

Reflections of a Healthcare Professional...

Probiotics as part of the Dietary Management of the Symptoms of Diarrhoea Predominant Irritable Bowel Syndrome

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Summary

In this article I reflect upon the clinical evidence for the use of probiotics in IBS and my dietetic management approach for a female (Susan*) with diarrhoea predominant irritable bowel syndrome (IBS-D). Susan reported high levels of anxiety and stress related to the severe symptoms she had suffered for several years. I discuss my rationale and learnings from the dietetic management approach chosen, which included lifestyle changes and a probiotic (containing *Bifidobacterium longum* strains **35624**[®] and **1714**[®]).

*Name has been changed

Introduction

IBS is one of the most common gastrointestinal disorders globally, characterised by recurrent abdominal pain related to disordered bowel movements and often also by psychological symptoms e.g. anxiety and depression^{1,2}. IBS-D makes up a considerable proportion of IBS cases and I see several individuals with this type of IBS on my dietetic caseload.

Management of IBS aims to reduce symptom severity and typically involves lifestyle changes and dietary interventions (including specific strains of probiotics), with pharmacological and psychological interventions also recommended when required^{1,2}.

Dietetic Review of a Female with IBS-D



Susan, a 49 year old female diagnosed with IBS-D, described to me an urgency to open her bowels 2-3 times a day. She explained to me that she drove long distances daily to take her two daughters to school and felt anxious as soon as she got in the car, often stopping to find somewhere to open her bowels. Frequently, the sense of urgency was so strong that if there was no access to a toilet, Susan had to open bowels at the side of motorways or in woodlands. She told me that her symptoms were accompanied by fears for her safety and feelings of embarrassment and anxiety. Susan described her situation as a '*vicious cycle where my IBS symptoms worsen my anxiety, and the anxiety worsens my IBS symptoms*'. Susan had suffered with these symptoms for several years and reported to have '*given up seeking help or advice*'.

Susan was overweight (BMI 28.6 kg/m²) and the detailed dietary history I conducted revealed a tendency to binge on sweet foods and several unsuccessful weight loss attempts. Susan had previously sought advice from her GP, who had recommended trialling a diet low in FODMAPs (fermentable oligosaccharides, disaccharides, monosaccharides and polyols). However, due to her high levels of anxiety, Susan had not felt capable of this and sought further help from me. Susan did not report any other medical conditions.

Dietetic Management Plan

In light of Susan's high anxiety levels and reluctance to try the low FODMAP diet, I decided to focus initially on providing first line dietary and lifestyle advice as recommended in IBS clinical guidelines¹. Particular focus was placed upon establishing regular mealtimes and incorporating some low intensity exercise into Susan's everyday routine. In view of national and international clinical guidelines^{1,4}, I also decided to recommend that she considered trying a probiotic.

As the health benefits of probiotics are specific to the bacterial strain(s) they contain⁴, I considered the research evidence available for specific probiotics in the management of IBS symptoms. I identified the

Bifidobacterium longum **35624**[®] strain to be supported by robust research evidence^{5,6} and recognised by the World Gastroenterology Organisation (WGO) global guidelines to have the best evidence for efficacy in managing IBS symptoms⁴. As Susan presented with high levels of anxiety, I also critically appraised the evidence base for probiotic strains and psychological symptoms and identified the *Bifidobacterium longum* **1714**[®] strain to have good supporting research evidence⁷. While caution must be taken when combining multiple probiotic strains, due to the potential incompatibility of their respective modes of action, the compatibility of **35624**[®] and **1714**[®] bacterial strains has been confirmed in a clinical trial, with significant improvements in both physical and psychological symptoms of IBS observed⁸.

Therefore, I recommended a probiotic (containing *Bifidobacterium longum* **35624**[®] and **1714**[®] bacterial strains, 1 x 10⁹ colony forming units (CFU)) to be taken for two months. I took time to discuss the management plan with Susan to ensure she was able and willing to try the suggested lifestyle changes and probiotic.

Dietetic Aims and Outcomes

The overall aim of the management plan was to reduce Susan's feelings of anxiety and manage her IBS symptoms. In collaboration with Susan, we chose the following as outcomes that would indicate whether this aim had been achieved:

- ▶ Reduced feelings of stress and anxiety in relation to going to the toilet and driving
- ▶ Reduced urgency to open bowels
- ▶ Reduced frequency of opening bowels each day

Dietetic Follow-up

Over the subsequent two months, I monitored Susan's progress via fortnightly telephone calls. Improvements in her physical IBS symptoms (urgency to open bowels) were reported by week 2 and improvements in her psychological symptoms (anxiety) noticeable by week 6 (Figure 1). Improvements continued throughout the two months and at a face-to-face follow-up appointment at week 8, I noticed that Susan appeared less anxious, and she was pleased with her progress. No side effects were experienced, and Susan reported 100% compliance with the daily probiotic.

Based on her change in symptoms and achievement of management plan outcomes, Susan wished to continue taking the probiotic. Susan described feeling a huge relief that she can get in the car and not feel anxious about needing to stop to open her bowels, something she described as being '*life changing*'.

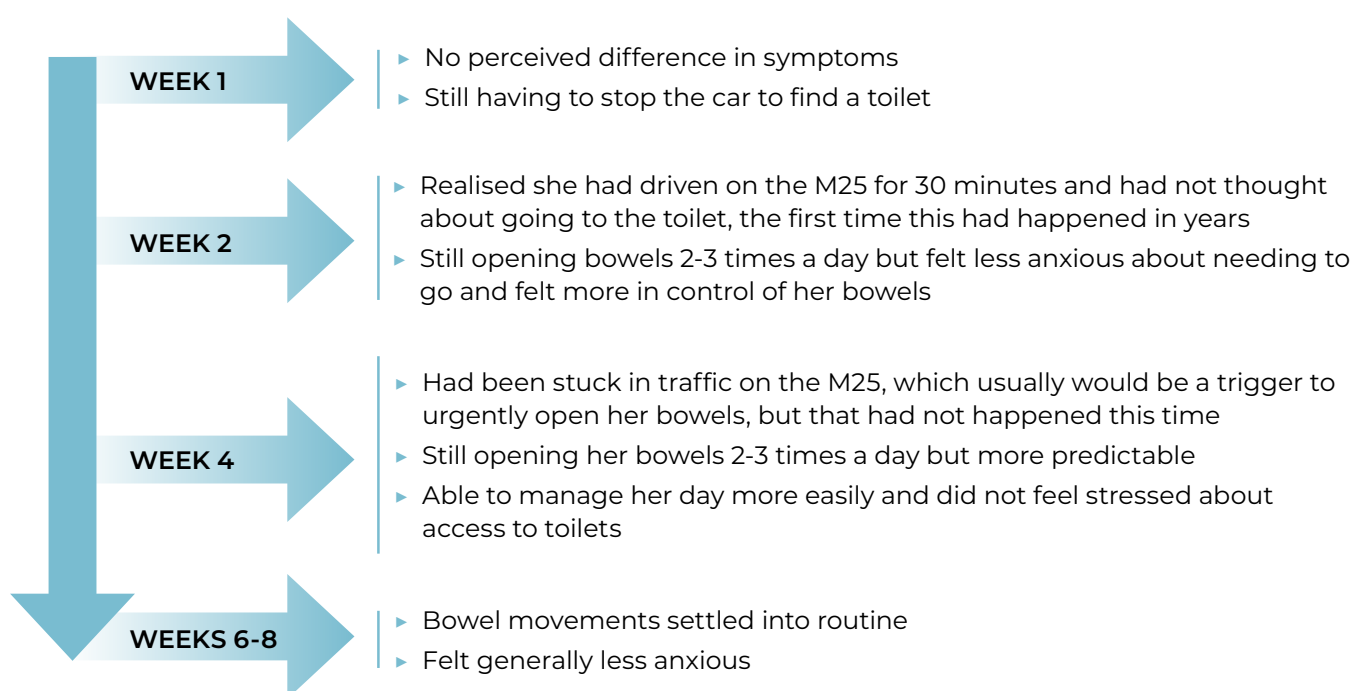


Figure 1. Reported changes in symptoms during the two-month dietetic follow-up period

Dietetic Reflections

Susan experienced both gastrointestinal and psychological symptoms of IBS, which she herself recognised to be interlinked, with her anxiety worsening her diarrhoea and vice versa. This relationship is likely explained by the bidirectional communication pathway between the gut and the brain, termed the gut-brain axis⁹. In recognition of the role of psychological comorbidities in the development and exacerbation of the condition, IBS has recently been redefined as a 'disorder of gut-brain interaction' (DGBI)². The gut-brain axis is a complex regulatory system involving several systems in the body including the nervous, immune and endocrine systems⁹. The gut microbiota is also recognised to be a key regulator of the gut-brain axis, leading to much interest in the role of probiotics in the management of IBS symptoms^{1,9}.

Susan described to me that the improvements in her symptoms were '*life changing*', which is reflective of the documented detrimental impact that IBS, in particular IBS-D, has upon the quality of life of sufferers^{1,10}. An international survey reported that, in return for an immediate relief of symptoms, individuals with IBS would sacrifice 10-15 years of their remaining life¹⁰. This is another important reason why I ensure dietetic management strategies target both the physical and psychological symptoms of IBS to improve overall wellbeing.

It can often take several weeks for the benefits of probiotics to take effect, so it was interesting to observe that Susan reported changes in her physical symptoms two weeks after starting the probiotic. It is likely that the other dietary and lifestyle changes adopted contributed to the management of symptoms. Additionally, response to probiotics is specific to each individual and the time taken to experience noticeable effects will vary.

My reflections provide a real-world example of the potential benefits of specific probiotics in the dietetic management of the symptoms of IBS, adding to the growing body of evidence of the effectiveness of specific probiotics in managing IBS symptoms, as recognised in international IBS clinical management guidelines¹.

Learning points

- ✓ Individuals with IBS often report having both physical and psychological symptoms
- ✓ A combination of the probiotic strains *Bifidobacterium longum* **35624**[®] and **1714**[®] may be a useful component of dietary approaches to manage symptoms of IBS
- ✓ As the full effects may not be apparent immediately, it is recommended probiotics are trialled for a minimum of four weeks

References

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This article reflects upon my real-life dietetic management of an individual - their name has been changed. I received payment from PrecisionBiotics[®] solely for my time taken to write this article, all views are my own.

Reflective Article - Reflective Learning Guide

Probiotics as part of the Dietary Management of the Symptoms of Diarrhoea Predominant Irritable Bowel Syndrome



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Dr. Sarah Schenker is an award winning and experienced registered dietitian, accredited sports dietitian and public health nutritionist with a degree in nutrition and dietetics and a PhD in human nutrition. She is registered with the Health Care Professions Council and the British Dietetic Association, and has wide ranging clinical experience both within the NHS and as a freelance dietitian working with various food and drink brands and national sports teams.

In this article, Sarah reflects upon her rationale and learnings from the dietetic management approach she chose for an individual on her caseload with diarrhoea predominant irritable bowel syndrome (IBS-D). Sarah discusses the clinical evidence and guidelines for the management of IBS and its psychological comorbidities, detailing how this informed her dietetic management approach which included lifestyle changes and a probiotic containing two bacterial strains.

Learning Objectives:

1. To recognise the prevalence of psychological comorbidities in IBS
2. To understand the potential impact of IBS symptoms on an individual's quality of life.
3. To consider the strain-specific role of probiotics as part of the dietetic management approach for IBS symptoms

Complete this reflective learning guide to support your learning objectives. This can be filed in your CPD portfolio as evidence of your learning.

Reflective Learning Questions:

1. Reflecting on your own clinical caseload, consider:
 - a) How many individuals with IBS present with both gastrointestinal and psychological symptoms?
 - b) How might an individual's quality of life be affected by their IBS symptoms?
 - c) What person-centered outcomes could be used to assess the effectiveness of a dietetic care plan?
2. How might the presence of anxiety, or other psychological comorbidities, impact your approach to the dietetic management of IBS symptoms?
3. How could specific probiotic strains be used to help manage the spectrum of gastrointestinal and psychological symptoms of IBS?