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Nutritional Interventions for IBS Patients

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PATIENT CARE ISSUE

Background & Significance

- IBS is a chronic disease without a clear etiology
- 3-25% of the population of western countries are affected by IBS³
- Symptoms include diarrhea, abdominal pain, incomplete stool, and constipation
- Symptoms interfere with daily life and cause feelings of helplessness or hopelessness

EVIDENCE-BASED PRACTICE QUESTION

Question: What diets should IBS patients adhere to in order to decrease symptoms that no diet change would exacerbate?

P Adults 18 years and older diagnosed with IBS
I Increased Fiber, Decreased Fructose, Probiotics
C No diet modification
O Lessen or eradicate reported symptoms of IBS

REGISTERED NURSE INTERVIEW

- No specific policy enforced regarding IBS patients at Springfield Regional
- No diet restrictions are enforced for patients, but specific diets are encouraged
- Situation dependent, the doctor may prescribe: anti-diarrheals, bulking agents, laxatives, and anti-spasmodics
- Patient teaching on discharge for patients with IBS includes: increase fiber intake in diet, smoking cessation, increased physical activity, and relaxation techniques.

METHODS

- Key Words: “IBS”, “diet”, “nursing”, and “nutrition”
- Databases: PubMed, Alternative Med Review, Medline, and CINAHL, Google search
- Inclusion: Over age of 18, possess common symptoms of IBS
- Exclusion: Under age of 18, patients with recent abdominal surgeries

RESULTS

40 articles were found using the key words and 7 fit the inclusion and exclusion criteria. 5 of those articles were included in this review.

- One Meta-Synthesis
- Two Randomized controlled trials
- One comparative study
- One Systematic review

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SYNTHESIS OF EVIDENCE

Decreased Fructose¹

About 1/3 of IBS in the Fructose tolerance study¹ reported improvement of symptoms (pain, belching, indigestion, and diarrhea). Adherence rate was 53% out of 80 patients.

Increased Fiber^{2,4}

Fiber intake was measured using the Food Frequency Questionnaire, and 64% of participants who had an intake of >30mg of fiber reported improvement of symptoms.

Probiotics^{3,5}

Approximately 61% of patients had an improvement on global symptoms when compared to placebo patients.

Patients experienced minimal side effects

Use of different probiotics had little change in outcome of symptom improvement

EVIDENCE-BASED PRACTICE RECOMMENDATIONS

- Add probiotics to diet (most evidence based for symptom improvement)^{3,5}
- Increase intake of fiber in diet^{2,4}
- Decrease intake of foods high in fructose¹

LIMITATIONS

Need for further research based on:

- Difficult to identify external factors
- Evidence was not entirely conclusive
- Limited number of people participating
- Assessment criteria was not standardized throughout studies

PROBIOTIC EFFECT ON GLOBAL SYMPTOMS³

Table 5 Global Improvement in IBS Symptoms in 14 probiotic/placebo treatment arms

Reference	Probiotic	Global improvement in IBS symptoms		Definition of primary outcome ¹
		Probiotic n/n (%)	Placebo n/n (%)	
Maupas ^[48]	<i>Saccharomyces cerevisiae boulardii</i> lyo	13/16 (81)	13/18 (72)	Improvement of symptoms
Gade ^[46]	<i>Strept faecalis</i>	26/32 (81)	9/22 (41)	Improvement of symptoms based on physician assessment
Halpern ^[47]	<i>L. acidophilus</i>	17/18 (94)	13/18 (72)	Absence of symptoms
Nobaek ^[46]	<i>L. plantarum</i>	11/25 (44)	7/27 (26)	Decrease \geq 1.5 on VAS symptom scale
Niedzielin ^[59]	<i>L. plantarum</i>	9/20 (45)	3/20 (15)	Absence of symptoms
Kim ^[51]	VSL#3 ²	4/12 (34)	5/13 (38)	Satisfactory relief of IBS symptoms
Kajander ^[54]	<i>L. rhamnosus</i> GG + <i>L. rham. LC705</i> + <i>Bifid. breve Bb99</i> + <i>Prop. freudenreichii</i>	31/41 (76)	17/40 (43)	Symptoms alleviated based on significant reduction of symptom scores
Simren ^[58]	<i>L. plantarum</i>	10/29 (35)	11/29 (38)	Reduction \geq 50% of total symptom score
Whorwell ^[36]	<i>Bifido. infantis</i> (dose, 10 ⁸ cfu/mL)	33/74 (44)	32/76 (42)	Adequate relief of symptoms
Whorwell ^[36]	<i>Bifido. infantis</i> (dose, 10 ⁸ cfu/mL)	45/72 (62)	32/76 (42)	Adequate relief of symptoms
Whorwell ^[36]	<i>Bifido. infantis</i> (dose, 10 ¹⁰ cfu/mL)	26/71 (37)	32/76 (42)	Adequate relief of symptoms
Enck ^[59]	<i>E. coli</i> + <i>Strept faecalis</i>	102/149 (68)	56/148 (38)	Reduction of \geq 50% in total symptom score
Marteau ^[61]	<i>Bifido. longum</i> , <i>L. acidophilus</i> , <i>Lactococcus lactis</i> , <i>Strept thermophilus</i>	20/47 (42.6)	22/52 (42.3)	Relief of discomfort
Simren ^[62]	<i>L. paracasei</i> , <i>L. acidophilus</i> , <i>Bifido. lactis</i> in yogurt	14/33 (42)	17/34 (50)	Reduction of \geq 50% in total symptom score

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