Tools for Practice is proudly sponsored by the Alberta College of Family Physicians (ACFP). ACFP is a provincial, professional voluntary organization, representing more than 4,000 family physicians, family medicine residents and medical students in Alberta. Established over fifty years ago, the ACFP strives for excellence in family practice through advocacy, continuing medical education and primary care research. <u>www.acfp.ca</u>

Updated: Nov 26, 2019 Evidence Updated: Addition of five systematic reviews Bottom Line: Minor changes incorporating results from systematic reviews Original: July 6, 2015



The Low FODMAP Diet: Food for thought or just an irritable idea?

Clinical Question: Does the low FODMAP diet improve symptoms for patients with irritable bowel syndrome?

Bottom-line: A low FODMAP diet may improve symptoms for patients with primarily diarrhea subtype irritable bowel syndrome (IBS). However, most studies were low quality (small numbers and short duration), and therefore more high quality studies are needed.

Evidence:

- Four meta-analyses¹⁻⁴ (4-8 randomized controlled trials, 293-596 participants, ROME II/III entry criteria), mainly young females. Compared with control, low FODMAP diet improved:
 - Symptoms of abdominal pain¹⁻³ and bloating¹⁻²
 - Quality of life small to moderate effect³
 - Global IBS symptoms⁴: 28% had ongoing symptoms vs 59% control, NNT 4
 - Severity of symptoms²
 - Limitations: short follow-up (range: 10 days 3months); small number of trials. Poor use of statistics (eg. odds ratios (without event rates) and/or standard mean differences) limit clinical interpretation of data.
- A systematic review assessed the quality of RCTs of LFD for IBS (9 trials, 542 patients) and found all trials were at high risk of bias, often due to lack of blinding and choice of control group;⁵
- Example of actual symptom changes: Largest, high-quality, 6-week, open-label RCT of 123 Danish IBS patients, under specialist care.⁶
 - 500-point symptom scale (minimal clinically important difference=50):⁷
 - Low FODMAP diet improved ~150 points, probiotic ~80, normal diet ~30 points.
 - Sub-group analysis: Only diarrhea patients improved.
 - Limitations: Pre-enrollment investigations: colonoscopy, genetic lactase deficiency testing; per-protocol analysis.

Context:

- Cohort studies demonstrate LFD benefit^{2,8} but IBS patients have high placebo response rate⁹ (even when told getting placebo).¹⁰
- IBS guidelines suggest offering patients a "low Fodmap diet trial."^{11,12} Adherence to the diet¹³ is approximately 40%.
- Patients who initially improve on LFD, worsen with reintroduction of fructose or fructans.¹⁴
- Low FODMAP diet is restrictive, limiting many fruits, dairy products, wheat, legumes, and artificial sweeteners.¹⁵ Examples available online.¹⁵

Original Authors: Cian Hackett BSc, Michael R Kolber BSc MD CCFP MSc

Update: Samantha Moe, PharmD

Review: Michael R Kolber BSc MD CCFP MSc, Mike Allan BSc. MD, CCFP

References:

- 1. Altobelli, E, Del Negro V, Angeletti P, et al. Nutrients. 2017; 9: 940.
- 2. Marsh A, Eslick EM, Eslick GD. Eur J Nutr. 2016; 55: 897.
- 3. Schumann D, Klose P, Lauche R, et al. Nutrition. 2018; 45: 24.
- 4. Dionne J, Ford AC, Yuan Y, et al. Am J Gastroenterol. 2018; 113: 1290.
- 5. Krogsgaard LR, Lyngesen M, Bytzer P. Aliment Pharmacol Ther. 2017; 45(12): 1506-13.
- 6. Pedersen N, Andersen NN, Végh Z, et al. World J Gastroenterol. 2014; 20(43):16215-26.
- 7. Francis CY, Morris J, Whorwell PJ. Aliment Pharmacol Ther. 1997; 11:395-402.
- 8. Rao SCC, Yu S, Fedew A. Aliment Pharmacol Ther. 2015; 41:1256-70.
- 9. Ford AC, Moayyedi P. Aliment Pharmacol Ther. 2010; 32:144-58.
- 10. Kaptchuk TJ, Friedlander E, Kelley JM, et al. PLoS One. 2010; (12):e15591.
- 11. Ford AC, Moayyedi P, Chey WD, et al. Am J Gastroenterol. 2018; 113 (Suppl 2): 1-18.
- 12. Moayyedi P, Andrews CN, MacQueen G, et al. J Can Assoc Gastrenterol. 2019; 2(1): 6-29.
- 13. Mari A, Hosadurg D, Martin L, et al. Eur J Gastroenterol Hepatol 2019; 31(2): 178-182.
- 14. Shepherd SJ, Parker FC, Muir JG, et al. Clin Gastro Hepatol. 2008; 6:765-71.
- 15. Low Fodmap Diet. https://stanfordhealthcare.org/medical-treatments/l/low-fodmapdiet.html Accessed Oct 3, 2019.