

Diet Low in FODMAPs Reduces Symptoms of Irritable Bowel Syndrome as Well as Traditional Dietary Advice: A Randomized Controlled Trial

Böhn et al. 2015

A diet with reduced content of fermentable short-chain carbohydrates (fermentable oligo-, di-, monosaccharides, and polyols [FODMAPs]) has been reported to be effective in the treatment of patients with irritable bowel syndrome (IBS). However, there is no evidence of its superiority to traditional dietary advice for these patients. The authors compared the effects of a diet low in FODMAPs with traditional dietary advice in a randomized controlled trial of patients with IBS.

The authors performed a multi-center, parallel, single-blind study of 75 patients (66 females) who met Rome III criteria for IBS and were enrolled at gastroenterology outpatient clinics in Sweden. After 10 days Screening Subjects were randomly assigned to groups that ate specific diets for 4 weeks—a diet low in FODMAPs (n = 38) or a diet frequently recommended for patients with IBS (ie, a regular meal pattern; avoidance of large meals; and reduced intake of fat, insoluble fibers, caffeine, and gas-producing foods, such as beans, cabbage, and onions), with greater emphasis on how and when to eat rather than on what foods to ingest (n = 37). Symptom severity was assessed using the IBS Symptom Severity Scale (IBS-SSS), and patients completed a 4-day food diary before and at the end of the intervention.

A total of 67 patients completed the dietary intervention (33 completed the diet low in FODMAPs, 34 completed the traditional IBS diet). The severity of IBS symptoms was reduced in both groups during the intervention ($P < .0001$ in both groups before vs at the end of the 4-week diet), without a significant difference between the groups ($P = .62$). At the end of the 4-week diet period, 19 patients (50%) in the low-FODMAP group had reductions in IBS severity scores ≥ 50 compared with baseline vs 17 patients (46%) in the traditional IBS diet group ($P = .72$). When assessing the effect of the interventions on the individual items of the IBS-SSS score, all items were improved in both groups at day 29 relative to baseline, and this reached statistical significance for abdominal pain frequency, severity of abdominal distention, and life interference in both groups, and for bowel habit dissatisfaction in the traditional IBS diet group, without significant between-group differences. Food diaries demonstrated good adherence to the dietary advice.

The authors concluded that a diet low in FODMAPs reduces IBS symptoms as well as traditional IBS dietary advice. Combining elements from these 2 strategies might further reduce symptoms of IBS.

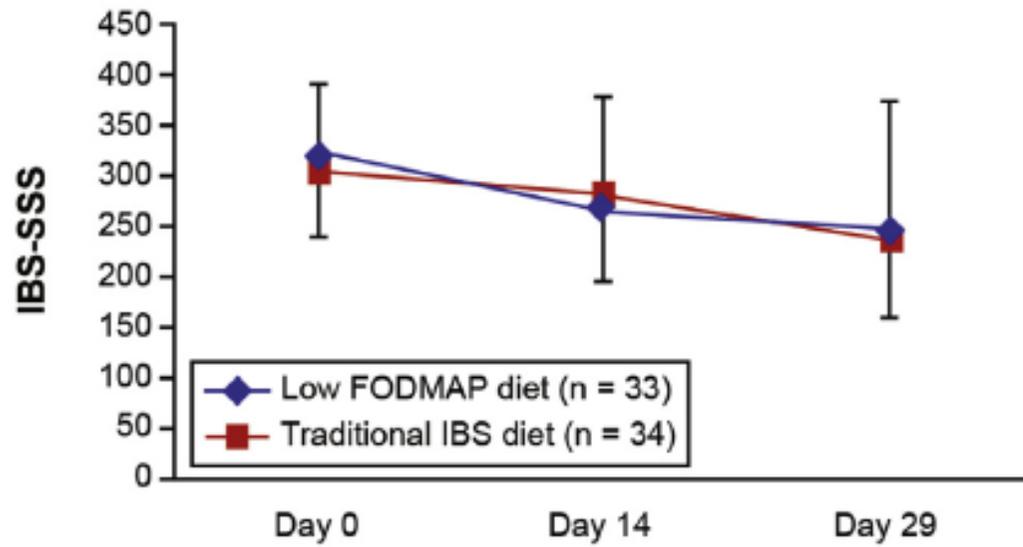


Table 1: IBS symptom severity (mean \pm SD) in patients who completed the intervention (Böhn et al. 2015)

	Low-FODMAP diet			Traditional IBS diet			<i>P</i> value between intervention groups ^a
	Baseline (n = 38), mean ± SD	Intervention (n = 33), mean ± SD	<i>P</i> value within group ^a	Screen (n = 37), mean ± SD	Intervention (n = 34), mean ± SD	<i>P</i> value within group ^a	
Energy, <i>kcal</i>	2100 ± 435	1658 ± 365	<.001	2085 ± 446	1889 ± 482	.009	.03
Protein, <i>g</i>	90.3 ± 36.6	75.2 ± 16.7	.001	85.3 ± 16.9	77.2 ± 21.9	.03	.67
Fat, <i>g</i>	89.1 ± 27.4	68.3 ± 25.5	<.001	90.4 ± 24.8	78.4 ± 24.7	.009	.11
Carbohydrates, <i>g</i>	205.0 ± 53.8	159.1 ± 40.6	<.001	200.2 ± 62.7	193.1 ± 57.8	.42	.007
Dietary fiber, <i>g</i>	18.2 ± 6.2	15.1 ± 5.6	.001	20.0 ± 7.9	20.2 ± 6.4	.99	.003
Alcohol, <i>g</i>	11.2 ± 11.0	9.7 ± 12.9	.05	11.6 ± 13.0	8.9 ± 11.1	.06	.005
Monosaccharides	29.4 ± 16.9	20.0 ± 10.5	.001	27.6 ± 45.5	28.3 ± 11.0	.97	.001
Fructose	14.9 ± 9.9	8.4 ± 4.9	<.001	13.8 ± 8.1	11.6 ± 4.9	.12	.009
Total FODMAPs, <i>g</i>	16.6 ± 10.3	3.8 ± 3.3	<.001	15.8 ± 8.4	13.5 ± 8.7	.16	.05
Excess fructose	2.9 ± 5.7	0.9 ± 3.1	.07	3.5 ± 7.2	0.5 ± 1.6	.03	.55
Lactose	10.0 ± 9.3	1.5 ± 1.7	<.001	8.3 ± 5.6	9.3 ± 8.5	.56	.002
GOS	0.4 ± 0.3	0.2 ± 0.2	.001	0.5 ± 0.4	0.4 ± 0.3	.06	<.001
Fructans	2.3 ± 1.0	1.0 ± 0.6	<.001	2.4 ± 1.1	2.3 ± 1.3	.77	<.001
Polyols	1.0 ± 1.5	0.1 ± 0.1	.001	1.1 ± 1.4	1.0 ± 1.1	.61	<.001
No. of meals/d	5.9 ± 1.1	5.5 ± 1.4	.002	5.5 ± 1.1	6.0 ± 0.9	.006	.05
Energy/meal, <i>kcal</i>	365 ± 84	321 ± 106	.01	389 ± 83	316 ± 71	<.001	.85
Dietary fiber/meal, <i>g</i>	3.2 ± 1.1	3.0 ± 1.3	.18	3.8 ± 1.7	3.4 ± 1.0	.14	.16

GOS, galacto-oligosaccharides.

^aComparison made per protocol, that is, in patients who completed the intervention.

Table 2: Dietary Intake in Patients on Low-FODMAP Diet and Patients on Traditional Irritable Bowel Syndrome Diet (Böhn et al. 2015)