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Review Article

Constipation in women: aetiology, hormonal influences, psychosocial impact and evidence-based management

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ABSTRACT

Constipation is a common gastrointestinal complaint and functional bowel disorder that affects women across the life course. Its occurrence and severity may be influenced by interacting physiological, hormonal, pelvic floor, behavioural, and psychosocial factors, with symptoms reported during the menstrual cycle, pregnancy, the postpartum period, and the menopausal transition. This narrative review draws on peer-reviewed literature identified through searches of PubMed/MEDLINE, EMBASE, and Scopus for publications from January 2000 to December 2025, together with relevant reference lists and clinical guidance. The literature was considered thematically in relation to epidemiology, proposed mechanisms, life-stage-specific factors, psychosocial consequences, and management. Available evidence indicates that constipation is reported more frequently by women than men, although prevalence estimates vary according to the population and diagnostic criteria used. Potential contributors include changes in gastrointestinal motility associated with reproductive hormones, pelvic floor and defaecatory dysfunction, pregnancy-related physiological changes, iron supplementation, medication use, dietary and activity patterns, and psychological comorbidity. Management is individualised and may include gradual optimisation of dietary fibre and fluid intake, physical activity, appropriate laxatives, and pelvic floor biofeedback when a defaecatory disorder is diagnosed. Evidence for yoga, mindfulness, probiotics, and other microbiome-directed approaches is developing and should be interpreted in proportion to the quality and relevance of available studies. Overall, constipation in women should be assessed in the context of life stage, symptoms, possible secondary causes, and patient preferences. Further well-designed studies are needed to clarify female-specific mechanisms and evaluate interventions in diverse populations.

Keywords: Constipation, Women, Gastrointestinal motility, Progesterone, Pelvic floor dysfunction, Pregnancy, Menopause, Biofeedback, Functional constipation

INTRODUCTION

Constipation is one of the most common functional gastrointestinal disorders encountered in primary and secondary care, accounting for approximately 2.5 million physician visits annually in the United States alone.[1] Defined by the Rome IV criteria as the presence for at least three months (within the past six months) of two or more of the following features-straining during more than 25% of defaecations, lumpy or hard stools in more than 25% of defaecations, a sensation of incomplete evacuation, a sensation of anorectal obstruction or blockage, manual manoeuvres to facilitate defaecation, and fewer than three spontaneous bowel movements per week-functional constipation represents a clinically significant disorder that extends well beyond the subjective notion of "infrequent stools".[2,3]

A globally consistent and striking epidemiological pattern is the disproportionate burden borne by women. Meta-

analyses of population-based studies estimate the global prevalence of functional constipation at approximately 14%, with a female-to-male ratio of 2.22:1.[4,5] In absolute terms, the prevalence of chronic constipation in women reaches 20-37%, compared to 10-14% in men.[6] This gender gap is not explained by differences in health-seeking behaviour or reporting bias alone; rather, it reflects deep-rooted biological, anatomical, and psychosocial differences that render women systematically more vulnerable.

Despite its high prevalence, constipation in women remains underreported and often undertreated. Many women self-manage using over-the-counter remedies or dietary modification without seeking professional help, and the psychological burden- including shame, frustration, and social avoidance- is frequently overlooked in clinical encounters.[7] Chronic constipation is associated with significantly impaired quality of life, with health-related quality of life scores comparable to those recorded in individuals with major depressive disorder or rheumatoid arthritis.[8]

This narrative review examines literature on the epidemiology, possible mechanisms, psychosocial consequences, and management of constipation in women. It considers relevant life stages, including the reproductive years, pregnancy, the postpartum period, and menopause, and discusses both non-pharmacological and pharmacological approaches. Findings from clinical trials and evidence syntheses are considered alongside observational and mechanistic research, with the strength and limitations of the available evidence taken into account.

The review brings together several clinically relevant areas: the Rome IV approach to functional bowel disorders, research on reproductive hormones and gastrointestinal function, the contribution of pelvic floor disorders, and the expanding range of treatments for chronic constipation. These topics are relevant to clinical assessment, although the strength of evidence differs across mechanisms and interventions.

LITERATURE SEARCH

A literature search was undertaken in PubMed/MEDLINE, EMBASE, and Scopus for articles published from January 2000 to December 2025. Search terms were used individually and in combinations with Boolean operators and included: “constipation”, “functional constipation”, “women” or “female”, “hormones”, “progesterone”, “oestrogen”, “pregnancy”, “menopause”, “pelvic floor dysfunction”, “gastrointestinal motility”, “biofeedback”, “dietary fibre”, “laxatives”, “secretagogues”, and “Rome IV”. Reference lists of relevant reviews, meta-analyses, and clinical guidance, including guidance from the American Gastroenterological Association and the Rome Foundation, were also examined. The search informed a narrative review; it was not designed or reported as a systematic review with a reproducible screening flow or formal risk-of-bias assessment.

Inclusion and exclusion criteria

Studies were included if they: (i) were published in peer-reviewed journals; (ii) examined constipation in adult female populations or reported sex-stratified data; (iii) addressed aetiology, pathophysiology, epidemiology, diagnosis, or management; and (iv) were written in English. Case reports, letters, and editorials without primary data were excluded. Where multiple studies addressed the same topic, systematic reviews and randomised controlled trials (RCTs) were prioritised over cross-sectional or retrospective studies.

Narrative synthesis

A narrative synthesis approach was used. Selected studies were grouped thematically into: (i) epidemiology and classification; (ii) hormonal and anatomical factors; (iii) pregnancy-related constipation; (iv) menopausal constipation; (v) psychosocial impact; and (vi) management strategies. Findings are presented with attention to the level of evidence supporting each conclusion.

EPIDEMIOLOGY AND CLASSIFICATION

The global prevalence of functional constipation, defined by Rome III or Rome IV criteria, is approximately 10–14% in the general adult population.[4,9] When broader symptom-based definitions are applied, estimates rise to 20% or above.[5] Across all studies and geographical regions, female sex is among the most robustly established risk factors, with a pooled female-to-male odds ratio of approximately 2.22.[5] In large-scale multinational surveys, the prevalence among women aged 18-65 years ranges from 18% (Northern Europe) to 37% (some Asian and Middle Eastern cohorts), with differences attributed to dietary patterns, physical activity levels, and cultural norms around bowel health.[4,6]

Rome IV describes functional constipation and IBS with constipation (IBS-C) as distinct functional bowel disorders; functional defaecation disorders, including dyssynergic defaecation and inadequate defaecatory propulsion, are classified separately. Opioid-induced constipation is a secondary form associated with opioid exposure rather than a subtype of functional constipation. Distinguishing these conditions is clinically important because assessment and treatment depend on the underlying mechanism. Slow-transit constipation and defaecatory disorders may coexist, and neither should be inferred from age or parity alone; targeted investigations may be required.[10,11]

Healthcare utilisation data reveal that only 22% of individuals with constipation seek medical attention, with most patients self-treating.[1] Women are more likely than

men to report constipation as a chief complaint and to undergo diagnostic evaluation, but barriers- including embarrassment, normalisation of symptoms, and limited access to specialist gastroenterological services-continue to contribute to underdiagnosis and delayed management, particularly in low- and middle-income countries.[7]

HORMONAL MECHANISMS: PROGESTERONE AND OESTROGEN

Hormonal factors represent the most biologically plausible explanation for the female preponderance of constipation. Progesterone, produced by the corpus luteum during the luteal phase of the menstrual cycle and by the placenta during pregnancy, exerts a well-documented inhibitory effect on gastrointestinal smooth muscle contractility.[12] The mechanisms are multifactorial: progesterone elevates nitric oxide synthesis in smooth muscle cells, promoting relaxation; inhibits Rho kinase signalling pathways that drive muscular contraction; and reduces the sensitivity of colonic smooth muscle to stimulatory neurotransmitters, including serotonin (5-HT_4).[12,13] The net result is a dose-dependent reduction in colonic transit time and peristaltic efficiency.

A comprehensive literature review confirmed that progesterone has a dose-dependent, sex-dependent inhibitory effect on gastric emptying and gastrointestinal motility across multiple mammalian models and human studies.[13] The clinical relevance is evident in the well-documented association between the premenstrual (luteal) phase and increased constipation symptoms in women, and the dramatic worsening of constipation during pregnancy when progesterone concentrations peak.[12,13]

Oestrogen may also influence gastrointestinal function, but its effects appear to vary with dose, receptor distribution, physiological state, and the outcome measured.[14] Changes in sex hormones around menopause have been associated with differences in bowel symptoms and gut microbial composition; current evidence does not establish that oestrogen decline directly causes constipation through a single pathway.15 Sex hormone receptors have been identified in several regions of the gastrointestinal tract, supporting the biological plausibility of hormonal modulation of gut function.[13]

ANATOMICAL AND PELVIC FLOOR FACTORS

The female pelvic floor supports the bladder, uterus, vagina, and rectum, and dysfunction in this complex support system can affect defaecation.[10] Obstetric injury, pelvic organ prolapse, prior pelvic or anorectal surgery, and neuromuscular dysfunction may contribute to evacuation symptoms in some women. Anatomical sex differences alone should not be assumed to cause delayed colonic transit; clinical assessment should focus on symptoms and, where indicated, objective evaluation of pelvic floor and colonic function.[14,15]

Pelvic floor dysfunction (PFD) is a recognised and prevalent cause of constipation in women, particularly those with a history of vaginal delivery, pelvic organ prolapse, or prior anorectal surgery. Dyssynergic defaecation- in which the puborectalis muscle and external anal sphincter paradoxically contract rather than relax during attempted defaecation affects approximately 25-50% of patients presenting to specialist constipation clinics, with a significant female predominance.[10,16] Obstetric trauma, including perineal lacerations and levator ani muscle avulsion, is a major acquired risk factor for PFD-associated constipation in women of reproductive age.[10]

Slow-transit constipation (STC) characterised by reduced colonic myenteric neuron density, decreased substance P and VIP (vasoactive intestinal peptide) expression, and impaired propagating colonic contractions is a clinical syndrome that predominantly affects young women and is occasionally associated with concurrent pelvic floor dysfunction.[11] Colonic manometry and wireless motility capsule studies have demonstrated that women with STC show significantly fewer high-amplitude propagating contractions (HAPCs) compared to healthy controls, suggesting an intrinsic enteric neuromuscular defect that may be hormonally modulated.[11]

PREGNANCY-RELATED CONSTIPATION

Constipation during pregnancy is extremely common, with a systematic review and meta-analysis (2024) estimating a global prevalence of 32.4% across all trimesters-21.1% in the first trimester, 34.0% in the second, and highest in the third.[17] Multiple factors converge during pregnancy to create this high burden. Rising progesterone concentrations throughout gestation progressively inhibit colonic smooth muscle activity and slow orocaecal transit time.[12,13] Physical compression of the sigmoid colon and rectum by the enlarging gravid uterus adds a mechanical element that worsens with advancing gestation. Reduced physical activity during the third trimester, dietary changes driven by nausea and food aversions, and decreased water intake further compound the problem.[17]

Iron supplementation, routinely prescribed during pregnancy to prevent or treat iron-deficiency anaemia, is an often-overlooked pharmacological contributor to constipation in this population. Ferrous sulphate, the most widely used and lowest-cost oral iron preparation, is associated with constipation in a significant proportion of users; the risk increases with dose, and at doses above 100 mg elemental iron per day, gastrointestinal side effects affect up to 40% of women.[18,19] The mechanism involves unabsorbed ionic iron in the intestinal lumen generating reactive oxygen species that damage colonocytes and alter the microbiome, reducing mucus production and increasing luminal water absorption.[18] Switching to alternate-day dosing schedules or iron formulations with lower free-iron release (e.g., iron polymaltose, ferric

carboxymaltose) significantly reduces constipation risk without compromising iron repletion.[18]

Postpartum constipation may be associated with perineal pain, fear of straining, reduced mobility, changes in diet and fluid intake, and the effects of analgesic medication. Women with significant perineal trauma may avoid defaecation because of discomfort, potentially worsening constipation. Advice on gradual fibre intake, adequate fluids, mobility, and suitable medication should be individualised, particularly after delivery and during breastfeeding.[17]

MENOPAUSAL AND POSTMENOPAUSAL CONSTIPATION

Constipation is frequently reported as a new or worsening symptom during the menopausal transition, even by women without prior bowel complaints. The mechanisms are multifactorial. Declining oestrogen concentrations reduce the trophic support for colonic serotonergic neurons, slowing peristalsis and reducing colonic motility.[14,15] Reduced physical activity associated with menopausal symptoms (vasomotor symptoms, musculoskeletal pain, disrupted sleep) compounds the physiological slowing of transit. Age-related atrophy of pelvic floor musculature and reduced rectal sensory sensitivity in postmenopausal women further impair the defaecatory mechanism.[10,15]

The gut microbiome undergoes substantial compositional shifts during the menopausal transition. Lower oestrogen levels are associated with reduced diversity and relative depletion of short-chain fatty acid (SCFA)-producing bacteria (*Faecal bacterium prausnitzii*, *Bifidobacterium* spp.), which promote colonic motility and mucus integrity.[15] These microbiome changes are potentially reversible, and emerging evidence suggests a role for targeted probiotic interventions and dietary prebiotic fibre in restoring motility in postmenopausal women.[15]

PSYCHOLOGICAL AND LIFESTYLE FACTORS

Constipation and psychological comorbidity are strongly bidirectionally associated in women. Anxiety and depression are both independent risk factors for and consequences of chronic constipation, mediated through the gut brain axis-a bidirectional neurohumoral communication network linking the central nervous system, enteric nervous system, and gut microbiome.[8,20] Chronic psychological stress activates the hypothalamic-pituitary-adrenal (HPA) axis, releasing cortisol and corticotropin-releasing hormone (CRH), which alter intestinal motility, increase intestinal permeability, and modify microbiome composition.[20] In women, these stress-response pathways appear to have stronger effects on colonic transit than in men, potentially reflecting sex differences in HPA axis reactivity and central serotonin signalling.

Sedentary behaviour, low dietary fibre intake, and inadequate fluid consumption are modifiable lifestyle factors consistently associated with constipation in women across epidemiological studies.[7,21] Low-fibre, highly processed diets reduce faecal bulk and increase colonic transit time. Inadequate hydration, particularly when combined with high ambient temperatures or increased insensible fluid losses during pregnancy, leads to increased water absorption from the colon and harder, more difficult-to-pass stools. A systematic review of 14 cohort studies (2024) confirmed that physical activity particularly moderate aerobic exercise is consistently associated with reduced constipation risk and improved bowel frequency, likely through multiple mechanisms including acceleration of colonic transit, modulation of the autonomic nervous system, and reduction of circulating stress hormones.[21]

PSYCHOSOCIAL IMPACT OF CONSTIPATION IN WOMEN

The burden of constipation in women extends substantially beyond the physical symptom of infrequent or difficult defaecation. Health-related quality of life (HRQoL) is significantly impaired in women with chronic constipation, with studies consistently demonstrating reduced scores on validated instruments including the SF-36, the Patient Assessment of Constipation Quality of Life (PAC-QOL), and the Gastrointestinal Quality of Life Index.[8] The magnitude of HRQoL impairment is comparable to that reported in chronic conditions such as hypertension, diabetes mellitus, and major depression, highlighting the genuine illness burden of this often-trivialised condition.[8]

Psychological comorbidity is highly prevalent in women with chronic constipation. Point prevalence rates of depressive disorder and anxiety disorder in this population range from 20% to 50% in tertiary referral series, substantially higher than in age-matched controls.[20] The direction of causality is bidirectional: depression and anxiety impair gut motility through the gut-brain axis, while the chronic distress and social disruption of constipation precipitate or exacerbate mental health symptoms. Women with chronic constipation report feelings of shame and embarrassment, avoidance of social and professional engagements, reduced work productivity, and diminished sexual satisfaction, particularly in the context of pelvic floor dysfunction.[8,20]

Social stigma surrounding bowel health creates additional barriers to help-seeking. In many cultural contexts including South Asian communities where social taboos around discussing bowel function are strong women are particularly reluctant to disclose constipation symptoms to healthcare providers or family members. These underreporting delays diagnosis and treatment and reduces the likelihood of adopting evidence-based management strategies.[7] Addressing stigma through culturally sensitive health communication and normalising discussions of bowel health in gynaecological, obstetric, and general

practice consultations is therefore an important component of holistic care.

EVIDENCE BASED MANAGEMENT STRATEGIES

Dietary modification and hydration

Dietary fibre is the cornerstone of first-line management for functional constipation. Soluble fibre (beta-glucan, psyllium, inulin) forms a gel matrix in the colon that retains water, softens stool consistency, and increases faecal bulk, thereby stimulating peristalsis. Insoluble fibre (cellulose, lignin) adds bulk and accelerates colonic transit. Current guidelines from the AGA and the Rome Foundation recommend a daily fibre intake of 25-35 grams for adults with constipation, achievable through a diet rich in whole grains, legumes, fruits (particularly prunes, kiwifruit, and apples), and vegetables.[1,3] A systematic review by Ford et al encompassing 17 RCTs, confirmed that psyllium supplementation was significantly more effective than placebo in increasing stool frequency and improving stool consistency in adults with chronic constipation.[22]

Kiwifruit (Actinidia deliciosa) has attracted particular research attention as a dietary intervention for constipation. Randomised trials published between 2018 and 2023 have demonstrated that consuming two green kiwifruits daily significantly increases defaecation frequency, reduces laxative use, and is well-tolerated compared to psyllium supplementation, with an equivalent or superior effect on whole-gut transit time.[23] The mechanism involves kiwifruit-specific actinidin (a cysteine protease), pectin, and water content acting synergistically to promote gastric emptying and colonic transit.

Hydration is an essential complementary intervention. Water absorption by colonocytes is driven by osmotic gradients and is strongly influenced by dietary fibre intake. Inadequate water intake-particularly below 1.5 litres per day results in hyperosmotic reabsorption of water from the colon, hardening stools and reducing defaecation ease. Women are advised to consume a minimum of 1.5-2.0 litres of fluid daily, with higher intakes recommended during pregnancy, lactation, and in hot climates.[1]

Physical activity and aerobic exercise

Regular moderate aerobic exercise is a well-supported lifestyle intervention for constipation. The mechanisms through which exercise improves bowel function are multifactorial: acceleration of colonic transit through increased intestinal blood flow and enhanced peristaltic contractions; stimulation of the parasympathetic nervous system (which promotes colonic motility); reduction in circulating cortisol and adrenaline (stress hormones that inhibit gut motility); and positive modulation of the gut microbiome composition.[21] A 2024 systematic review of 22 cohort studies confirmed that higher levels of physical activity were significantly associated with reduced constipation risk (pooled RR=0.67; 95% CI: 0.58-0.78), with the benefit particularly pronounced for moderate aerobic activities such as brisk walking and cycling.[21]

A randomised controlled trial by Song et al specifically investigating the effects of core-strengthening exercise in young women, demonstrated that 12 weeks of progressive core-muscle training significantly reduced whole-gut transit time compared to a sedentary control group.[24] This finding is consistent with the broader evidence base and supports the recommendation that women with constipation engage in at least 150 minutes of moderate-intensity aerobic exercise per week, supplemented by core-strengthening activities.[1,21,24]

Yoga asanas and the gut-brain axis

Yoga may be considered as an adjunctive mind-body activity for interested patients, particularly when stress or coexisting functional gastrointestinal symptoms are present. Proposed mechanisms include physical activity, relaxation, and modulation of stress responses; however, direct evidence that specific asanas mechanically stimulate the bowel or reliably improve colonic transit is limited.25 Pranayama and relaxation practices may support stress management but should not replace established assessment or treatment for chronic constipation.

Some trials and evidence syntheses have evaluated yoga in irritable bowel syndrome, including populations in which IBS-C may be represented. These findings may support yoga as an adjunct for symptom burden, stress, or quality of life, but they should not be interpreted as direct evidence of efficacy for functional constipation as a separate diagnosis.[25,26]

Mindfulness meditation-a core component of many structured yoga programmes specifically targets the psychological drivers of constipation through the gut brain axis. By activating parasympathetic tone, mindfulness meditation reduces CRH and cortisol secretion, modulates visceral afferent sensitivity, and promotes a neurophysiological environment conducive to normal enteric nervous system function. Clinical guidelines for functional gastrointestinal disorders increasingly recommend mindfulness-based stress reduction (MBSR) as an adjunct to dietary and pharmacological management, particularly for women with concurrent anxiety or depression.[20] Women should be encouraged to practise 10-20 minutes of daily mindfulness or yoga-based relaxation, integrating it as a sustainable lifestyle modification rather than a temporary intervention.

Pelvic floor rehabilitation and biofeedback

For women with constipation attributable to pelvic floor dysfunction specifically dyssynergic defaecation biofeedback-assisted pelvic floor muscle training (BF-PFMT) is the recommended first-line treatment and is

strongly supported by RCT evidence.[10,16] Biofeedback works by providing real-time sensory feedback (visual or auditory) about pelvic floor muscle activity, enabling patients to learn to relax the puborectalis and external anal sphincter during straining, thereby correcting the paradoxical contraction that obstructs defaecation.[16]

A landmark RCT by Rao et al (Lancet Gastroenterology and Hepatology), comparing home-based versus office-based biofeedback therapy for dyssynergic defaecation, demonstrated that both modalities were equally effective in normalising the dyssynergic pattern, increasing complete spontaneous bowel movements per week, and improving balloon expulsion test results at 3-month follow-up.[16] A 2025 RCT published in Neurogastroenterology and Motility specifically addressed postmenopausal women with chronic constipation and sexual dysfunction, finding that biofeedback therapy significantly improved pelvic floor muscle function, bowel frequency, and sexual health, with additional benefits on testosterone levels.[27] These findings underscore the particular relevance of biofeedback-based rehabilitation in older women with multi-compartment pelvic floor dysfunction.

For women with constipation related to structural pelvic floor abnormalities (rectocele, rectal intussusception, enterocele), surgical correction may be appropriate after exhausting conservative measures; however, the decision to operate should be taken jointly with a colorectal surgeon or urogynaecologist familiar with defaecatory disorders, given the potential for symptom persistence despite anatomical repair.

PHARMACOLOGICAL MANAGEMENT

When lifestyle modifications are insufficient, pharmacological treatment is indicated. Current evidence-based pharmacological ladder for constipation in women proceeds through: bulk-forming laxatives (psyllium, methylcellulose); osmotic laxatives (macrogol/polyethylene glycol, lactulose, magnesium hydroxide); stimulant laxatives (bisacodyl, senna); and prosecretory agents and novel pharmacotherapies.[1,28]

Osmotic laxatives particularly PEG are recommended as first-line pharmacological agents by the AGA due to their established efficacy, favourable safety profile, and lack of tachyphylaxis.[1,28] A Cochrane systematic review by Ford et al confirmed that PEG is more effective than lactulose in increasing stool frequency and softening stool consistency, with fewer side effects.[29] PEG is safe during pregnancy and is frequently used as a second-line agent when dietary measures alone are insufficient for managing gestational constipation.[17]

Prosecretory agents represent an important advance for women with refractory chronic constipation. Lubiprostone, a locally-acting type-2 chloride channel activator, increases fluid secretion into the intestinal lumen, softening stools and enhancing transit. It has regulatory approval specifically for the treatment of chronic idiopathic constipation in adults (both sexes) and for IBS-C in women aged 18 and over.[28] Linaclotide and plecanatide, guanylate cyclase-C (GC-C) agonists, stimulate intestinal fluid secretion and accelerate colonic transit; both have demonstrated superiority over placebo in large-scale RCTs for functional constipation and IBS-C.[28] Prucalopride-a highly selective, high-affinity serotonin 5-HT_4 receptor agonist-promotes pan-colonic propulsive contractions and is effective for chronic constipation in both sexes; notably, early trials specifically enrolled women due to the higher prevalence in this group.[28]

For pregnant women, pharmacological treatment should be approached cautiously and in following order of preference: (i) dietary and lifestyle measures; (ii) bulk-forming agents; (iii) osmotic agents (PEG/lactulose); and (iv) stimulant laxatives (senna or bisacodyl) only when osmotic agents are insufficient, given limited safety data in 1st trimester.[1,17] Prosecretory agents are not routinely recommended in pregnancy due to limited human safety data.

PROBIOTIC THERAPY AND GUT MICROBIOME MODULATION

The gut microbiome plays an increasingly recognised role in the regulation of colonic motility. Dysbiosis characterised by reduced microbial diversity and depletion of SCFA-producing bacteria has been associated with slow-transit constipation and functional constipation in multiple observational studies.[15,29] Interventional studies using multi-strain probiotic preparations (particularly Lactobacillus and Bifidobacterium species) have shown modest but statistically significant improvements in stool frequency and consistency in adults with functional constipation.[30] A study found that probiotics reduced whole-gut transit time by approximately 12 hours and increased stool frequency by 1.3 bowel movements per week compared to placebo, with the effect more pronounced in women and in the elderly.[30]

Dietary prebiotic fibre including fructo-oligosaccharides (FOS), inulin, and resistant starch-selectively promotes the growth of beneficial microbiome taxa and increases faecal SCFA concentrations, thereby enhancing colonic motility and mucosal integrity. The combination of probiotic supplementation with prebiotic fibre (a "synbiotic" approach) represents a promising strategy for women with constipation associated with microbiome dysbiosis, including postmenopausal women.[15,30]

CONSTIPATION IN SPECIAL FEMALE POPULATIONS

Adolescent girls

Constipation in adolescent girls often begins at menarche, when cyclical progesterone exposure first establishes a

pattern of luteal-phase bowel slowing. Dietary factors- particularly low fibre intakes associated with restrictive eating behaviours, eating disorders, and convenience food consumption- are prominent in this age group. Clinicians should sensitively screen for disordered eating in adolescent girls presenting with constipation, as this may represent an important entry point for nutritional and psychological intervention.

Older women

Constipation prevalence rises with age, and older women (aged >65 years) represent the highest-risk group in most epidemiological studies.[1,5] Polypharmacy particularly anticholinergic medications, opioid analgesics, calcium channel blockers, and iron supplements is a major pharmacological contributor in this population.

Reduced physical mobility, dehydration, and cognitive decline impairing recognition of and response to rectal urgency further compound the problem.

Faecal impaction, a serious complication of severe constipation, occurs predominantly in older, hospitalised, or institutionalised women and requires urgent management.[1]

Table 1: Summary of factors associated with constipation in women and their clinical implications.

Domain/ life stage	Potential contributors described in the literature	Clinical considerations
Reproductive years / menstrual cycle	Possible cyclical variation in bowel function associated with reproductive hormone fluctuations; dietary, activity, and psychosocial factors.	Ask about symptom timing and pattern; assess for functional constipation, IBS-C, medication effects, and alarm features.
Pregnancy	Hormonal and physiological changes, reduced activity, dietary or fluid changes, and constipation associated with oral iron in some women.	Review symptoms and iron therapy with the antenatal care provider; begin with appropriate dietary and lifestyle measures and select medicines cautiously.
Postpartum period	Perineal pain, fear of defaecation, reduced mobility, analgesic use, and changes in routine.	Address pain and medication contributors; individualise advice on fibre, fluids, mobility, and suitable treatment.
Menopause and older age	Coexisting changes in bowel habits, pelvic floor function, mobility, diet, comorbidity, and polypharmacy.	Review constipating medicines and comorbidities; assess persistent symptoms and consider pelvic floor or transit evaluation when indicated.
Pelvic floor/ defaecatory dysfunction	Impaired coordination or relaxation during evacuation; possible association with obstetric injury or pelvic floor disorders.	Consider anorectal examination and appropriate physiological testing; use instrumented anorectal biofeedback for confirmed dyssynergic defaecation.
Psychosocial and lifestyle factors	Stress, anxiety or depression, low fibre intake, inadequate fluid intake, and sedentary behaviour may contribute or coexist.	Use a non-judgemental history; support feasible dietary and activity changes and address relevant psychological comorbidity.

DISCUSSION

This narrative review highlights the multiple factors that may contribute to constipation in women and the need to assess symptoms in their clinical and life-stage context. Management should be individualised and may include gradual dietary fibre optimisation, adequate hydration, physical activity, appropriate pharmacological treatment, and anorectal biofeedback for confirmed defaecatory dysfunction. Yoga and mindfulness may be considered adjuncts for selected patients, although evidence for constipation-specific benefits is less established.

A central clinical implication of this review is the importance of identifying and addressing the specific subtype and mechanism of constipation in each woman. A young woman with cyclical premenstrual constipation requires a different approach to a postmenopausal woman with dyssynergic defaecation or a pregnant woman with iron supplement-induced symptoms. The Rome IV classification provides a clinically useful framework for this subtyping, but it is underused in primary care settings, where most women with constipation are first encountered.

The hormonal dimension of constipation in women progesterone-mediated inhibition of colonic smooth muscle, oestrogen-related microbiome modulation, and the gut-brain interaction amplified by psychological stress points to the need for hormonal life-stage awareness in clinical management. Clinicians should routinely enquire about symptom variation across the menstrual cycle, during pregnancy, and at the menopausal transition, as this information guides both understanding and the management.

Anorectal biofeedback has a well-established role in the treatment of dyssynergic defaecation, although access to trained services may be limited. Wider availability of appropriately supervised care and further evaluation of home-based delivery models may improve access. Evidence for dietary interventions such as kiwifruit, probiotics, prebiotics, yoga, and mindfulness is promising in some settings but remains variable; these approaches should be presented as possible adjuncts rather than substitutes for established treatment. Pregnancy-specific decisions require separate consideration of maternal and fetal safety.

Limitations of this review include the narrative rather than systematic methodology, which introduces a degree of selection bias. Many included studies were conducted in Western, high-income settings, and the transferability of findings to South Asian, African, and Middle Eastern contexts requires careful consideration, given meaningful differences in diet, microbiome composition, cultural attitudes to bowel health, and access to specialist care. Future research should prioritise: (i) large, sex-stratified RCTs of emerging pharmacological agents; (ii) longitudinal studies tracking the natural history of constipation across the female reproductive life course; (iii) mechanistic studies on the oestrogen-gut microbiome-motility axis; (iv) implementation science studies on scalable biofeedback and yoga programmes in low-resource settings; and (v) randomised trials of synbiotic (probiotic + prebiotic) interventions in postmenopausal women.

CONCLUSION

Constipation is a common and potentially burdensome condition in women. Its occurrence reflects a combination of factors that may include gastrointestinal physiology, reproductive life stage, pelvic floor function, medication exposure, diet, physical activity, and psychosocial context. Although constipation is reported more frequently by women than men in many population studies, the size of this difference varies according to the population and diagnostic definition used. Management should be tailored to symptom pattern, suspected cause, comorbidities, life stage, and patient preference. Measures may include an appropriate fibre intake, adequate fluid intake, physical activity, evidence-based laxatives, and anorectal biofeedback when a defaecatory disorder is confirmed. Clinicians should ask about bowel symptoms during relevant reproductive, antenatal, and menopausal consultations, review potentially constipating medicines, and investigate alarm features or persistent symptoms when indicated. Improving communication about bowel health and access to appropriate assessment may help reduce the burden of constipation.

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