

## Grahani (Irritable Bowel Syndrome)

# Irritable Bowel Syndrome (IBS)

(Integrating Contemporary Gastro-enterology with Āyurvedic Grahaṇī-vikāra Concepts)

## 1. Disease Description

### Modern view

- IBS is a chronic, relapsing functional bowel disorder characterised by abdominal pain associated with altered stool form and/or frequency in the absence of detectable structural pathology (Rome IV, 2016).
- Global prevalence  $\approx$  4-7 %. Women : men  $\approx$  2 : 1; peak 20-40 y.
- Major impact: impaired quality-of-life, work absenteeism, health-care cost.

### Āyurvedic lens

- Closely resembles various presentations of **Grahāṇī-roga / Pakvāsāyagata Vāta** in Bṛhatrayī – alternating constipation/diarrhoea, incomplete evacuation, flatulence, abdominal pain, post-defecatory relief.
- Also overlaps with **Udāvarta, Atisāra (pravāhikā subtype)** or **Ajīrṇa** depending on phenotype.

## 2. Types / Clinical Sub-classes

Rome IV Stool-based Sub-types ( $\geq$ 25 % of bowel motions)

Abbreviation	Predominant Pattern	Probable Āyurvedic Analogue
IBS-C	Constipation-predominant	Vātaja Grahaṇī / Vibandha
IBS-D	Diarrhoea-predominant	Pittaja or Kaphānubandha Grahaṇī
IBS-M	Mixed (C + D $\geq$ 25 %)	Sannipātaja Grahaṇī
IBS-U	Unclassified	Vaiṣāmya-grahaṇī

### Extra modern phenotypes:

- Post-infectious IBS
- Menstrual-exacerbated
- Post-cholecystectomy, etc.

## 3. Causes & Risk Factors

IBS is multi-factorial; no single “cause”.

- 1. Gut-Brain Axis Dysregulation**
  - Heightened visceral hypersensitivity
  - Altered CNS processing of pain & motility signals
- 2. Dysmotility**
  - Accelerated transit (IBS-D) / delayed transit (IBS-C)
- 3. Microbiome Imbalance**
  - ↓ diversity, ↑ gas-forming bacteria, SIBO in  $\sim$ 40 %

4. **Low-grade Mucosal Immune Activation**
  - Mast cell / enterochromaffin cell proliferation
5. **Post-Infective Sequelae**
  - Campylobacter, Salmonella, Shigella → PI-IBS
6. **Psychosocial Stressors**
  - Anxiety, depression, history of abuse
7. **Dietary Factors**
  - FODMAPs, gluten, caffeine, artificial sweeteners
8. **Hormonal**
  - Oestrogen/progesterone influence (↑ during luteal phase)
9. **Genetic Predisposition** (weak; e.g., serotonin transporter polymorphism).

#### Āyurvedic Nidāna parallels:

- Vishama āhāra-vihāra (irregular meals, night-vigil)
- Guru-snigdha-pichchhila (heavy oily) or Ati-rukṣa (over dry) diet
- Viruddhāhāra combinations
- Vegā-dharana (suppressed urges)
- Mano-abhigata: Soka, Bhaya, Krodha → Vāta-pitta vitiation.

## 4. Etiopathogenesis

### 4.1 Modern Pathophysiology

Trigger (infection / stress / diet)  
↓  
Epithelial & immune activation → ↑ permeability, cytokines  
↓  
Enteric nervous system sensitisation → ↑ serotonin release  
↓  
Central pain amplification → Abdominal pain  
↓  
Altered motility + secretion → Constipation / diarrhoea  
↓  
Anxiety / worry reinforce CNS loops (viscous cycle)

### 4.2 Āyurvedic Samprāpti

Nidāna → **Agnimāndya** → Āma production → Kapha-āma coats intestinal mucosa (Grahāṇī) → **Apāna-Vāta prakopa** with erratic gati → a. Udāvartita (upward) Vāta → colicky pain, bloating b. Anulomana failure → alternation of stools, incomplete evacuation. Chronic friction of Vidagdha-Pitta leads to mucus, burning, loose stools (IBS-D).

**Samprāpti-vighaṭana focus:** Āma-pācana + Agni-dīpana + Vāta-anulomana + Grahaṇī-sthāpanam.

## 5. Differential Diagnosis

Condition	Key Discriminators
Inflammatory Bowel Disease (IBD)	Nocturnal diarrhoea, rectal bleeding, ↑ CRP, colonoscopy ulcers
Celiac disease	Steatorrhoea, malabsorption, tTG-IgA positive
Lactose / Fructose intolerance	H <sub>2</sub> breath test positive; symptom onset after dairy/fruit
Microscopic colitis	Watery diarrhoea, normal colonoscopy, biopsy ×

Condition	Key Discriminators
Colorectal cancer	Anaemia, >50 y, weight-loss, bleed; colonoscopy lesion
Hyperthyroidism / Hypothyroidism	TSH abnormalities; systemic signs
Endometriosis (women)	Cyclic pain, dysmenorrhoea, pelvic imaging
Chronic pancreatitis	Pancreatic calcification, ↑ fecal fat

## 6. Diagnosis (Rome IV Toolkit)

- Clinical Criteria** • Recurrent abdominal pain  $\geq 1$  day/week for last 3 months, onset  $\geq 6$  months ago, associated with  $\geq 2$ : a) relation to defecation, b) change in stool frequency, c) change in stool form.
- Alarm Features Requiring Further Work-up**
  - Age > 45–50 y new onset - GI bleed - Unintentional weight-loss - Family history CRC/IBD - Anaemia - Fever / nocturnal symptoms.
- Investigations (selective)** • CBC, CRP, ESR • tTG-IgA, Stool calprotectin (to exclude IBD) • Colonoscopy if red flags, age >50 or persistent diarrhoea • Lactose H<sub>2</sub> breath test, SIBO breath test (methane/H<sub>2</sub>) • Thyroid profile, faecal ova & cyst, basic metabolic panel.

IBS remains a positive clinical diagnosis once structural disease excluded.

## 7. Prognosis

- Benign; no excess mortality or cancer risk.
- Waxing-waning course; 30 % achieve long-term remission, 20 % moderate disability.
- Predictors of poor outcome: severe baseline pain, psychological comorbidity, female sex, IBS-M.

## 8. Modern Therapeutic Spectrum

### 8.1 General & Dietary

Advice	Evidence
Low-FODMAP diet (6 wk) then re-challenge	50–70 % symptom relief
Adequate soluble fibre (psyllium 10 g/d) – esp. IBS-C Grade A	
Regular meals, limit caffeine, alcohol, spicy, sorbitol	Consensus
Physical activity 30 min/day	Improves bloating & mood

### 8.2 Drug Armamentarium

Sub-type	Drug Class & Example	Comment
IBS-C	- Bulking fibre	↑ stool water; GCC-agonist also ↓ pain
	- PEG-3350	
	- Lubiprostone 8 µg BID	
	- Linaclotide 290 µg OD - Prucalopride 2 mg OD	
IBS-D	• Loperamide 2–4 mg prn	Rifaximin repeat q4 m; caution pancreatitis with eluxadoline
	• Bile acid binder (colesevelam)	
	• Rifaximin 550 mg TID×14d	
	• Eluxadoline 100 mg BID	
Pain/Bloating (All)	Antispasmodics (dicyclomine, hyoscine), Peppermint-oil enteric caps	Meta-analysis supports peppermint

Sub-type	Drug Class & Example	Comment
Central Modulators	• Low-dose TCA (amitriptyline 10-25 mg HS) for IBS-D • SSRI (citalopram 20 mg) for IBS-C/M	Analgesic/visceral pain benefit
Gut-brain	Psychological: CBT, hypnotherapy, mindfulness	Equivalent to pharmacotherapy
Emerging: BGM probiotics (B. infantis 35624), fecal microbiota transplant (in research).		

## 9. Āyurvedic Management

### 9.1 Nidāna-Pañcaka (for IBS presentation)

Component	Details
Nidāna	Irregular eating, junk food, vegā-dharana, stress
Pūrvārūpa	Anannābhinanda, tandra, mukhasrava
Rūpa	Abdominal pain relieved after passing stool/flatus, alternating bowel pattern, mucus, bloating
Upaśaya	Hot water, buttermilk, hingvāṣṭaka; Anupaśaya - cold drinks, day-sleep
Samprāpti	Agnimandya → Āma + Kapha āvaraṇa → Apāna-Vāta viṣama →

### 9.2 Doṣa-wise Cikitsā Sūtra

1. **Vātaja (IBS-C)** “Sneha-sveda-gandharvahastādi taila-bastiḥ; Triphalā-Eranda at bedtime.”
2. **Pittaja (IBS-D Hot)** “Śīta-tikta virecanaḥ, Musta-Yashti-kūtaja yuktam takra-pāna.”
3. **Kaphaja / Mucus-predominant** “Kaṭu-tikta dīpana, Vamana-pūrvaka laghu langhana, Pañcakola-kvātha.”
4. **Sannipātaja (IBS-M)** Sequential: Āma-pācana → Karma-basti (Yoga-basti 16) → Ghṛta-based rasāyana.

### 9.3 Cikitsā-Yojanā (Practical Protocol)

Stage	Intervention	Formulations (Dose & Anupāna)
Āma-pācana & Dīpana	7-10 d	Pañcakola Cūrṇa 3 g + warm water before meals; Shunthi+Ajwain decoction 50 ml BID
Śodhana	According to doṣa	• Vāta: Anuvāsana Basti with <i>Eranda-taila</i> 60 ml alt. day x5 • Pitta/Kapha: <i>Kūtaja-Ghṛta</i> snehapāna 30 ml x3 d then Avipattikara Virecana
Śamana	-	
	<i>Hingvāṣṭaka Cūrṇa</i> 2 g with ghee before meals	Gas/bloating
	<i>Kūtaja-ghan Vaṭi</i> 500 mg TID	IBS-D mucus loose stool
	<i>Bilvādi Cūrṇa</i> 3 g with warm water	Pain & insecurity of stool
	<i>Triphala-Ghṛta</i> 10 ml HS	IBS-C & mucosal healing
	<i>Dadimāshṭaka Cūrṇa</i> 3 g with spiced buttermilk	Post-meal digestion
Rasāyana	30-60 d	<i>Śatāvārī-Ghṛta</i> 10 ml HS + <i>Guduchi Sattva</i> 500 mg BID

### 9.4 Pathya-Apathya

#### PATHYA

1. Old red/white rice, barley, green-gram khichadi with cumin-hing ghee
2. Spiced **Takra** (buttermilk) post-lunch: 100-150 ml with rock-salt & roasted cumin
3. Pomegranate, ripe banana, guava, nutmeg-infused warm water (IBS-D)
4. Warm water sipping; coriander-fennel infusion
5. Routine: early meals, 100-step post-meal walk, adequate sleep

6. Yogāsana & Prāṇāyāma: Pavanamuktāsana, Vajrāsana after food, Nāḍī-śodhana, Bhrāmarī

#### APATHYA

1. Excess maida, bakery, cheese, carbonated drinks
2. Curd at night, ice-cream, raw salads in large quantity
3. Eating while watching screen, suppressed urges, prolonged sitting
4. Alcohol, smoking, chillies, vinegar, ketchup
5. Day-sleep immediately after lunch; late-night vigil.

## 10. Integrated Management Algorithm

- ▶ Rule out red flags → if absent, diagnose IBS (Rome IV)
  - ↓
- ▶ Start diet & lifestyle (Low-FODMAP / Āyurveda Pathya)
  - ↓
- ▶ Sub-type Target:
  - IBS-C → Fibre ± PEG / Lubiprostone + Vāta-śamana basti
  - IBS-D → Loperamide / Rifaximin + Kūtaja-ghan, Takra-pāna
  - IBS-M → Symptom-directed + Karma-basti
  - ↓
- ▶ Psych-gut axis: CBT / Yoga-prāṇāyāma / Śirodhārā
  - ↓
- ▶ Re-assess 6–8 weeks
  - Improved → Continue maintenance with Triphala-Ghṛta, Pathya
  - Poor response → Advanced Rx (linaclotide, eluxadoline) or multi-disciplinary review

## 11. Prognostic Pearls

Factor	Favourable	Unfavourable
Symptom duration	<6 months	>5 years
Psychological overlay	Mild	Severe anxiety, depression
Patient engagement	Adherent to diet & yoga	Poor compliance
Coexistent SIBO	Treated	Persistent

With combined **biomedical & Āyurvedic** approach, 60–80 % of patients achieve ≥50 % global symptom relief within 3 months.

## 12. Selected References

1. Lacy BE et al. Rome IV Criteria and Multi-Dimensional Clinical Profile for Functional GI Disorders. *Gastroenterology* 2016.
2. NICE Guideline NG 1: IBS in Adults. 2021 update.
3. Camilleri M. Pharmacotherapy of IBS. *Gut* 2023.
4. Agniveśa. *Caraka Saṃhitā* - Chikitsā-sthāna 15 (Grahāṇī).
5. Vāgbhaṭa. *Aṣṭāṅga Hṛdaya* - Chikitsā-sthāna 12.
6. Ford AC, Moayyedi P. Systematic review of peppermint oil and fibre in IBS. *BMJ* 2019.