analgesics (pain relief)

- Paracetamol (acetaminophen) is preferred
- Avoid NSAIDs (e.g. ibuprofen) when dehydrated

Nutrition during diarrhoea

- Continue eating if appetite allows
- Light, bland foods are appropriate
- Avoid prolonged fasting

Common mistakes to avoid

- Drinking only water instead of ORS
- Using sports drinks as ORS substitutes
- Stopping ORS because diarrhoea continues
- Using loperamide despite fever or blood
- Delaying care when vomiting prevents intake

Oral Rehydration Solution (ORS)

Oral Rehydration Solution (ORS)

What it is, why it works, and how to use it properly

What is Oral Rehydration Solution (ORS)?

Oral Rehydration Solution (ORS) is a carefully balanced mixture of glucose and electrolytes designed to treat dehydration caused by diarrhoea and vomiting.

ORS is one of the most important medical treatments ever developed and is effective even when diarrhoea is ongoing.

Why ORS works (and water alone does not)

The intestine absorbs sodium and glucose together through a specific transport mechanism. When glucose and sodium are absorbed together, water is absorbed with them, even during severe diarrhoea.

Plain water:

- does not replace lost electrolytes
- can worsen low sodium levels if taken in excess

What counts as ORS (important)

Appropriate ORS options

- WHO oral rehydration solution
- Pharmacy ORS sachets mixed with clean water
- Commercial medical-grade ORS preparations

Not equivalent to ORS

- Sports drinks
- Soft drinks or soda
- Fruit juice
- Coconut water
- Plain water alone

These alternatives usually contain too much sugar and too little sodium.

How to take ORS (practical guide)

If not vomiting:

- Drink regularly throughout the day
- Aim for pale yellow urine

If nauseated or vomiting:

- Take 5–10 mL (1–2 teaspoons) every 2–3 minutes
- Gradually increase as tolerated

- Continue even if diarrhoea persists

ORS works best when taken early, before dehydration becomes severe.

ORS for children

- Use weight-appropriate dosing
- Continue feeding (including breastfeeding) alongside ORS
- Do not dilute ORS beyond instructions

When ORS is not enough

- Persistent vomiting preventing fluid intake
- Signs of moderate–severe dehydration
- Confusion, lethargy, or minimal urine output

Common mistakes to avoid

- Sipping only water instead of ORS
- Stopping ORS because diarrhoea continues
- Using sports drinks as a substitute
- Delaying care when vomiting prevents intake

Testing & investigations

Testing diarrhoea safely and effectively

What to test, when to test, and how to avoid harm

Why testing strategy matters

Most diarrhoea does not require extensive testing. Poorly targeted investigations increase anxiety, delay appropriate care, and expose patients to avoidable risk.

Stool testing

Multiplex stool PCR (preferred where available)

Multiplex PCR detects multiple pathogens rapidly from a single sample (bacteria, viruses, parasites). Advantages: rapid and sensitive; limitations: detects DNA and may reflect colonisation.

When stool testing is appropriate

- Severe illness
- Fever or blood
- Persistent diarrhoea (>7 days)
- High-risk patients
- Recent travel
- Suspected C. diff

C. difficile testing

- Test only if diarrhoea is present and recent antibiotics/healthcare exposure
- Do not test formed stool

Blood tests

- Full blood count, CRP, electrolytes/renal function, LFTs

Pancreatic enzymes

- Amylase and lipase are not routine; useful if pancreatitis suspected

Coeliac disease testing

- tTG antibodies; test before gluten restriction

Pancreatic elastase (faecal elastase)

Faecal elastase assesses exocrine pancreatic function.

- >200 µg/g normal
- 100–200 µg/g borderline

- <100 µg/g pancreatic exocrine insufficiency

Hormonal and rare causes (selected cases only)

Not routine. May include gastrin, VIP, thyroid tests, and medication/hormonal effects (e.g. GLP■1 receptor agonists).

Imaging

- Ultrasound: biliary disease
- CT abdomen: severe pain, complications, colitis, malignancy
- MRCP: biliary/pancreatic duct detail

Colonoscopy

When indicated

- Chronic diarrhoea, suspected IBD, weight loss/anaemia, persistent symptoms

Antibiotics (hub)

Antibiotics in diarrhoea

When they help, when they harm, and how to choose safely

- Do not shorten viral illness
- Increase side effects and allergic reactions
- Increase risk of C. diff
- Drive antimicrobial resistance

Situations where antibiotics may be appropriate

- Severe traveller’s diarrhoea (incapacitating symptoms, fever, dysentery)
- Suspected/confirmed invasive bacterial infection
- Cholera with severe dehydration (adjunct to fluids)
- High-risk hosts

Situations where antibiotics should be avoided

- Likely viral gastroenteritis
- Mild illness improving
- Suspected STEC — risk of HUS
- Unexplained diarrhoea without red flags

Commonly used antibiotics (overview)

Major risks to consider before prescribing

Allergy and anaphylaxis

Any history of anaphylaxis must be documented clearly.

Antibiotic-associated diarrhoea and C. diff

Any antibiotic can trigger C. diff; risk rises with age, hospitalisation, immunosuppression.

Fluoroquinolone-specific risks

Fluoroquinolones carry boxed warnings including tendon rupture, neuropathy, CNS effects, aortic aneurysm/dissection risk.

Clostridium difficile (or Clostridioides difficile)

Clostridium difficile (or Clostridioides difficile) infection (C. diff)

Recognition, testing, modern treatment, and prevention of recurrence

What is C. diff?

C. diff is a bacterium that can cause antibiotic-associated diarrhoea and colitis, ranging from mild to severe colitis, sepsis, toxic megacolon, and death.

Who is at risk?

- Recent antibiotic use
- Hospital/healthcare exposure
- Age over 65
- Immunosuppression
- Prior C. diff
- Gastric acid suppression with proton pump inhibitors (PPIs) such as omeprazole, pantoprazole, esomeprazole (Nexium)

Typical symptoms

- Watery diarrhoea (often ≥3 loose stools/day)
- Lower abdominal pain/cramping
- Fever, nausea, dehydration

Testing

- Test only if diarrhoea is present and suspicion is high
- Do not test formed stool or asymptomatic patients
- PCR may detect colonisation; interpret with symptoms

Treatment (modern approach)

- First-line: oral vancomycin or fidaxomicin (lower recurrence where available)
- Not first-line: metronidazole (only if first-line unavailable and mild disease under supervision)

Supportive care

- Hydration is essential
- Avoid anti-diarrhoeal agents (e.g. loperamide)
- Stop unnecessary antibiotics if possible

Recurrence

Recurs in up to 20–30%. Risk factors: age, continued antibiotics, immunosuppression. Specialist-directed strategies may include extended regimens or faecal microbiota transplantation in selected cases.

Prevention

- Use antibiotics only when indicated
- Handwashing with soap and water (spores)

When to seek urgent care

- Worsening abdominal pain
- Fever
- Signs of dehydration
- Reduced urine output
- Abdominal distension
- Confusion or collapse

Chronic diarrhoea causes

Chronic diarrhoea

A structured approach to causes, investigations, and management

What is chronic diarrhoea?

Chronic diarrhoea lasts 4 weeks or longer. It is rarely infectious and requires systematic evaluation.

Major categories of chronic diarrhoea

1. Inflammatory causes

Examples: IBD, microscopic colitis, chronic infections (C. diff), colorectal cancer. Clues: blood/mucus, nocturnal diarrhoea, weight loss, anaemia, raised markers.

2. Malabsorptive causes

Examples: coeliac disease, pancreatic exocrine insufficiency, bile acid diarrhoea, short bowel. Clues: greasy stools, bloating, deficiencies, weight loss.

3. Functional disorders

Examples: IBS-D, post-infectious IBS. IBS is a diagnosis of exclusion.

4. Endocrine and hormonal causes

Examples: hyperthyroidism, gastrinoma, VIPoma, medication-related effects.

5. Post-surgical causes

Examples: post-cholecystectomy bile acid diarrhoea, post-pancreatectomy malabsorption, dumping syndrome.

6. Medication-related diarrhoea

Common culprits: metformin, PPIs, antibiotics, magnesium supplements, SSRIs, chemotherapy/immunotherapy.

Baseline investigations

- Full blood count
- Inflammatory markers
- Electrolytes
- LFTs
- Coeliac serology
- Stool studies where appropriate

Red flags

Post■prandial diarrhoea

Post-prandial diarrhoea

Diarrhoea triggered by eating: causes, investigations, and management

What is post-prandial diarrhoea?

Diarrhoea that occurs soon after meals. Often mislabelled as IBS without evaluation. Causes are often treatable.

Major causes

1. Bile acid diarrhoea

Common and under-diagnosed. Excess bile acids reach the colon, stimulating water secretion and rapid transit. Often after gallbladder removal. Management includes bile acid sequestrants (e.g. cholestyramine) and dietary fat moderation.

2. Dumping syndrome

After gastric/oesophageal surgery (including bariatric). Early dumping within 30 minutes (diarrhoea, cramping, palpitations, flushing, dizziness). Late dumping 1–3 hours (hypoglycaemia symptoms). Management: small frequent meals, reduced simple sugars.

3. Post-cholecystectomy diarrhoea

Continuous bile flow can overwhelm absorptive capacity; often bile acid diarrhoea.

4. Pancreatic exocrine insufficiency

Clues: post-meal diarrhoea, greasy stools, weight loss, vitamin deficiencies. Investigate with faecal elastase; manage with pancreatic enzyme replacement.

5. Rapid transit

Seen in functional disorders, post-infectious states, endocrine disorders.

6. Food-related triggers

Lactose intolerance, fructose malabsorption, FODMAP triggers — avoid over-restriction.

Assessment strategy

- Timing after meals
- Watery vs fatty stools
- Weight loss
- Surgical history (gallbladder, gastric, pancreas)

Useful investigations

- Coeliac serology
- Faecal elastase
- Bile acid testing (where available)

- Therapeutic trial of bile acid sequestrant

Nutrition & deficiencies

Nutrition in diarrhoea

What weight loss is acceptable, what is concerning, and which deficiencies to consider

Why nutrition matters

Diarrhoea affects fluid balance, calorie intake, and absorption. This matters particularly in chronic diarrhoea.

Weight loss: acceptable vs concerning

Short-term weight loss

During acute diarrhoea, mild weight loss often reflects fluid loss and usually reverses with rehydration.

Concerning weight loss

Common nutritional deficiencies

Fat-soluble vitamins

- Vitamin A — vision changes, dry skin
- Vitamin D — bone pain, fractures, weakness
- Vitamin E — neuropathy (rare)
- Vitamin K — bruising/bleeding

Water-soluble vitamins

- Vitamin B12 — anaemia, neuropathy, cognitive change
- Folate — anaemia

Minerals and electrolytes

- Iron — iron deficiency anaemia
- Magnesium — weakness, cramps, arrhythmia
- Zinc — impaired immunity

Eating during diarrhoea

- Continue eating if appetite allows
- Small frequent meals often better tolerated
- Avoid unnecessary elimination diets

Supplements

Supplement documented deficiencies; avoid blind high-dose use; monitor response.

Timeline guide

A practical timeline for diarrhoea

What usually happens, when to act, and how to avoid overtreatment or missed disease

Why a timeline helps

Diarrhoea fluctuates. A timeline helps you know what is normal, recognise deterioration early, and avoid unnecessary antibiotics and tests.

Day 0–1: Onset

- Start ORS immediately
- Rest
- Use antiemetics (ondansetron wafers) if vomiting prevents intake

Do not start antibiotics; do not use loperamide if fever or blood.

Day 2–3: Early course

Reassess urine output, ability to maintain fluids, fever/blood. Seek review if worsening, dehydrated, or vomiting persists.

Day 4–7: Persistent symptoms

Most viral/toxin illness improves. Consider stool testing if not improving; avoid repeated empiric antibiotics.

Day 8–14: Prolonged diarrhoea

Consider parasites, early IBD, medication-related diarrhoea, post-infectious dysfunction. Do targeted testing and review.

After 2–4 weeks: Chronic phase

Diarrhoea ≥4 weeks requires structured evaluation (see Chronic Diarrhoea).

After infection: what is normal?

Loose stools may persist for weeks; urgency/bloating common; microbiome recovery takes time.

Warning patterns at any time

High-risk patients

Infants, older adults, pregnancy, immunosuppression, or asplenia: deterioration may be rapid; seek care earlier.

Bristol Stool Scale

Bristol Stool Form Scale

A simple way to describe stool consistency — and why it matters

Visual guide: Bristol Stool Form Scale

Illustrated Bristol Stool Scale — Types 1 to 7

What is the Bristol Stool Scale?

A standard medical tool classifying stool into seven types by appearance and consistency. Consistency is often more informative than frequency.

The seven stool types (overview)

Types 1–2: Constipation spectrum

- Type 1: Separate hard lumps
- Type 2: Lumpy sausage

Types 3–4: Normal / optimal

- Type 3: Sausage with cracks
- Type 4: Smooth sausage/snake

Types 5–7: Diarrhoea spectrum

- Type 5: Soft blobs, clear edges
- Type 6: Mushy stool, ragged edges
- Type 7: Watery, no solids

How clinicians use the Bristol scale

Helps distinguish overflow vs true diarrhoea, functional vs inflammatory disease, and track response to treatment.

Using it accurately

- Choose the type matching most stools
- Focus on consistency
- Track changes over time

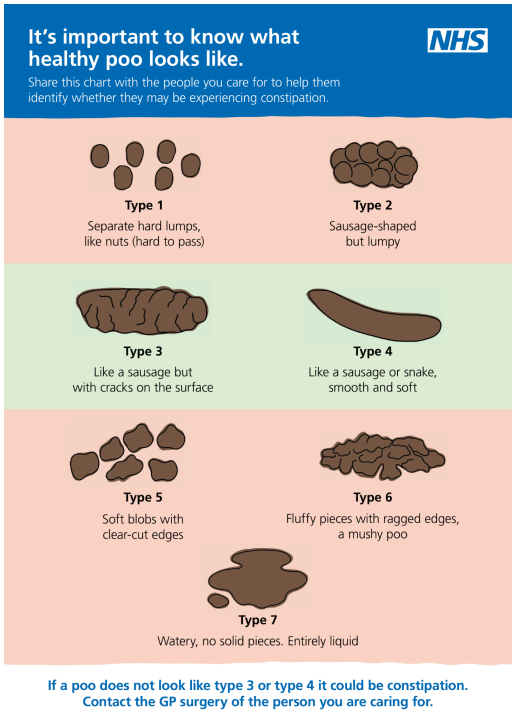

Image: NHS Bristol Stool Chart (patient education).

Downloadable PDF

Downloadable guide: diarrhoea management

A concise, printable reference for patients and clinicians

The PDF summarises the site in a structured format: red flags, acute algorithms, ORS guidance, antibiotics, traveller's diarrhoea, C. diff, chronic differential, nutrition, timeline, and the Bristol Stool chart.

Download the PDF

What's included

- Immediate safety: dehydration, sepsis, high-risk groups
- Acute diarrhoea: when to test, when antibiotics help/harm
- Rehydration & symptom control, including ondansetron wafers
- Antibiotic tables with key risks (QT, tendon rupture, allergy)
- Traveller's diarrhoea prevention and when to seek care
- C. diff: modern testing and treatment
- Chronic diarrhoea: categories, red flags, stepwise evaluation
- Post-prandial diarrhoea: dumping, bile acids, pancreatic insufficiency
- IBD vs IBS and faecal calprotectin
- Nutrition/deficiencies and weight-loss thresholds
- Timeline guidance
- Bristol Stool Form Scale (NHS-style chart)
- Privacy & emergencies (Anonamed)

Haemolytic uraemic syndrome (HUS)

Haemolytic uraemic syndrome (HUS)

A rare but serious complication of diarrhoeal illness

What is haemolytic uraemic syndrome (HUS)?

Haemolytic uraemic syndrome (HUS) is a serious condition that can develop after certain gastrointestinal infections, most commonly Shiga-toxin producing Escherichia coli (STEC).

It is most often seen in children, older adults, and people with underlying health conditions. HUS is a medical emergency.

What causes HUS?

HUS usually follows infection with bacteria that produce Shiga toxin, particularly E. coli O157:H7 and related strains. The toxin damages blood vessels, especially in the kidneys.

What happens in HUS?

HUS is defined by three key features:

- Haemolysis — destruction of red blood cells
- Low platelets — increased bleeding risk
- Acute kidney injury — reduced urine output, rising creatinine, possible dialysis

Warning signs after diarrhoea

HUS typically develops several days after diarrhoea onset, often as bowel symptoms begin to improve.

- Reduced or absent urine output
- Dark or bloody urine
- Unusual bruising or bleeding
- Pallor and fatigue
- Swelling of the face or legs
- Confusion or drowsiness

Why antibiotics and anti-diarrhoeal drugs can be dangerous

In suspected or confirmed STEC infection, antibiotics can increase toxin release and anti-diarrhoeal agents can prolong toxin exposure. Both may increase HUS risk.

How is HUS treated?

There is no specific cure. Treatment focuses on supportive care: fluids/electrolytes, transfusion if needed, dialysis if kidney failure develops.

Prognosis

Many recover fully with prompt care, but some develop long-term kidney problems. Rarely, HUS can be fatal.