



Traffic Jam Ahead

Restoring Flow to the Mobbed Colon

Dr Zaid Heetun

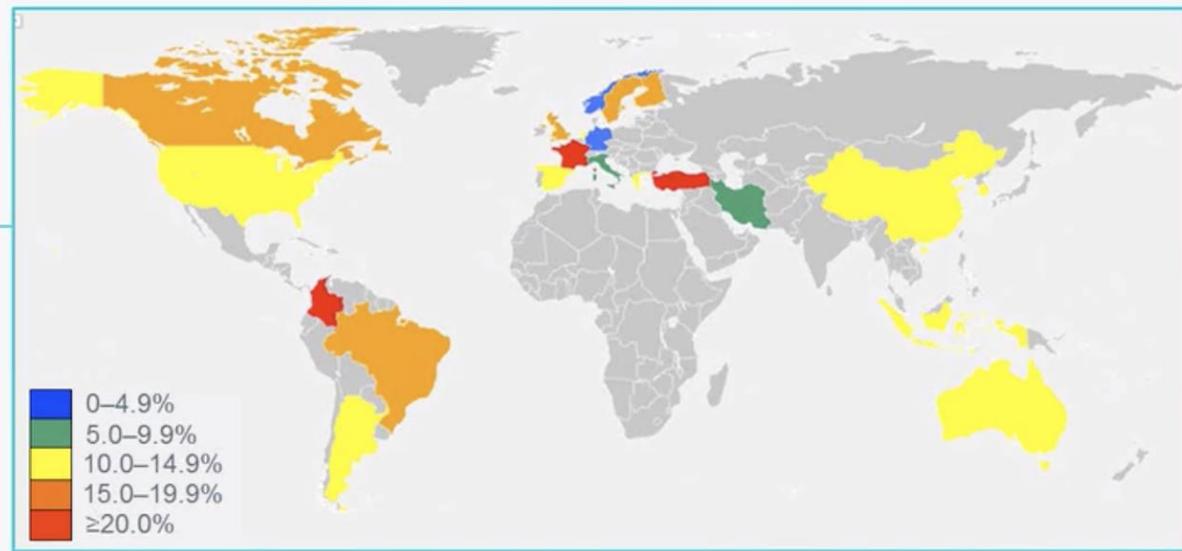
Advisor Gastroenterology

Chairperson of the National Committee on Viral Hepatitis

Dr Abdool Gaffoor Jeetoo Hospital

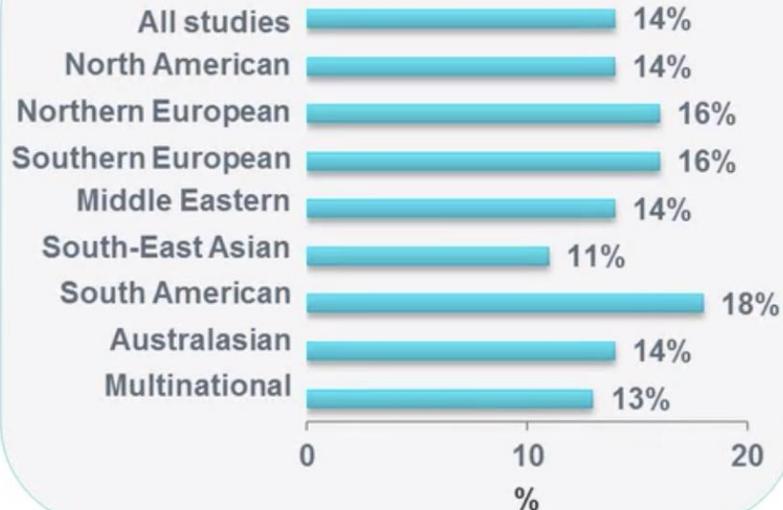
Introduction: Epidemiology

Prevalence by country



Pooled prevalence

Geographic location



Gender

♀ 17.4% (95% CI: 13.4–21.8); OR = 2.22 (95% CI: 1.87–2.62)
 ♂ 9.2% (95% CI: 6.5–12.2)

Age group (years)

<29: 12.0% (95% CI: 10.0–14.0); OR = 1.0
 30–44: 15.0% (95% CI: 12.0–19.0); OR = 1.20 (1.09–1.33)
 45–59: 16.0% (95% CI: 11.0–21.0); OR = 1.31 (1.09–1.58)
 ≥60: 17.0% (95% CI: 13.0–22.0); OR = 1.41 (1.17–1.70)

Socioeconomic status

High: 14.0% (95% CI: 8.0–22.0); OR = 1.0
 Medium: 15.0% (95% CI: 8.0–22.0); OR = 1.01 (0.92–1.10)
 Low: 18.0% (95% CI: 12.0–25.0); OR = 1.32 (1.11–1.57)

Quality of life

A systematic review of 8 pooled studies showed that, for both adults and children in a community or hospital setting, **all** domains of the SF-36 were negatively affected by functional constipation



The magnitude of the negative impact was comparable to that seen in patients with allergies, musculoskeletal conditions and inflammatory bowel disease

Economic

European real-life data on the economic burden of chronic idiopathic constipation are scarce.

A recent retrospective cohort study from Sweden of 4,043 patients calculated that in the 12-month follow-up period, patients with chronic constipation had:

- A mean of 2.3 ± 7.5 constipation-related contacts and a mean of 15.2 ± 19.5 other healthcare-related contacts
- Annual costs (adjusted for sex, age, mortality, and comorbidities) were €5,388, of which €951 were for constipation-related care

What is constipation?

- Infrequent passage of stools

What is constipation?

- Healthy individuals v/s patients complaining of constipation:
 - Healthy: 6.8 BMs/week
 - Patients: 1.0 BM/week

What is normal bowel frequency?

- Once daily?
 - Maybe
- Similar number of healthy individuals open their bowels:
 - Less than once daily
 - Once daily
 - More than once daily

Houston, Do We Have a Problem?



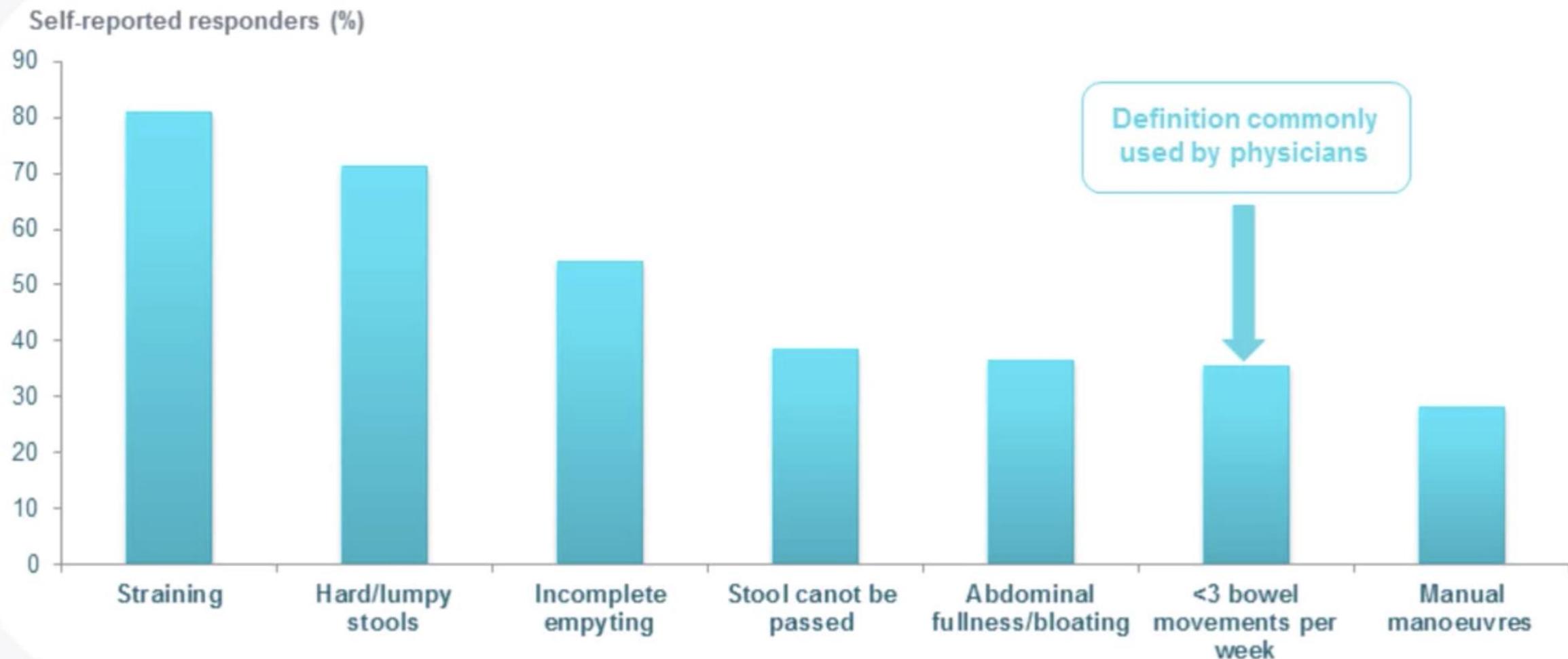
- Many definitions of constipation have been used in the literature
- Physicians v/s Patients

What is constipation?

- Infrequent passage of stools
- Bloating and discomfort
- Hard stools
- Straining
- Feeling of incomplete evacuation
- Abdominal pain
- Faecal incontinence
- Need for rectal or vaginal manipulation

Most bothersome self-reported symptoms in self-reported constipation

- 1,149 participants
- 27.2% self-reported constipation within the past 3 months
- 16.7% and 14.9% had constipation according to the Rome I and II criteria



Houston, Do We Have a Problem?

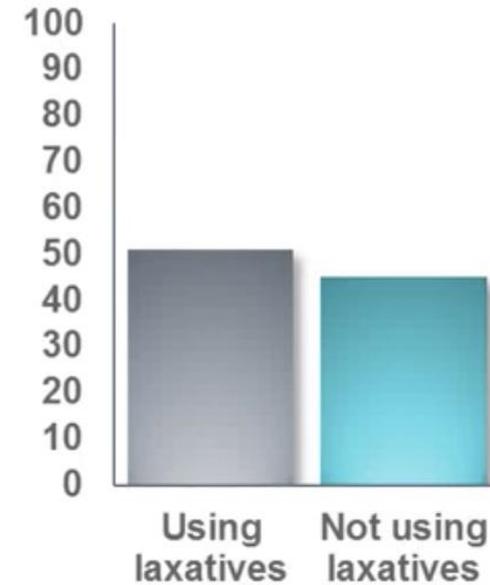
Study of approximately 2,000 adults
each
Kir
Bra



- 16
- la
- S
-

laxatives

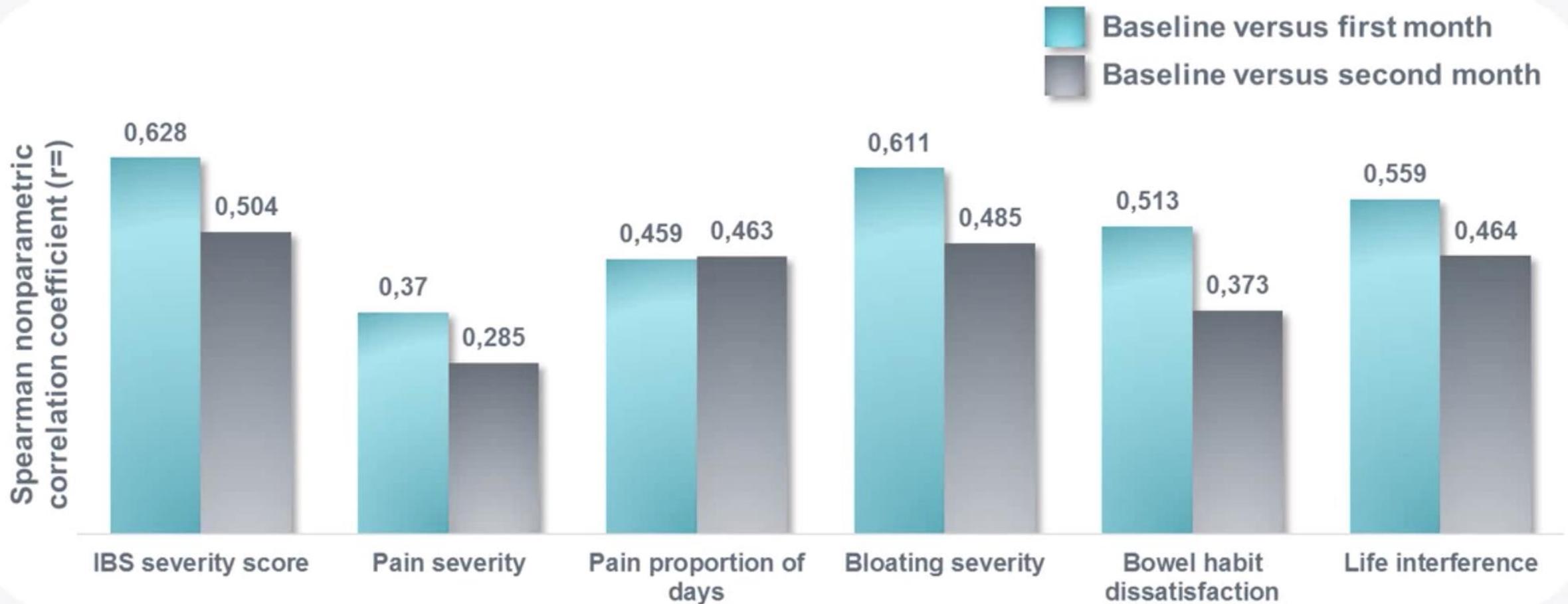
Patients with ongoing constipation symptoms (%)



Bowel diary

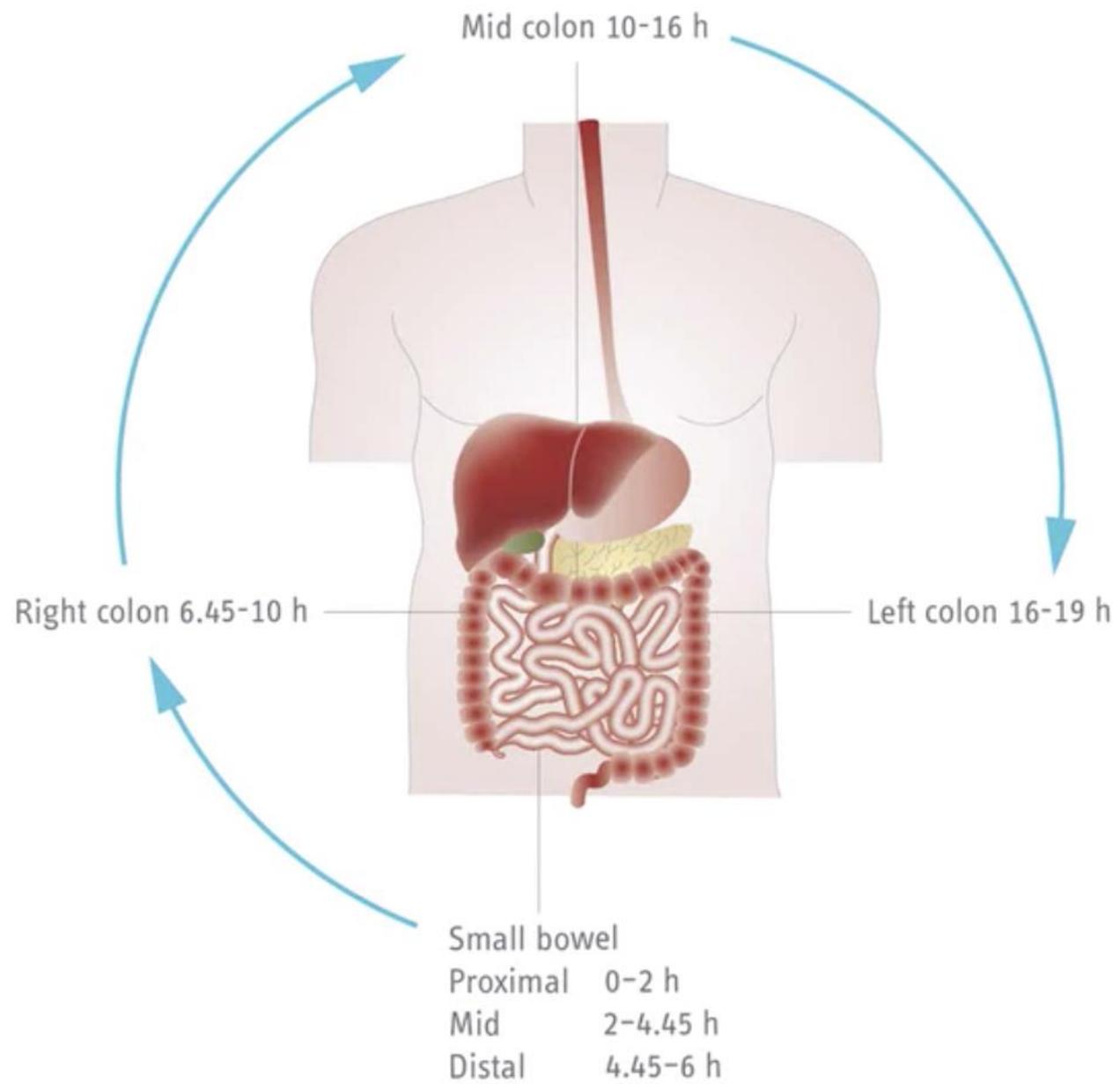
Value elegantly demonstrated by Palsson et al. in a prospective study of 185 well-defined (Rome III) IBS patients for an average of 73 consecutive days, yielding data on 24,642 stools

- The correlation between scores on the baseline retrospective questionnaire and the diary-based scores was poor
- Patients overestimated the severity of symptoms at baseline



Physiology of Defecation

- Defecation is a complex process that requires interplay between several different factors
- Control is mostly subconscious but conscious control is also involved
- Gut movement (transit)
- Pelvic floor evacuation (voiding)
- Motor function
- Social context
- Emotional context



Proportion of different types of constipation

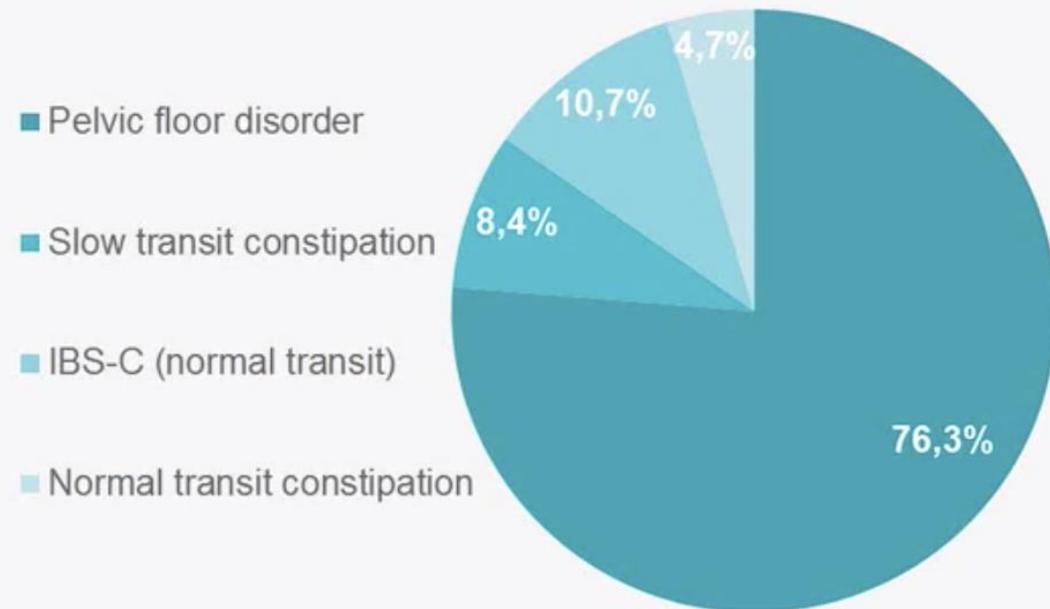
466 patients* with constipation† referred to a gastroenterology referral unit

251 (54%) secondary constipation

Including:

- Pharmacology (27%)
- Endocrine disorders (16%)
- Psychiatric disorders (13%)

215 (46%) primary constipation



*382 women, 82 men; age range, 18–83 years, referred over a 10-year period to a centre in Buenos Aires, Argentina

†Defined using Rome I criteria

Secondary Constipation

Medications:	Opiates, antihypertensive agents, tricyclic antidepressants, iron preparations, anti-epileptic drugs, anti-Parkinsonian agents (anticholinergic or dopaminergic)
Intrinsic/organic:	Colorectal cancer, extra-intestinal mass, postinflammatory, ischaemic or surgical stenosis, anal fissure, anal strictures, inflammatory bowel disease, proctitis, diverticular disease
Metabolic/endocrine:	Diabetes mellitus, hypothyroidism, hypercalcaemia, porphyria, chronic renal insufficiency, panhypopituitarism, pregnancy
Neurological:	Spinal cord injury, Parkinson disease, paraplegia, multiple sclerosis, autonomic neuropathy, Hirschsprung disease, chronic intestinal pseudo-obstruction (CIPO), stroke
Psychological:	Psychological distress (past or present), psychological disease, psychiatric disease
Myogenic:	Myotonic dystrophy, dermatomyositis, scleroderma, amyloidosis, CIPO
Diet/lifestyle:	Low-fibre diet, dehydration, inactive lifestyle

Primary Constipation

- Slow Transit 8-13%
 - Normal Transit >60%
 - Pelvic Floor Dysfn 25-76%
 - IBS-C 10-25%
 - No abnormality 5%
- Combinations are common

Primary Constipation

- Difficulty expelling stools
 - Impaired rectal contraction
 - Inadequate anal relaxation
 - Paradoxical anal contraction
- Rectal/Anal Dyssynergia
- Impaired rectal sensation
- Structural abnormalities
 - Rectal prolapse
 - Rectocele

Investigations

- DRE
 - Integral to clinical evaluation
 - MUST be performed in all patients complaining of constipation
- Blood tests
- Colonoscopy
- Advanced physiologic testing
 - Anal manometry
 - Balloon expulsion test
 - Colonic transit time
 - Defecography

DRE

- Inspection:
 - Scars/skin abn/stool discharge/pus
 - Fistulae
- Squeeze the anus
 - Concentric movement of the anus and perianal skin
- Strain
 - Perineal descent
 - Rectocele
 - Prolapse of vagina or rectum
 - Bulging haemorrhoids

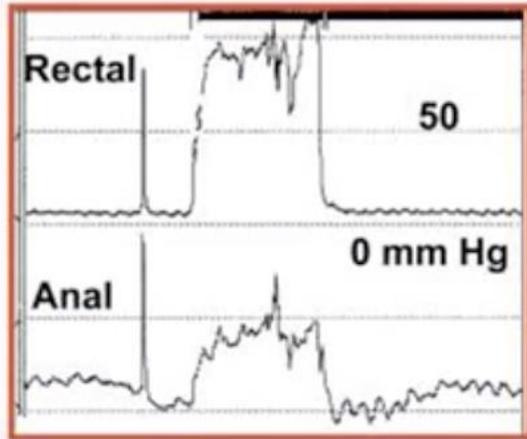
Colonoscopy

- Yield is VERY low for constipation as sole indication
- ALARM SYMPTOMS
 - Age >50
 - Anaemia
 - Blood in stools
 - Weight loss
 - Fhx
 - Abd/rectal mass
 - Change in bowel habits

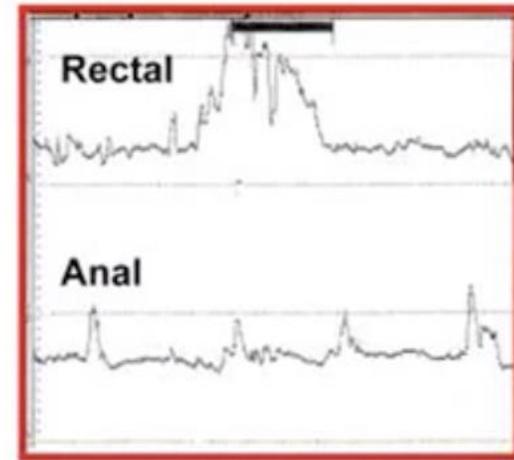
Advanced Physiologic Testing

- To be considered in patients not responding to conventional therapy

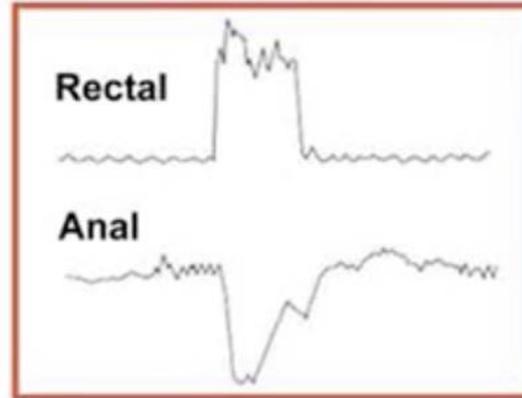
Type I



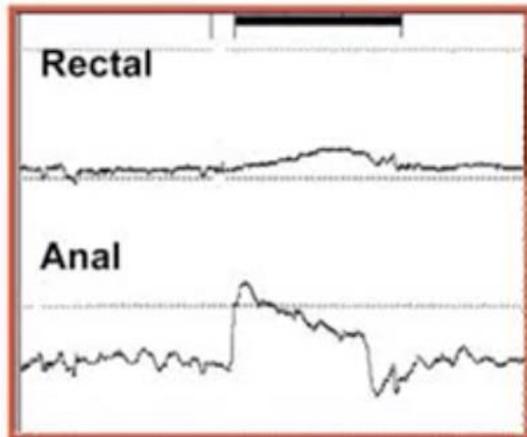
Type III



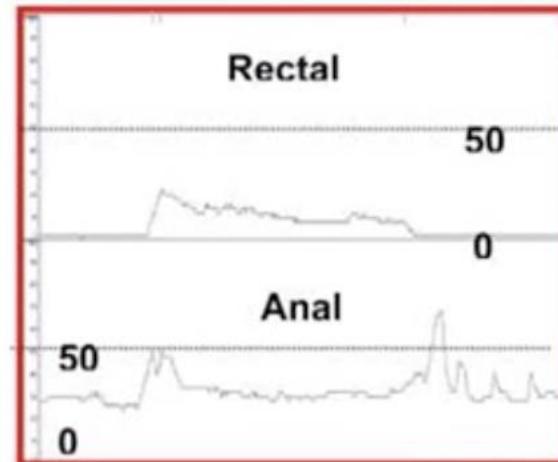
Normal



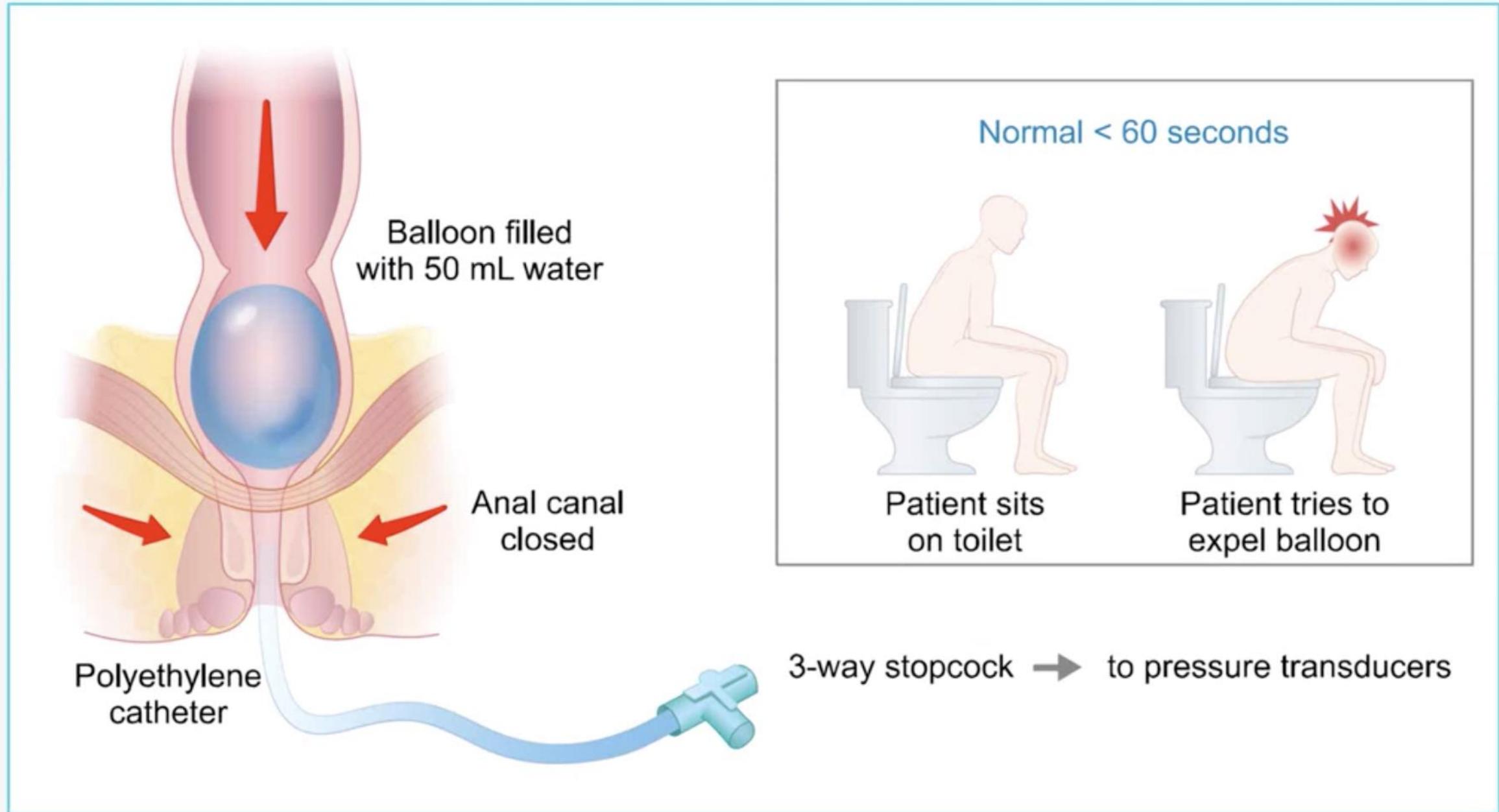
Type II



Type IV



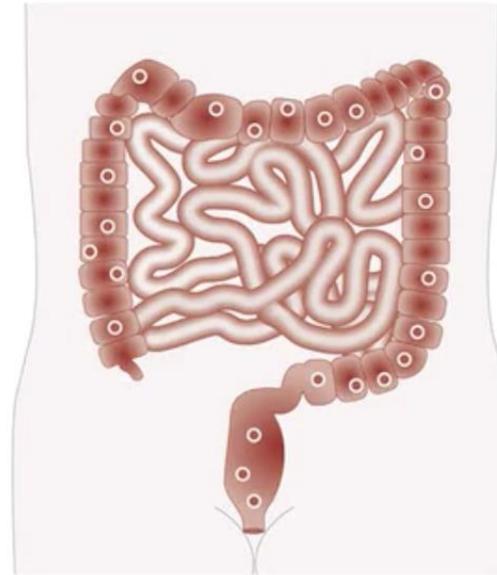
Balloon expulsion test



Colonic Transit Time

- Ingestion of 1 capsule per day for 3 days
- Each capsule contains 24 markers
- PFA on day 4 and 7

Distribution of radiopaque markers may add valuable information



Markers scattered about the colon is most likely slow transit constipation



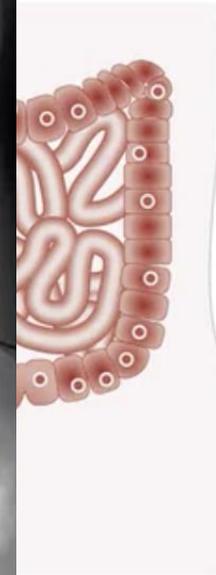
Markers gathered in the rectosigmoid is a defecatory disorder

Colonic Transit Time

- Ingestion of 1 capsule per day
- Each capsule contains 24
- PFA on day 4 and 7



opaque markers may add valuable information

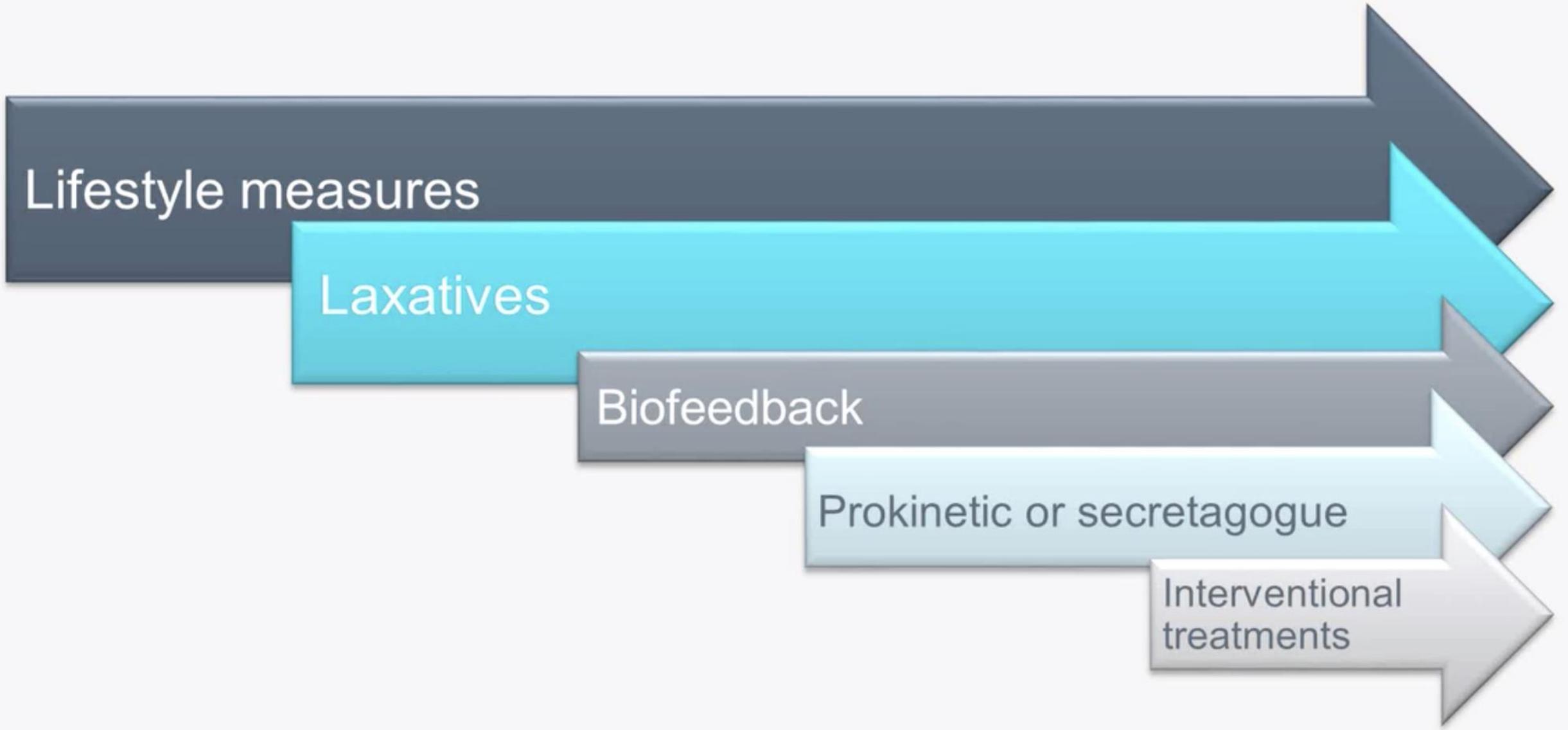


ed about the
likely slow
tipation



Markers gathered in the
rectosigmoid is a defecatory
disorder

Treatment



Lifestyle Measures

- Dietary Fibre

- Unchanged 56%
- Improved 22%
- Symptom free 22%

- Exercise

- Modest effect

- Fluid consumption

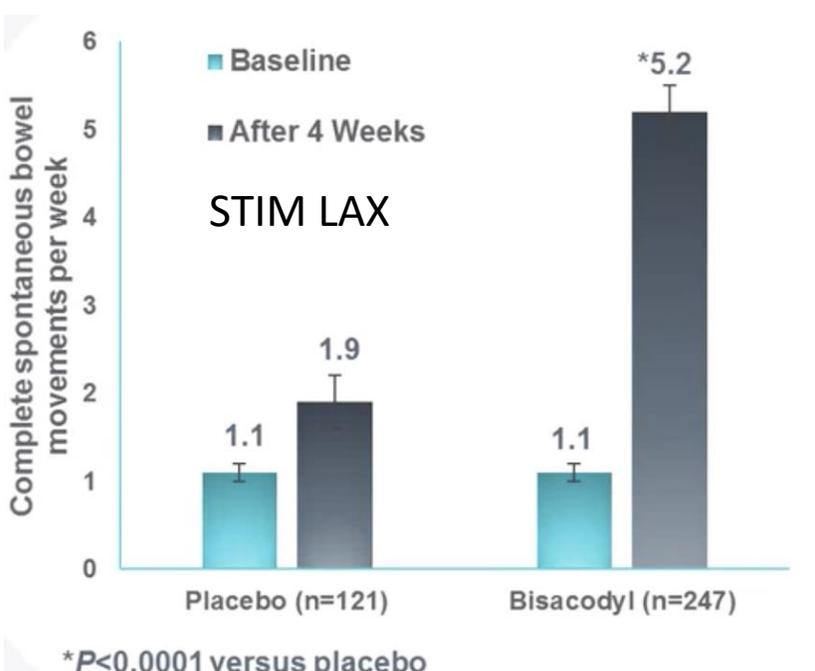
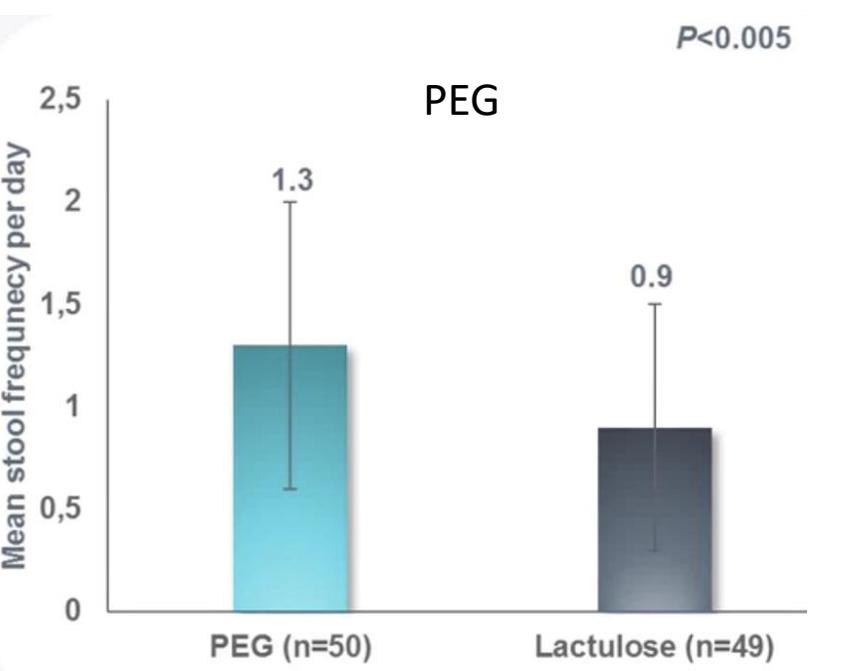
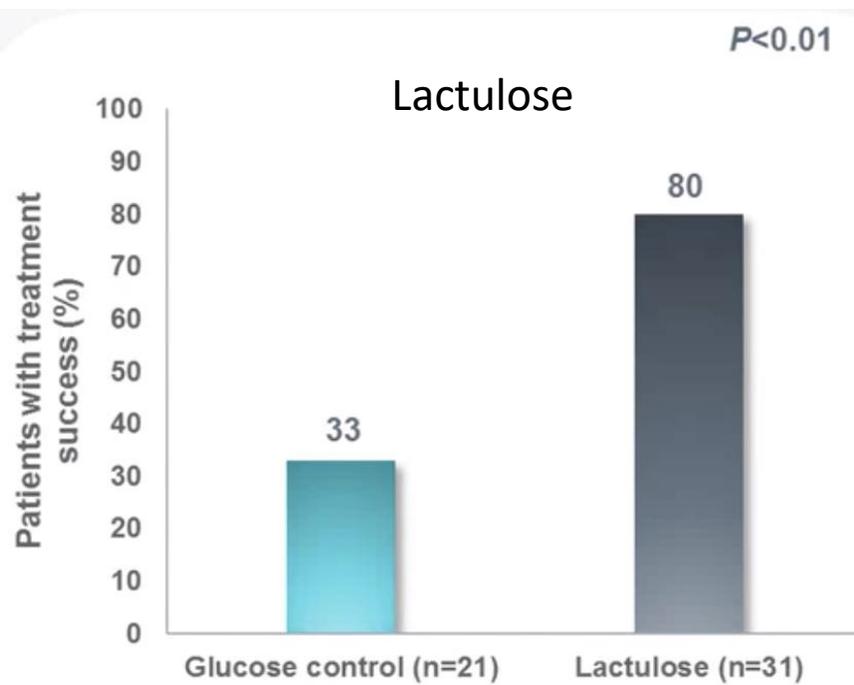
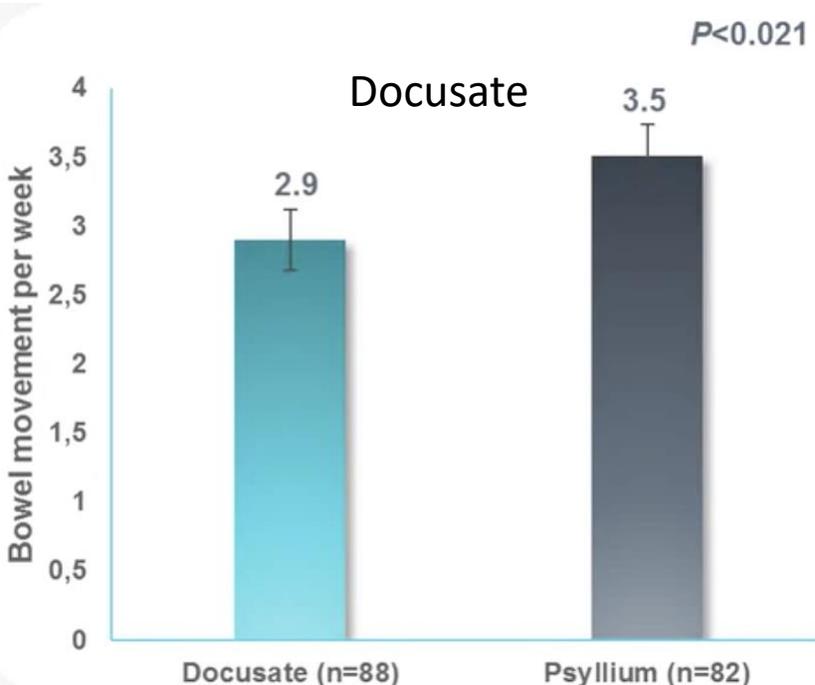
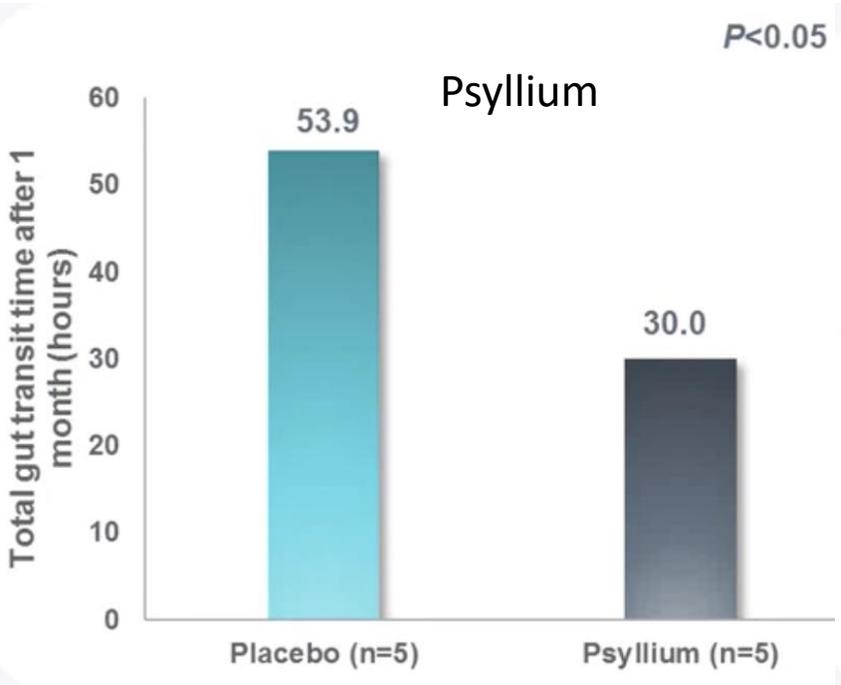
- Modest effect

Laxatives

Current therapeutic options for chronic constipation

Agent and mechanism of action	Example	Therapeutic response
Bulking agent Increases stool volume making it easier to pass	Pysillium	Decreased gut transit time and increased stool frequency ^{1,2}
Stool softener Softens the stools making it easier to pass	Docusate	Less effective than pysillium at improving bowel movements ³
Osmotic laxative Increases fluids within the intestine making stools softer and easier to pass	Lactulose	Decreased transit and reduced faecal impaction ⁴
	Polyethylene	Increased stool frequency and decreased straining ⁵
Stimulant laxative Stimulates muscles helping them to move stools and waste products along the large intestine	Bisacodyl	Increased frequency of bowel movement ⁶
	Sennoside	Increased frequency of bowel movements in elderly patients ⁷

Although 16–40% of patients use laxatives, symptoms persist despite laxative use in up to 70% of patients⁸



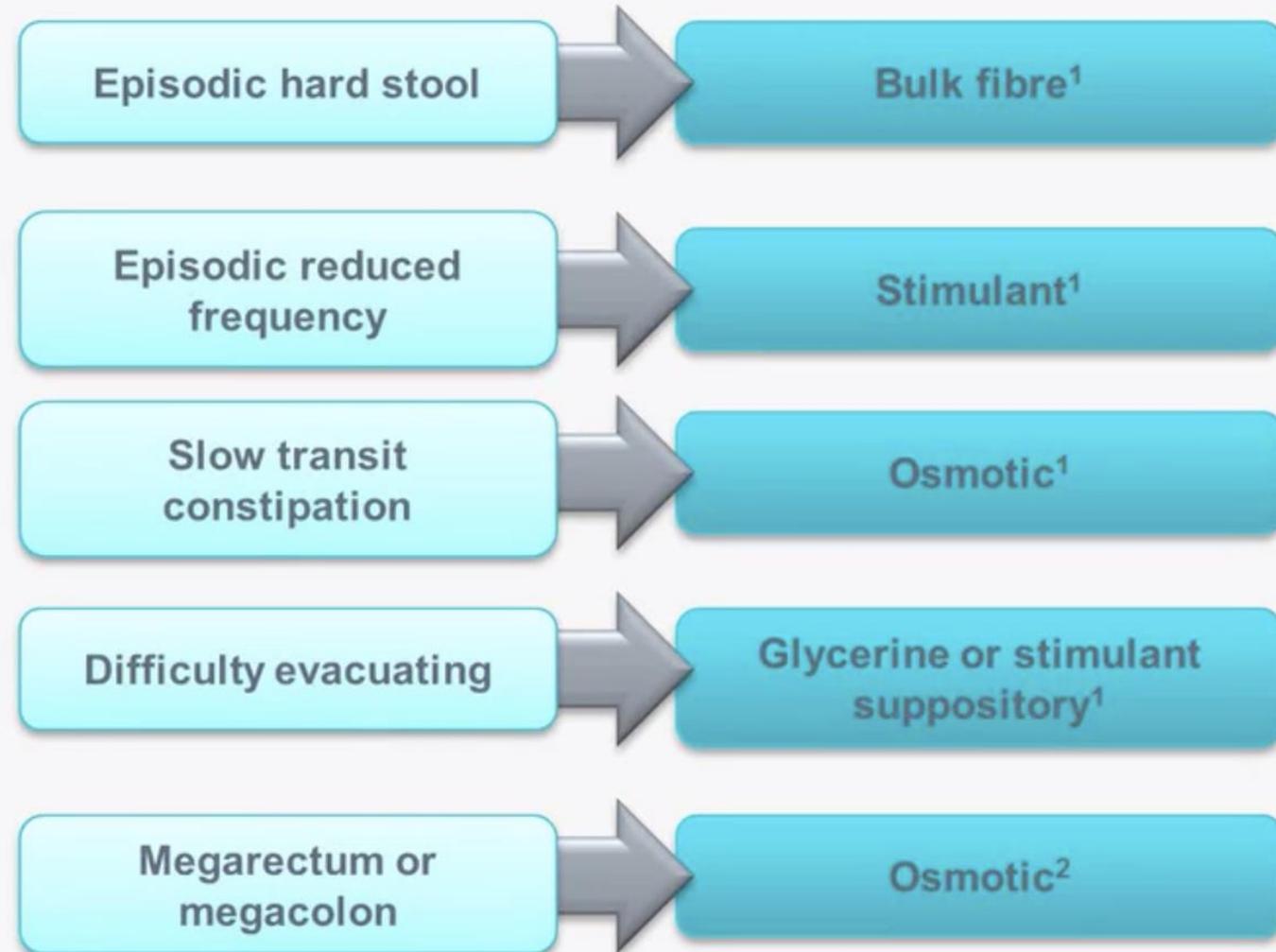
Suppositories

Weak Evidence

Recommended where fast onset of action needed

Laxatives: Summary

Tailoring laxatives to the patient based on their symptoms and diagnosis

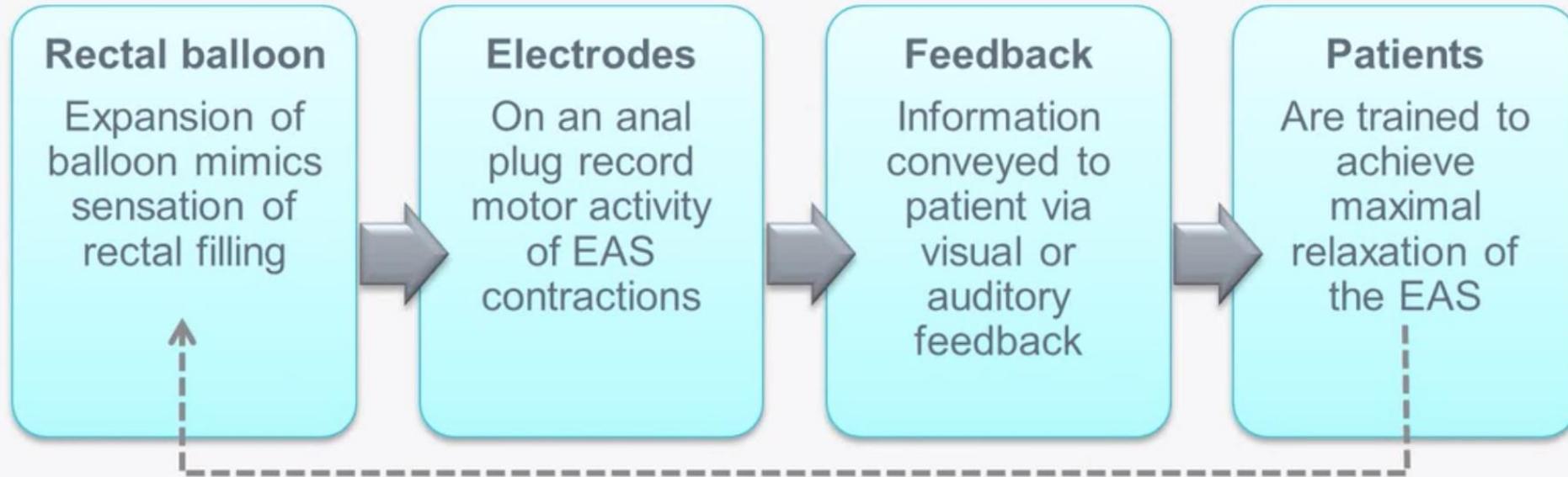


If no improvement:

- Increase dose¹
- Rational combination:
 - Stool softener and stimulant laxative^{3,4}
 - Bulking agent¹

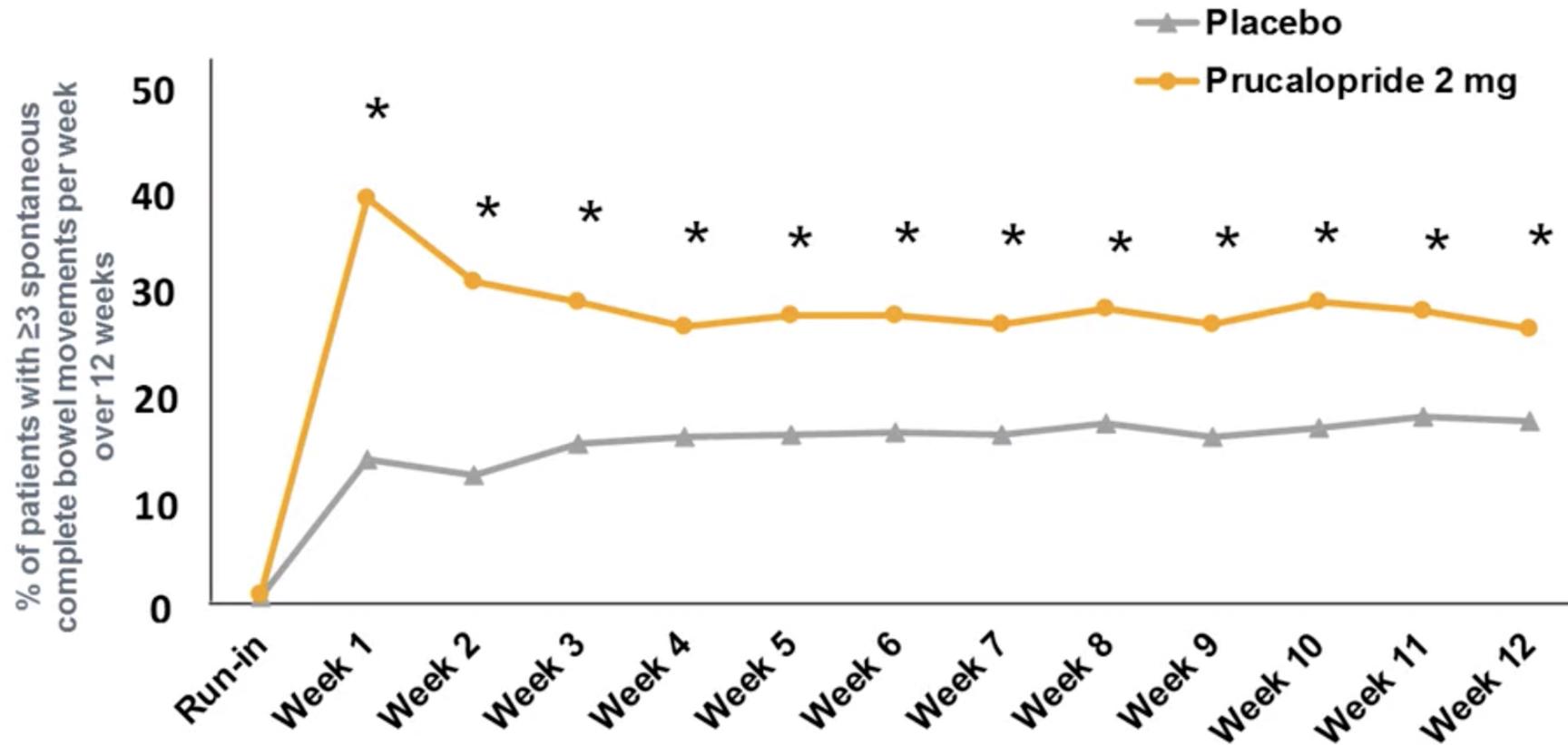
Biofeedback

Therapy



Prokinetics and secretagogues

Prucalopride in chronic constipation: Response over a 12-week treatment period†



* $P < 0.001$ versus placebo

†Primary end point

The 4 mg dose has not been licensed since no incremental benefit was demonstrated versus the 2 mg dose

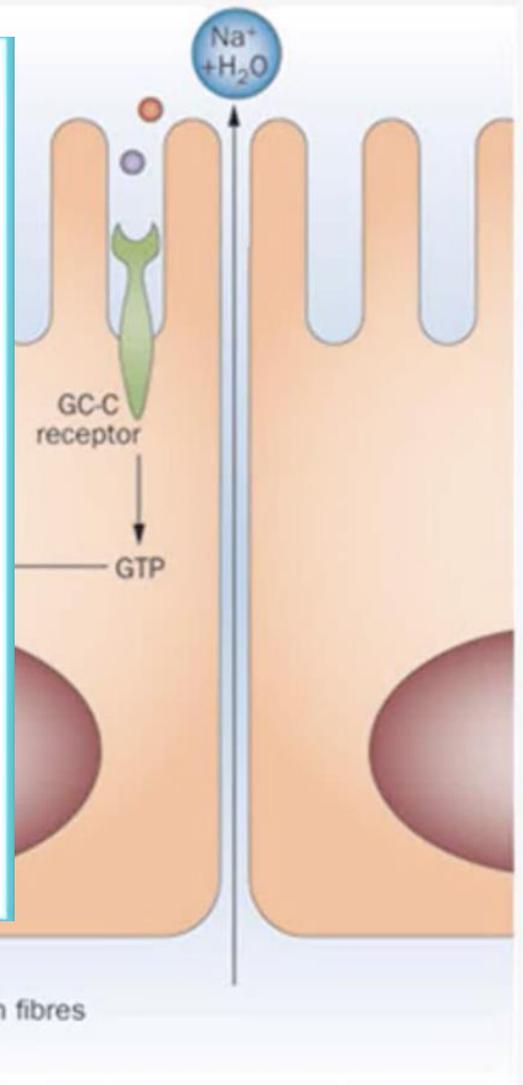
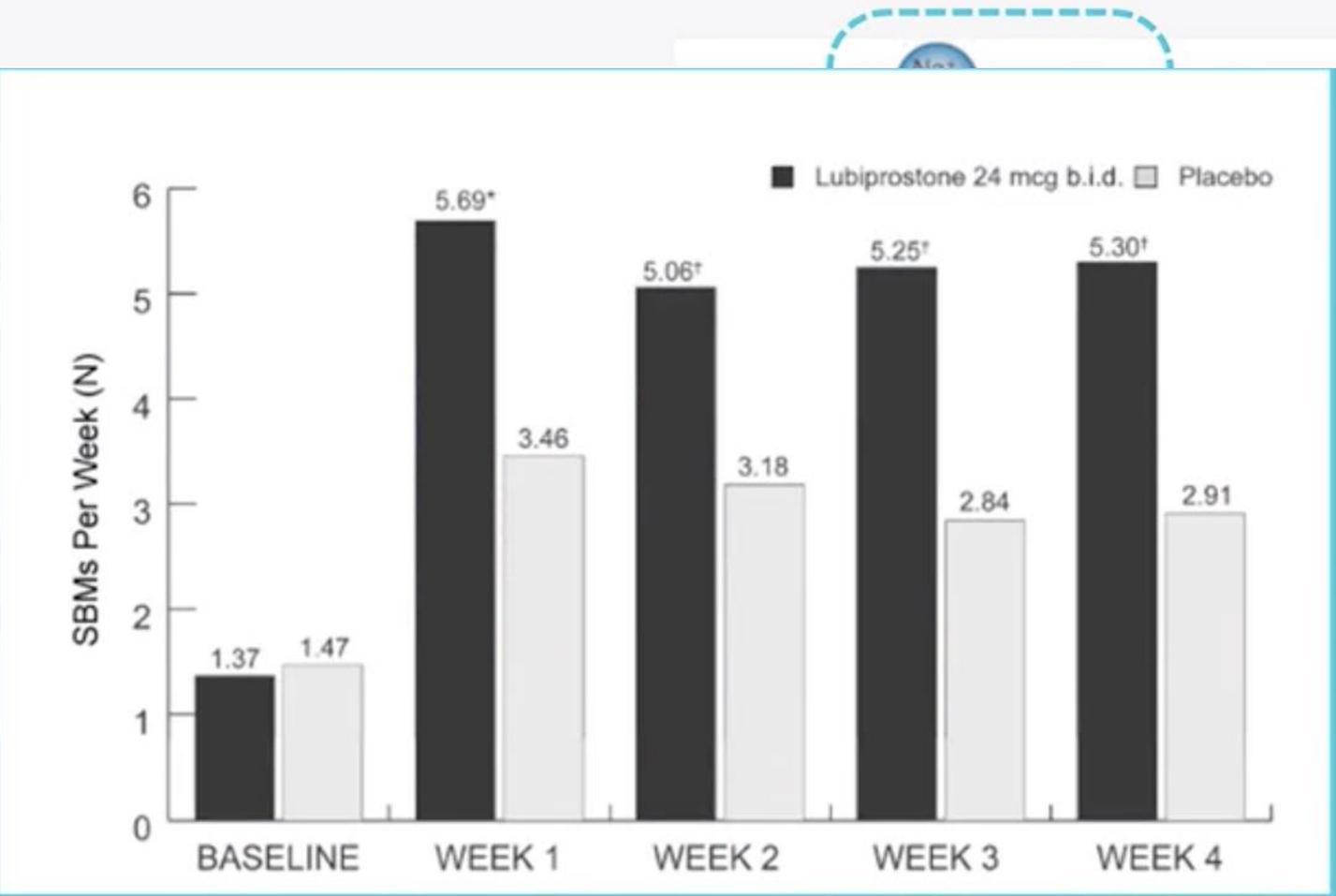
Prokinetics and secretagogues

Lubiprostone

A bicyclic fatty acid derived from prostaglandin

Primarily works by activating the ClC-2 chloride channel

Secretion of chloride into the lumen



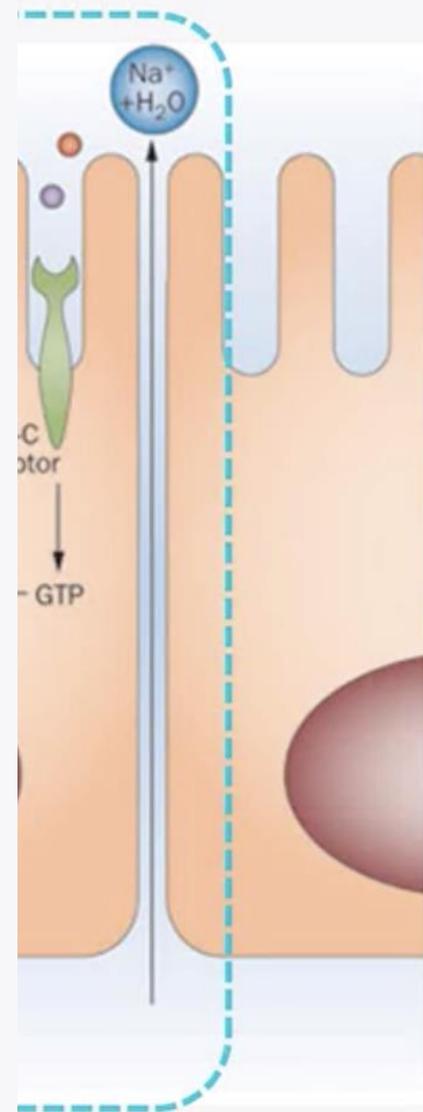
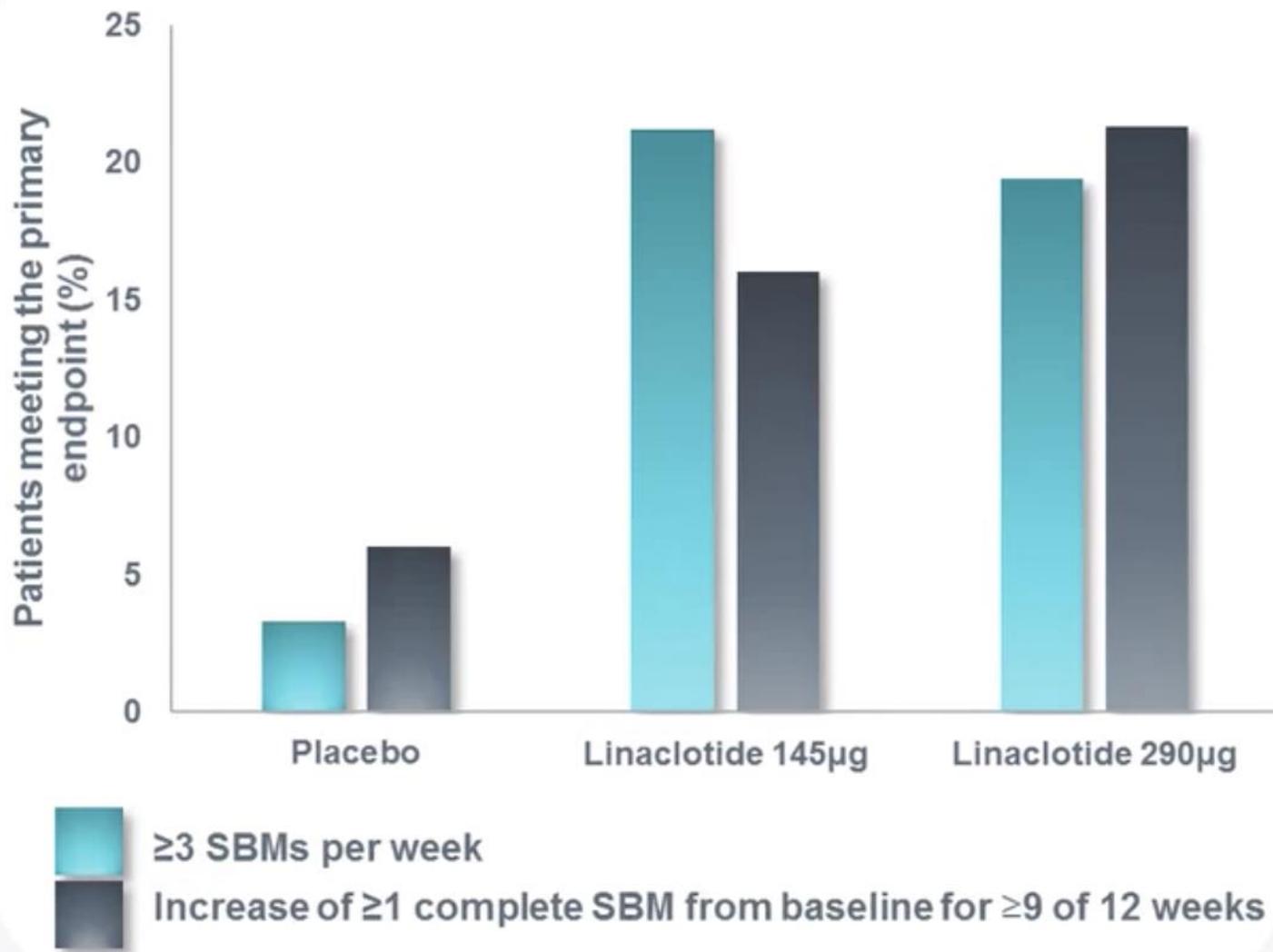
Prokinetics and secretagogues

Linaclootide

Acts on guanylate cyclase, which is selectively expressed at the border membrane of mucosa cells from the ileum to the rectum

Finally opens the tight junction channel

Reduces depolarization of smooth muscle fibres

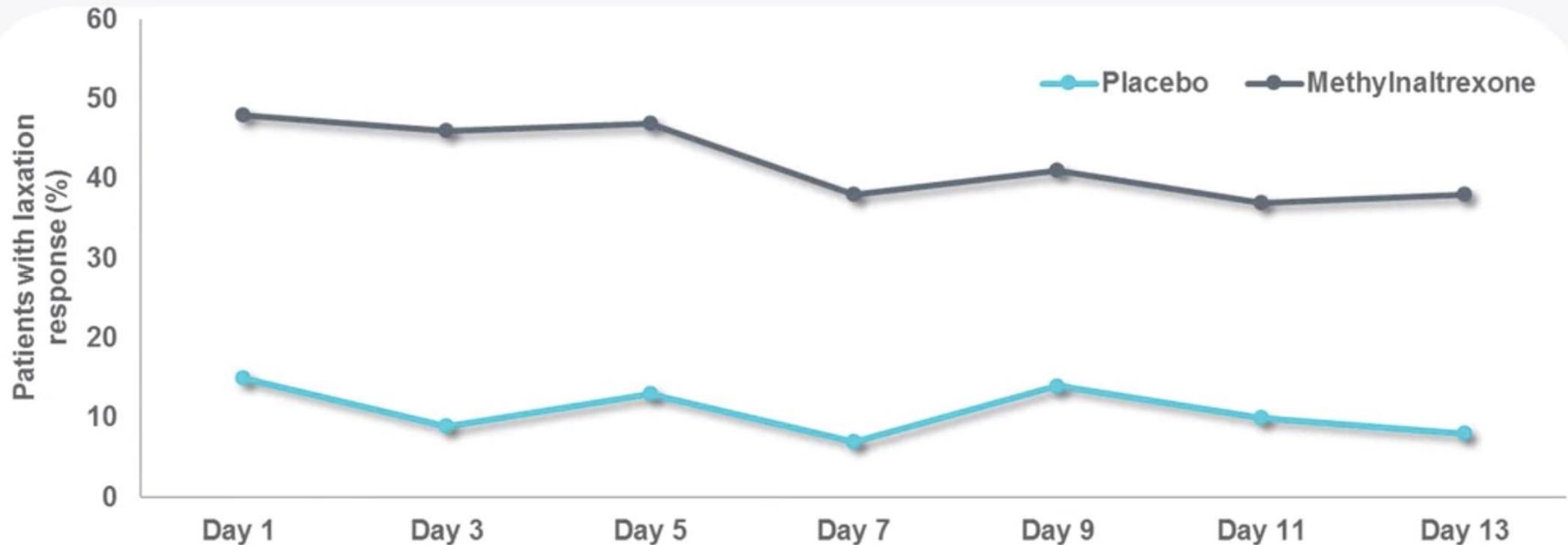


Methylnaltrexone

A μ -opioid receptor antagonist that cannot pass the blood brain barrier

Belongs to the PAMORA medication group (peripheral μ -opioid receptor antagonists)

Limited evidence for subcutaneous methylnaltrexone in non-opioid constipation¹



Day 1: n=71 (placebo) & n=62 (methylnaltrexone); Day 13: n=51 (placebo) & n=47 (methylnaltrexone)

Constipation in Pregnancy

- Up to 40%

- 1st trimester: 35%
- 2nd trimester: 39%
- 3rd trimester: 21%
- Post partum: 17%

Take Home Messages

- WHAT DO YOU MEAN YOU ARE CONSTIPATED?

Take Home Messages

- Healthy Lifestyle recommended (despite lack of evidence)
 - Exercise
 - Diet rich in fibre
 - Adequate water intake
- Laxatives
 - Tailor to patient's needs
 - PEG is first choice for most
- Prokinetics and secretagogues are 2nd line agents
- Surgical treatment in highly selected cases

Passé Message

Hépatite C



➤ Ena traitement

➤ Ena guérison

Ou concerné?

Zis ene sel comprimé par jour pou 3 mois

- ❖ Li disponible
- ❖ Li gratuit
- ❖ Li efficace

Pou plis renseignements – coz ek ou docteur