

## Exclusion Diets in Irritable Bowel Syndrome: Are They Worthwhile?

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Forty patients with irritable bowel syndrome received an antigen-exclusion diet identical to that previously reported to be highly effective in this condition. Only 15% of the group as a whole showed evidence of food intolerance manifested by an improvement in their irritable bowel symptoms. In a further 12.5% only well-being improved and this did not seem to be related to the exclusion of any particular food. Patients whose bowel dysfunction was characterized by diarrhea responded the best (3/8) whereas those with constipation consistently failed to improve.

**Key Words:** Diet—Irritable bowel syndrome.

Although the cause of irritable bowel syndrome (IBS) is unknown, psychological factors (1-3), abnormal motility, (4-6), and dietary mechanisms (7,8) have been implicated. Alun Jones et al. (9) reported that 67% of patients with IBS responded to an exclusion diet, leading these investigators to conclude that food intolerance is a major pathogenetic factor. However, Bentley et al. (10) subsequently failed to confirm these observations. It should be noted that in both studies patients had diarrhea, whereas constipation or an alternating bowel habit are far more common characteristics of IBS. The purpose of this study was to assess an identical dietary regime in the wider spectrum of IBS, thus, patients with differing bowel habits were included.

### PATIENTS AND METHODS

Forty consecutive outpatients with IBS (4 men, 36 women, aged 18-64) were studied. All complained of abdominal pain, abdominal distension, and an abnormal bowel habit (diarrhea—8 patients, constipation—11, alternating constipation and diarrhea—21). All subjects had normal biochemistry, hematology, and contrast radiology or colonoscopy. Patients were started on a diet of lamb, pears, and spring water for 1 week. If improvement occurred, foods were then sequentially re-introduced in order to identify those that provoked a recurrence of symptoms, and patients were asked to retest foods that appeared to upset them on at least two separate occasions. For the 3 weeks prior to introduction of the diet and during the trial period patients recorded daily the severity of abdominal pain and abdominal distension. These were given a score of 0 = none, 1 = mild, 2 = moderate, or 3 = severe. The bowel habit was also recorded and abnormality expressed on a similar 0-3 scale. The data for each week was totalled giving a 7-day maximum score of 21. Overall well-being was scored weekly on a 0-3 scale (0 = very unwell, 1 = unwell, 2 = well, 3 = very well). Patients' symptoms were only judged as having "improved" if their mean weekly scores for two or more parameters fell to 4 or less.

### RESULTS

The mean symptom scores for each of the parameters measured (pain, distension, bowel habit, and well-

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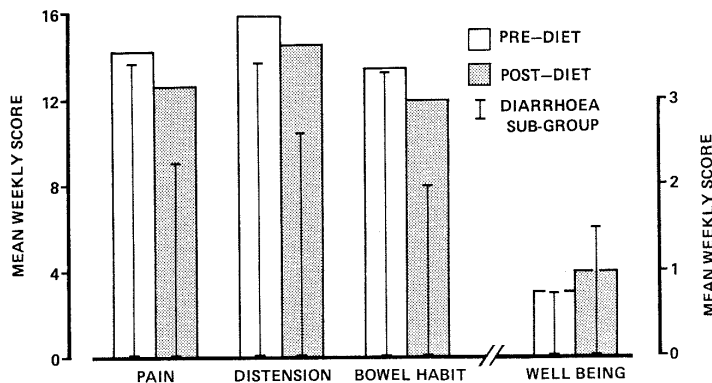


FIG. 1. Symptom scores before and after dietary exclusion.

being) did not change significantly (paired *t* test) during the period of dietary exclusion (Fig. 1). However, within this group, six (15%) of the 40 patients experienced a marked improvement in two or more of their IBS symptoms, and a specific food exacerbating their symptoms was identified (Table 1). A further five subjects reported only an improved sense of well-being during the exclusion, with no change in the symptom scores for pain, distension, or bowel habit.

Subsequent deterioration in well-being could not be related to any particular food. Those patients showing food intolerance were confined to the diarrhea or alternating diarrhea/constipation groups whereas the nonspecific responders were evenly distributed. Abdominal pain and diarrhea appeared to respond to the exclusion diet better than abdominal distension.

Twenty percent of the group as a whole were atopic and there was no evidence of a relationship between atopy and food intolerance; only one of the responders gave a history of atopic manifestations.

## DISCUSSION

This study shows that in IBS patients with a variety of bowel habits only 15% respond to an exclusion diet. This is well below the expected placebo response for this condition which is in the order of 33% (11). Although the response rate was best in the diarrhea group

(3/8), numbers were small and comparisons with previous studies, therefore, difficult. In four patients, milk was identified as causing an increase in symptoms although there was no evidence of lactose intolerance. It is noteworthy that patients with constipation alone consistently failed to respond.

The previous two studies on this subject (9,10) both used double-blind challenge in a proportion of patients who experienced exacerbation of symptoms when specific food was re-introduced. The combined results of these challenges showed that only 50% of patients could accurately identify the incriminating food. The aim of our trial was to see if the findings of Alun Jones et al. (9) were reproducible in a group of patients with different types of bowel dysfunction. As the response to dietary exclusion was so poor and could be expected to fall further on double-blind challenge, it was not considered clinically justifiable to subject patients to the discomfort of repeated nasogastric intubation.

In five patients the response was limited to an improved sense of well-being with no food intolerance demonstrable and no improvement of IBS symptoms. Although other explanations are possible, a placebo response would seem to be the most likely reason for this observation.

In conclusion, our study fails to confirm that food intolerance is a major factor in the pathogenesis of IBS. These results highlight the difficulties associated with trials carried out under such a heterogeneous condition,

TABLE 1. Patient details

Bowel habit	No. of patients	No. with improved IBS symptoms	Food incriminated	No. with improved sense of well-being only
Diarrhea	8	3	Eggs, milk, potatoes, wheat	1
Constipation	11	0	—	2
Diarrhea/Constipation	21	3	Milk	2
Total	40	6		5

but it would seem that the subgroup characterized by diarrhea might be the one most likely to respond to dietary manipulation.

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