Irritable bowel syndrome in adolescents

Tummy pain linked to bowel changes - with a treatment plan that targets the gut, the brain and everyday life.

i IBS is a disorder of gut-brain interaction. The pain is real, but IBS does not mean there is ongoing inflammation, an ulcer or damage to the bowel. A positive diagnosis can usually be made from the symptom pattern plus an appropriate medical assessment.

What makes the pattern “IBS”?

Current Rome V paediatric criteria require intermittent abdominal pain on average at least 4 days per month, with the pain related to bowel motions and/or a change in stool frequency or stool form. Abdominal pain is the predominant symptom and the pattern is present for at least 2 months.

Adolescents may also have bloating, urgency, incomplete emptying, nausea, fatigue, headaches or symptoms that flare with exams, travel, sleep disruption, infection or menstruation. Pain that occurs only during periods needs a broader assessment rather than automatically being called IBS.

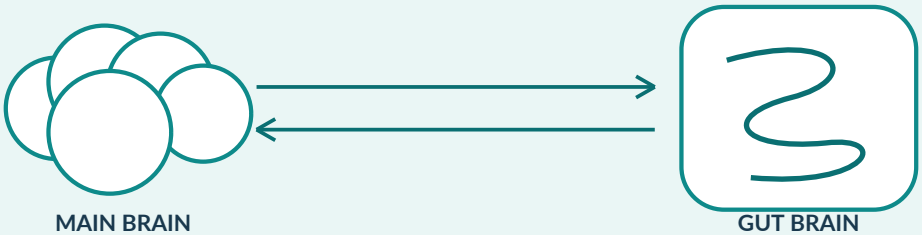
IBS has different bowel patterns

The bowel habit can be constipation-predominant (IBS-C), diarrhoea-predominant (IBS-D), mixed (IBS-M) or unclassified (IBS-U). Subtypes can change over time, so treatment should follow the current pattern rather than a permanent label.

Why does IBS happen?

The gut-brain axis can become more sensitive after multiple different triggers.

There is rarely one single cause. IBS reflects how gut sensation, bowel movement, the microbiome, immune signalling and the nervous system interact.



MAIN BRAIN

sleep • stress • anticipation
can turn up pain processing

GUT BRAIN

gas • stretch • constipation
can turn up gut sensitivity

Messages travel both ways - treatment can target both ends.

A sensitive alarm system

Normal gas, stool or bowel stretching may feel unusually painful. The brain can also become quicker to notice gut signals after repeated symptoms, while the bowel can become more reactive during illness, stress or disrupted sleep.

IBS may begin after gastroenteritis. Constipation itself can increase pain and bloating. Psychological stress can turn up the volume, but it is neither necessary nor sufficient to cause IBS.

> “ The treatment target is not only “make pain disappear”. Better school attendance, eating, sleep, confidence, stool control and quicker recovery from flares are equally important outcomes.

Assessment: what should be checked?

IBS is a positive diagnosis, but new warning features change the plan.

History and examination

The clinician reviews the relationship between pain and bowel motions, stool form, urgency, nocturnal symptoms, growth, diet, medicines, family history and the impact on school and life. A short stool-and-pain diary can be more useful than months of constant symptom checking.

Constipation can be under-recognised even when a teenager passes some stool most days. If pain and “diarrhoea” do not respond as expected, retained stool and overflow should be reconsidered.

Tests should answer a question

Depending on the pattern, selected tests may include blood count, inflammatory markers, coeliac serology, iron studies or stool calprotectin. Stool infection testing is used when exposure or diarrhoeal features make it plausible.

Endoscopy is not routinely required for typical IBS with reassuring growth and tests. It becomes more useful when bleeding, weight loss, anaemia, dysphagia, persistent nocturnal diarrhoea, abnormal inflammatory markers or another specific concern suggests a different disease.

! Urgent care: green vomit, vomiting blood, severe new localised pain, a swollen or rigid abdomen, fainting, marked dehydration or a very unwell adolescent. Prompt review is needed for weight loss, poor growth, persistent blood in stool, fever, waking repeatedly with diarrhoea or a progressive change in the pattern.

Which IBS subtype fits today?

Use stool form on abnormal-bowel-movement days. Subtypes can move over time.

1-2 **hard / lumpy**
Track the pattern, not one isolated poo.

3-4 **formed / soft**
Track the pattern, not one isolated poo.

5-7 **looser / watery**
Track the pattern, not one isolated poo.

IBS-C

Constipation-predominant

Hard/lumpy stools are the dominant abnormal pattern. Treatment emphasises softening and emptying the bowel while also treating the pain system.

IBS-D

Diarrhoea-predominant

Loose/watery stools and urgency dominate. Treatment focuses on stool control, triggers and gut-brain therapy without unnecessarily restricting food.

IBS-M

Mixed bowel habits

Both hard and loose abnormal stools occur. Do not treat one snapshot; use a diary to see the pattern and adjust treatment over time.

IBS-U

Unclassified

IBS criteria are met, but abnormal stool form is not frequent enough to fit C, D or mixed categories.

i Rome V uses the “25% rule” for formal subtyping: among abnormal bowel movements, more than 25% hard stools suggests IBS-C; more than 25% loose stools suggests IBS-D; both suggests IBS-M. In everyday clinical care, a practical description of the dominant pattern is often enough.

The foundations of treatment

Start with a clear explanation and a small number of achievable targets.

Regular meals

Avoid long fasting followed by a huge meal. Eat at predictable times and keep enough overall calories for growth, sport and study.

Normal hydration

Drink regularly. More water is not a cure for IBS, but dehydration can worsen constipation and dizziness.

Sleep & movement

A consistent sleep schedule and enjoyable activity support gut-brain regulation and reduce deconditioning.

Treat the bowel pattern

IBS-C and IBS-D need different symptom tools. The pain plan should sit alongside, not replace, stool management.

School, exams, sport and social life

Build a plan for toilet access, water, a short coping break and return to class. Keep a spare kit if urgency is a concern. For travel or exams, agree on a flare plan before the event rather than making decisions in panic.

Parents can validate symptoms while still supporting ordinary activities. Repeatedly checking pain, cancelling every plan or keeping the teenager home until they feel completely symptom-free can unintentionally strengthen the alarm response.

Choose measurable goals: fewer missed school days, less urgency, softer stools, fewer pain interruptions, greater food variety, better sleep or faster recovery after a flare. Review those goals before adding another treatment.

Food, fibre and probiotics

Diet can help, but restriction is not automatically safer than medicine.

Soluble fibre has the best diet-supplement evidence

The 2025 ESPGHAN/NASPGHAN guideline suggests soluble fibre supplements for paediatric IBS, with moderate-certainty evidence. Studied options include psyllium, hydrolysed guar gum and glucomannan. Increase gradually and pair with reasonable fluid intake; too much too quickly may worsen bloating.

What about low FODMAP?

A strict low-FODMAP diet was not suggested as a routine paediatric IBS treatment in the 2025 joint guideline because the evidence is very uncertain and restrictive diets can affect nutrition and the relationship with food.

For a motivated adolescent with an IBS-like pattern of pain, bloating and stool change, a paediatric dietitian may still use a short, targeted or “gentle” approach, followed by reintroduction. The aim is the broadest tolerated diet - not a permanent list of forbidden foods.

Probiotics are strain-specific

Lactobacillus rhamnosus GG is suggested specifically for IBS with moderate-certainty evidence, although the expected effect is modest. Some multistrain probiotic/synbiotic preparations may help, but evidence is lower certainty. “More strains” or a higher price does not guarantee better results.

Do not start fibre, probiotics, a restrictive diet and several supplements at the same time. A monitored trial of one change is much easier to judge.

Gut-brain therapies

These have some of the strongest evidence in paediatric IBS.

Therapy	2025 evidence	Practical role
Gut-directed hypnotherapy	Strong recommendation; moderate-certainty evidence.	Helps reduce pain intensity and treatment failure. Can be delivered in person, remotely or via a suitable self-directed program when appropriate.
Cognitive behavioural therapy (CBT)	Strong recommendation; low-certainty evidence.	Builds coping, attention-shifting, sleep and activity skills and reduces fear-driven avoidance.
PENFS / auricular nerve-field stimulation	Conditional recommendation; moderate-certainty evidence.	A specialist device treatment for selected refractory adolescents. Access and cost vary; it is usually not the first step.
Relaxation / breathing	Useful self-management skill.	Can lower autonomic arousal during a familiar flare, but is usually part of a broader plan rather than a stand-alone cure.

A note on apps

Digital gut-directed programs can improve access, but the evidence base and age suitability vary. The 2025 guideline did not find that one delivery route for hypnotherapy is clearly superior; choose a credible program that suits the adolescent and keeps medical care connected.

> “ Psychological therapy is not used because IBS is imaginary. It treats the nervous-system component of a real gut-brain disorder in the same way physiotherapy treats a physical system.

Medicines and symptom-targeted treatments

Match the treatment to the problem you are trying to solve.

Target	Options	Key cautions
IBS-C	Macrogol/PEG or another constipation plan to achieve soft, easy stools; soluble fibre can also help.	Treat stool retention properly. If pain disappears once constipation is controlled, reconsider whether IBS is still the best label.
IBS-D	Loperamide may be used for diarrhoea control in selected adolescents; bile-acid sequestrants can be considered in selected cases.	These are symptom tools, not cures for the gut-brain pain circuit. Avoid routine chronic self-treatment without review.
Pain / spasm	Enteric-coated peppermint oil may help; anticholinergic antispasmodics are commonly used but paediatric evidence is insufficient to recommend for or against them.	Peppermint can worsen reflux. Product, age and swallowing ability matter.
Persistent pain	Low-dose amitriptyline may be considered under experienced supervision.	Evidence is low certainty. Review sleepiness, constipation, mood, interactions and cardiac/QT risk; an ECG may be considered.
Nausea / early fullness phenotype	Cyproheptadine can be considered in selected patients. Domperidone has low-certainty trial evidence but is not a routine IBS treatment and has rhythm-risk considerations.	Choose based on the actual symptom phenotype rather than treating every IBS patient the same.

i No dose chart is provided here because age, weight, subtype, other medicines and side-effect risk matter. Medication trials should have a specific target and a review date.

Putting the plan together

A few well-chosen treatments usually beat a long list of simultaneous changes.

A sensible sequence

1. Confirm the diagnosis and current bowel pattern. 2. Explain the gut-brain model and choose functional goals. 3. Treat constipation or diarrhoea adequately. 4. Add a gut-brain therapy early when pain is disruptive. 5. Consider soluble fibre, strain-specific probiotic or peppermint when the symptom fit is good. 6. Reserve neuromodulators, PENFS or less-common therapies for selected persistent cases.

What is not routine treatment?

The 2025 joint guideline did not suggest strict low-FODMAP, fructose/fructan-restricted diets or antibiotics as routine paediatric IBS treatments because evidence is very uncertain. Buspirone, mebeverine, drotaverine and citalopram were also not suggested on the available evidence.

Cannabis/cannabidiol is discouraged, and surgery is strongly recommended against for treating a gut-brain pain disorder. Yoga and exercise can still be good for general wellbeing, but yoga has not been shown well enough to be recommended as a specific IBS therapy.

! Reassess if the pattern changes. IBS does not protect an adolescent from developing appendicitis, inflammatory bowel disease, coeliac disease, infection or another illness later.

TRUSTED INFORMATION & EVIDENCE

ESPGHAN/NASPGHAN 2025 paediatric IBS treatment guideline ↗

Rome V criteria - paediatric IBS ↗

GiKids - irritable bowel syndrome ↗



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