Low FODMAP diet

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Clinical question
Does the low FODMAP (fermentable oligo-di-mono-saccharides and polyols) diet (LFD) improve symptoms for patients with irritable bowel syndrome (IBS)?

Bottom line
The LFD might improve symptoms for those with primarily diarrhea-subtype IBS. However, most studies were of low quality; high-quality studies are needed.

Evidence
Four RCTs with mainly young female participants compared the LFD to a normal diet (ND).

- Denmark: the largest, high-quality, 6-week, open-label RCT of 123 IBS patients receiving specialist care.1
  - On a 500-point symptom scale (minimal clinically important difference was 50),2 LFD led to an improvement of about 150, probiotics about 80, and ND about 30 points.
  - Subgroup analysis: only diarrhea patients improved.
  - Limitations: pre-enrolment investigations included colonoscopy and genetic lactase deficiency testing; analysis was per protocol.

- Australia: blinded crossover trial of LFD versus ND (each for 3 weeks, with a 3-week washout period) of 30 IBS patients and 8 controls in primary or secondary care.3
  - Global gastrointestinal symptoms: with LFD 70% had a more than 10-point improvement on a 100-point scale.
  - Limitations: ND results not reported; high-fibre diet included in LFD arm; authors had conflicts of interest.

- United Kingdom: 3-week, non-blinded RCT of 41 patients with diarrhea-predominant IBS or substantial bloating, receiving specialist care.4
  - Adequate symptom control was reported for 68% of LFD and 23% of ND patients (NNT=3); however, symptom control at baseline was different (not significantly): 37% for LFD and 58% for ND; symptoms actually worsened in the ND arm (58% controlled at baseline, 23% at the end).
  - Fourth RCT: too short (2 days) to draw conclusions.5
  - Two systematic reviews had conflicting conclusions:6,7
    - More research is required6 or LFD is efficacious in treating functional gastrointestinal symptoms.7

Context
- Cohort studies demonstrate LFD benefit,6,7 but IBS patients have a high placebo response rate8 (even when told they are getting placebo).9
- Patients who initially improve on LFD worsen with reintroduction of fructose or fructans.10
- The LFD is restrictive, limiting many fruits, dairy products, wheat, legumes, and artificial sweeteners.11

Implementation
Approximately 7% of North Americans have symptoms of IBS12, about 4% of IBS patients actually have celiac disease.13

Testing for celiac disease is recommended for those with IBS symptoms.12 Fibre (psyllium or bran) appears beneficial for primary care IBS patients14; gluten-free15 and elimination diets16 have less convincing evidence. Antidepressants improve global symptoms of IBS (NNT=4).17 Given side effect profiles, it is reasonable to try tricyclic antidepressants for diarrhea-subtype and selective serotonin reuptake inhibitors for constipation-subtype IBS.

The opinions expressed in Tools for Practice articles are those of the authors and do not necessarily reflect the perspective and policy of the Alberta College of Family Physicians.

References