MONASH University

Module 8
Summary Factsheet

1. Gut-directed hypnotherapy

1.1 Definition / description

In gut-directed hypnotherapy (as opposed to standard hypnotherapy), suggestions are made for the control and normalisation of gastrointestinal function (normally on a repetitive basis) and metaphors are used for bringing about improvement. A common metaphor would involve asking the subject to imagine swallowing down medicine that is known to improve gastrointestinal function. The subject would then envisage the medicine providing protection against abdominal pain, bloating and abnormal bowel habits.

1.2 Brain gut axis

The brain-gut axis refers to the bi-directional flow of information that occurs between the brain and the gastrointestinal tract. Alterations in brain-gut interactions are thought to contribute to symptoms in all patients with chronic intestinal disorders. A number of pharmacological and non-pharmacological agents may alter brain-gut interactions in chronic intestinal disorders, including gut-directed hypnotherapy.

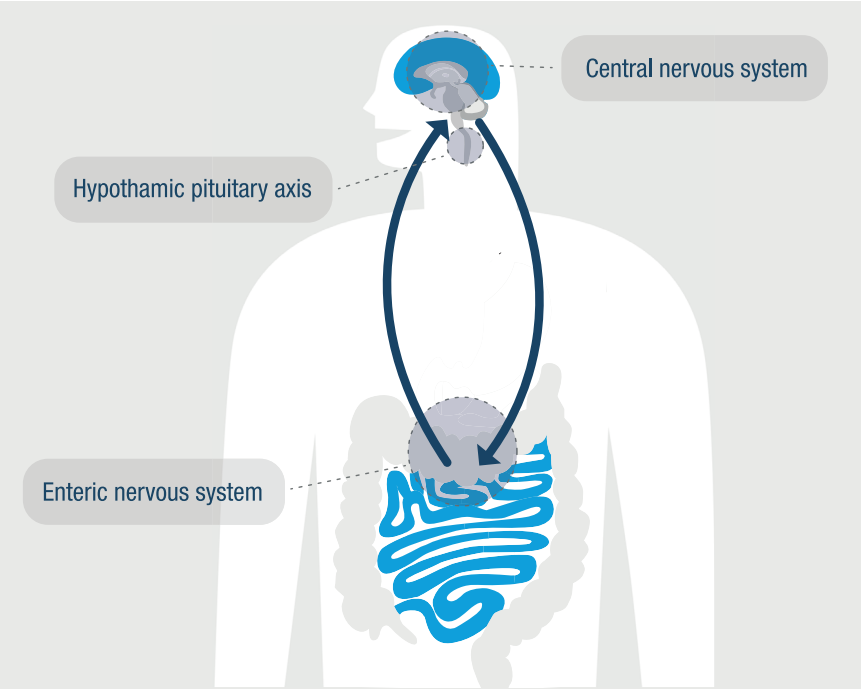

Figure 1: Brain-gut axis

1.3 Efficacy

Strong RCT evidence now supports the efficacy of gut-directed hypnotherapy in subjects with IBS. For instance, one study showed that durable effects of gut-directed hypnotherapy are similar to those of the low FODMAP diet for the relief of gastrointestinal symptoms[1].

1.4 Mechanisms of action

The precise mechanism by which gut-directed hypnotherapy influences psychological and physiological outcomes is unclear. Gut-directed hypnotherapy may influence gastrointestinal motility[2], visceral sensitivity[3-7], immune function[8-10] and/or central processing[11-13].

1.5 Patient population likely to benefit

We do not know which patients are most likely to benefit from gut-directed hypnotherapy. However, gut-directed hypnotherapy appears at least as good as some of the new and expensive pharmacological treatment options[14] and equally effective compared to a low FODMAP diet[1]. There are also no known side effects of hypnotherapy[14].

1.6 Where is hypnotherapy available?

Access to gut-directed hypnotherapy may be limited by treatment cost and the time commitment needed (usually between 6-12 one-hour sessions). Also, few professionals are trained to deliver gut-directed hypnotherapy, making services difficult to access. **Before recommending gut-directed hypnotherapy to patients, identify a gut-directed hypnotherapist who has expertise in the area of gastroenterology and a thorough understanding of IBS.**

2. Cognitive behavioural therapy

2.1 Definition / description

Cognitive behavioural therapy (CBT) is a type of psychotherapy that is sometimes applied to patients with IBS. When CBT is used in patients with IBS, it generally includes:

- psychoeducation (about the stress response and its relationship to gastrointestinal issues);
- building insight into cognitive and behavioural responses to IBS symptoms and/or fear of symptoms, and
- modifying those responses to reduce distress related to IBS and physical reactivity to stress[15].

2.2 Efficacy

Numerous RCTs have shown that CBT is effective in both individual and group settings[16-33]. Response rates range between 25–80% and studies that have measured long-term outcomes show that efficacy is maintained.

2.3 Mechanisms of action

It is possible that psychological treatments like CBT work by helping patients to manage the psychological distress that would otherwise worsen bowel symptoms.

2.4 Patient population likely to benefit

At present, we do not know which patients with IBS are most likely to respond to CBT[34], although patients with more severe gastrointestinal symptoms at baseline may achieve greater improvements in quality of life[34].

2.5 Where is CBT available?

CBT should be provided by a psychologist with a thorough understanding of IBS and experience in managing gastrointestinal disorders.

3. Stress management

3.1 Role of stress in pathogenesis of IBS symptoms

Stress refers to the ability of an individual to deal with internal and external demands (e.g. an individual's job or relationship with others). When the brain sees an external stress-inducing demand, the sympathetic nervous system is activated, borrowing energy from the gut. This results in changes in gastrointestinal function, such as:

- Reduced blood flow
- Reduced mucus production
- Reduced movement of food through the digestive tract
- Heightened gastrointestinal sensitivity.

These changes can trigger gastrointestinal symptoms, including abdominal pain, bloating and changes in stool consistency.

CBT should be provided by a psychologist with a thorough understanding of IBS and experience in managing gastrointestinal disorders.

3.2 Stress management techniques

There are several ways to learn to manage stress, but establishing the cause of stress is among the most important. Once the cause is identified, stress management techniques can be explored.

3.3 Efficacy of stress management

The most evidence-based stress management technique is the natural act of breathing. Diaphragmatic breathing or abdominal or deep breathing is marked by the expansion of the abdomen rather than the chest when breathing[35-36].

Other techniques that have shown some benefit in IBS include:

- Progressive muscular relaxation - requires patients to alternately tense and relax muscles in the legs, abdomen, chest, arms and face in a sequential pattern with the eyes closed.
- Mindfulness meditation - encourages the individual to pay attention in a particular way, on purpose, in the present moment and non-judgmentally.
- Biofeedback - a conditioning treatment that enables patients to recognise their own body signals and to influence them by the use of operant conditioning principles.

3.4 Patients likely to benefit

Stress management techniques should be considered if IBS symptoms are:

- moderate to severe
- associated with psychological stress
- contributing to impaired QOL.

Generally, the choice to engage in stress management techniques depends on factors such as cost, time constraints, physician and patient preference and therapist availability.

4. Probiotics

4.1 Definition

Probiotics are defined as 'live microorganisms that, when administered in adequate amounts, confer a health benefit on the host'[37].

4.2 Mechanisms of action

Probiotics may:

- influence the composition of gut bacterial populations
- affect intestinal physiology, or
- modulate the immune compartment.

4.3 Evidence for clinical efficacy

Overall, weak evidence favours the use of probiotic preparations in people with IBS. This is due to significant heterogeneity between studies in terms of the probiotic preparation used, even for the same strain (for example, fruit juice vs rose hip drink), as well as inconsistencies in the outcomes measured in these studies. Despite this, the studies highlight a number of key messages regarding value of probiotics in the management of IBS that are relevant to clinical practice.

- Symptomatic relief obtained by probiotic therapy is often modest.
- Noticeable benefits can take time to appear (up to 4 weeks)
- A multi-species probiotic is not necessarily more effective than a single-strain probiotic
- Little is known about the types of FGID patients who are most likely benefit from probiotic therapy although it is possible that probiotics may suit:
    - › Patients with mild symptoms
    - › Patients with evidence of microbiome alterations (e.g. post-infectious IBS)
    - › Patients during FODMAP restriction to counter changes in gut microbiota observed on a low FODMAP diet, although more research is needed to confirm this[38].
- It is not known whether probiotic therapy improves FODMAP tolerance during Phases 2 and 3.

4.4 Safety

Most evidence suggests that probiotics are safe in patients with IBS, but without co-morbidities[39].

Table 1 - Recommendations from clinical guidelines regarding the role of probiotics in the management of IBS

BRITISH SOCIETY OF GASTROENTEROLOGY, 2021[40]	Probiotics may be an effective for global symptoms and abdominal pain in IBS, but it is not possible to recommend specific species or strains. Advise patients wishing to try probiotics to take them for up to 12 weeks, and to discontinue them if there is no improvement in symptoms.
AMERICAN COLLEGE OF GASTROENTEROLOGY, 2021[41]	We suggest against probiotics for the treatment of global IBS symptoms based on low quality of evidence.
JAPANESE SOCIETY OF GASTROENTEROLOGY, 2021[42]	Probiotics are effective in treating IBS. Probiotics are recommended for IBS.
KOREAN SOCIETY OF NEUROGASTROENTEROLOGY AND MOTILITY, 2018[43]	Probiotics are considered beneficial for IBS, as they are inexpensive and safe. However, the optimum strains, species, dose and duration of therapy are unclear.
BRITISH DIETETIC ASSOCIATION, 2016[44]	Probiotics are unlikely to provide substantial benefit. However, individuals choosing to try probiotics are advised to select one product at a time, try it for a minimum of 4 weeks at the recommended dose and monitor the effects.

Box 2 - Summary of recommendations for probiotic use in IBS

1. The choice of probiotic product and regime should be selected based on:
   - strain and dose of probiotic with evidence of efficacy
   - symptom profile of the patient
2. Patients with mild symptoms may be best suited for probiotic therapy
3. Trial the selected probiotic for at least 4 weeks and monitor the patient for symptom improvements and adverse effects
4. Probiotics are sometimes formulated with prebiotics fibres (such as oligosaccharides and inulin) which are FODMAPs. These products are known as synbiotics, but not enough is known about their therapeutic value in IBS.
5. Good compliance with probiotic therapy is needed to achieve any potential benefits

5. Pharmacological therapies

CATEGORY	AGENTS	IBS SUBTYPE	SYMPTOM BENEFITS
Antispasmodics	Mebeverine	All	Global symptoms
	Hyosine	All	Global symptoms
	Dicyclomine	All	Global symptoms
Opioid receptors	Loperamide	IBS-D	Diarrhoea
	Diphenoxylate	IBS-D	Diarrhoea
	Eluxadoline	IBS-D	Diarrhoea
Bile Salt Binder	Cholestyramine	IBS-D	Diarrhoea
Antidepressant	Tricyclic antidepressant	IBS-D, IBS-M	Global symptoms, pain
	Selective serotonin reuptake inhibitors	IBS-C, IBS-M	Global symptoms, pain
Antibiotics	Rifaximin	IBS-D, IBS M	Global symptoms, bloating
Serotonin receptor agonists	Alosetron	IBS-D	Global symptoms, pain
	Alosetron	IBS-D	Diarrhoea, urgency, bloating
Serotonin receptor antagonists	Tegaserod	IBS-C	Constipation
	Prucalopride	IBS-C	Constipation
Pro-secretory Agents	Lubiprostone	IBS-C	Constipation
	Linaclotide	IBS-C	Constipation, pain
Laxatives	Biscodyl Docusate sodium Polyethylene glycol Magnesium sulfate (epsom salts) Psyllium husk Methylcellulose Sterculia	IBS-C	Constipation
Herbal remedies	Peppermint oil	All	Pain
	STW-5	All	Pain

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