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# IRRITABLE BOWEL SYNDROME IN CHILDREN & ADOLESCENTS

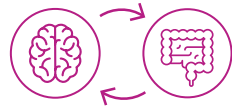


What is it and how the gut microbiota may contribute?

**Irritable Bowel Syndrome (IBS) is a functional bowel disorder characterized by recurrent abdominal pain and changes in bowel habits, without structural abnormalities. It is often associated with higher stress or anxiety levels and may be linked to alterations in the gut microbiota.<sup>1</sup>**

## DID YOU KNOW? <sup>2,3</sup>

**5,8%**  
global prevalence  
among 4-18 year olds



**One of the most common disorders of gut-brain interaction (DGBI) in children over 4 yo**

## HOW DOES IBS MANIFEST? <sup>4</sup>



Recurrent abdominal pain



Bloating



Altered bowel habit  
(frequency and/or shape of the stools)

## FACTORS ASSOCIATED WITH IBS <sup>4</sup>



High prevalence in girls



Higher prevalence in children 8-12 y.o.



Anxiety, depression, worry, abuse



Past history of gastroenteritis



Asthma



Born to mothers with:  
-Gestational diabetes  
-Pregnancy induced hypertension



Fat, sugar, spicy food



Affluent social class  
Exposure to cold

## BIOLOGICAL MECHANISMS CHANGES <sup>4</sup>

**Disrupted gut-brain communication**  
gut signals are amplified by the brain



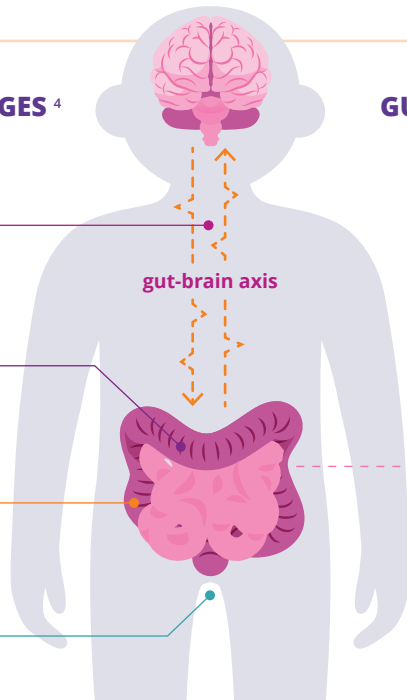
**Intestinal hypersensitivity**  
normal sensations can be painful or uncomfortable



**Infection & inflammation**  
mild inflammation, inflammation after digestive infection



**Irregular transit**  
(constipation, diarrhea or both)



## GUT MICROBIOTA IMBALANCE (DYSBIOSIS) MAY BE OBSERVED <sup>4</sup>

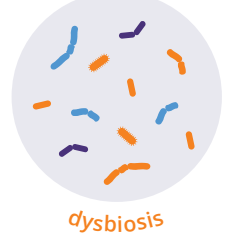
healthy children



eubiosis

VS

IBS children



dysbiosis

Dysbiosis may influence mechanisms involved in IBS: intestinal permeability, brain function, enteric nervous system, gastrointestinal motility, visceral pain

## HOW TO RELIEVE SYMPTOMS AND IMPROVE QUALITY OF LIFE <sup>3, 4, 5, 6, 7, 8, 9, 10, 11</sup>

According to international guidelines from ESPGHAN/NASPGHAN



specific medication



selected probiotics  
specific strains



rich fiber diet & prebiotics



healthy lifestyle  
good hydration, regular diet and physical activity



psychotherapeutic interventions  
Cognitive Behavior Therapy (CBT), hypnosis, psychodynamic, relaxation... for long term psychological support



promising approaches  
Transcutaneous Electrical Nerve Stimulation (TENS), peppermint capsules





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What is it and how the gut microbiota may contribute?

## Sources

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