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Addressing the Role of Food in Irritable Bowel Syndrome Symptom Management

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ABSTRACT

Patients with irritable bowel syndrome (IBS) have often associated the worsening of symptoms with specific foods. Research is starting to catch up with what patients have reported about food interaction and their symptoms, and the role of diet is being increasingly recognized for the management of IBS. Clinical guidance for nurse practitioners can be challenging because of limited data and guideline consensus along with the nuances of symptoms associated with IBS subtypes. This article summarizes some of the key themes and dietary recommendations by various gastrointestinal organizations, public health agencies, and dietary associations. By addressing the relevance of diet for symptom alleviation, nurse practitioners are able to better support patients and collaborate with dietitians to improve symptom management.

Keywords: diet, food, gastrointestinal, irritable bowel syndrome, symptom management

Irritable bowel syndrome (IBS) is a chronic gastrointestinal (GI) disorder denoted by abdominal pain and changes in bowel patterns affecting 5% to 15% of the general population.[1,2] According to the Rome III diagnostic criteria for IBS, a diagnosis of IBS is made if a patient experiences recurrent abdominal pain or discomfort at least 3 days per month in the last 3 months with symptom onset at least 6 months before diagnosis with 2 or more of the following: improvement with defecation, change in frequency of stool, and/or change in form or appearance of the stool.[2] IBS patients are subtyped by the predominant stool pattern as follows: IBS with constipation (IBS-C), IBS with diarrhea (IBS-D), IBS mixed (IBS-M), or unsubtyped IBS (IBS-U). The pathology is understood to be multifactorial, including disturbed gut motility, enhanced visceral hypersensitivity, brain gut signaling problems, genetic factors, mucosal inflammation, immune abnormalities, intestinal microflora disruptions, and psychological and social aspects.[1]

Patients with IBS have commonly associated certain foods with exacerbation of their symptoms. More than half of IBS patients have self-reported food intolerances and worsening of symptoms with certain foods or meal related, most within 3 hours after eating, with gas problems and abdominal pain being the most frequently reported symptoms.[3,4] IBS patients often attempt dietary modifications on their own by excluding foods they perceive to be causing their symptoms, possibly lending them to nutritional deficiencies or poorer quality diets.

The typical dietary advice for IBS symptom management is formulated more on common sense than clinical evidence. Some standard recommendations are establishing regular eating times, eating smaller frequent meals, and drinking enough fluids.[5-10] Other dietary advice includes "eating foods that are low in fat and high in carbohydrates, such as pasta, rice, whole-grain breads and cereals, fruits, and vegetables"[5] or reducing specific foods containing carbohydrates that are hard to digest.[7,8] A very low-carbohydrate diet may improve symptoms for

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IBS-D.[4] For clinicians, understanding the nuances of individual symptoms is vital to providing the most useful and beneficial dietary recommendations. Determining which dietary approach to use can be challenging because of limited high-quality data and guideline consensus. This article discusses key evidence-based themes so nurse practitioners (NPs) can better support patients and collaborate with dietitians to provide optimal management of symptoms.

FOODS ASSOCIATED WITH IBS SYMPTOMS

Many IBS patients associate certain foods with their IBS symptoms and perceive food intolerance. For individuals with IBS-D, there may be a higher prevalence of food trigger reactions.[4] The most common foods reported as symptom triggers are fruits (citrus and banana), grains (wheat, barley, rye, oats, and corn), vegetables (onions, peas, and potatoes), dairy products (yogurt, milk, cheese, eggs, and butter), legumes (beans and lentils), wine, chocolate, coffee, tea, and fried foods.[3,4] Using double-blind oral food challenges, items that have been confirmed include banana, coffee, corn, eggs, milk, peas, potatoes, and wheat.[9] The obstacles are identifying the specifics of the food trigger as well as the physiologic stimuli. Foods contain an assortment of potential chemicals and physical components that are both absorbable and poorly absorbed, which may trigger in individuals with enhanced sensitivity.[11] For example, certain components of foods like biogenic amines and lectins that trigger histamine release (ie, lentils and beans) have not been fully studied in IBS.[3]

KEY RECOMMENDATIONS

Alcoholic Beverages

The direct contact of alcoholic beverages with the mucosa lining of the GI tract can lead to mucosal damage, disrupting the assimilation of nutrients and intestinal motility.[12] Prior studies have been inconclusive or conflicting for alcohol, and alcohol intake was not correlated with IBS in epidemiologic studies.[9] For individuals with IBS-D, alcohol intake may exert a more potent influence on symptom severity than for IBS-C or IBS-M.[12] An association between alcohol intake, particularly binge drinking (4 or more drinks on 1 occasion), and symptoms like diarrhea and abdominal pain has been observed among females with IBS but not for moderate (maximum of 3 drinks per day) or light drinkers (1 drink per day). Psychosocial stress plays a role in IBS, and the misuse of alcohol to alleviate stress is a factor to consider when screening patients for heavy drinking and alcohol use disorders.

Caffeine

Caffeine stimulates gastric acid secretion and colonic motor activity, particularly coffee.[4] In a study of 330 IBS patients, coffee was 1 of the top 10 most frequently reported foods producing symptoms, and the 3 most common symptoms reported were dyspepsia, pain, and loose stools.[3] There are no randomized controlled studies of low caffeine diets, but most dietary guidelines suggest modifying caffeine intake and encourage fluids from noncaffeinated sources.[5,7–10] The National Institute for Health and Care Excellence (NICE) guidelines suggest limiting the consumption of coffee and tea to no more than 3 cups per day.[10] The bowel-stimulating qualities of coffee may be worse for people with IBS-D than IBS-C, and other sources of caffeine to watch for include soft drinks, coffee ice cream, dark chocolate, unsweetened baking chocolate, cocoa powder, and some over-the-counter analgesics.

Lipids/Fatty Foods

Fatty foods are often attributed to symptoms by IBS patients, and it is often recommended to avoid foods rich in fat, particularly for those IBS sufferers with gas-related symptoms and diarrhea.[5,7–10] Laboratory studies have shown intestinal gas transport is delayed by intraluminal lipids, and duodenal lipids inhibit small bowel motility.[4] Furthermore, lipids' effects on gastric emptying and enhancement of colorectal sensitivity or visceral perception have also been studied.[13] Despite such laboratory studies, the evidence relating dietary fat intake to IBS is limited. Few studies have evaluated dietary intake and eating behavior, and most have been unable to determine the fat content of diets that may provide clinical benefit.[13] For IBS-D patients who perceive certain fatty foods to be triggers, NPs can caution on the intake of low-fat processed foods, which may contain