

# Low-FODMAP diet



The low-FODMAP diet is a dietary intervention that restricts foods containing highly **F**ermentable **O**ligosaccharides, **D**isaccharides, **M**onosaccharides, **A**nd **P**olyols. These short-chain carbohydrates and polyols are poorly absorbed in the digestive tract and reach the colon, where they are fermented by bacteria, a process that may result in certain gastrointestinal symptoms.

Limiting dietary intake of FODMAPs may lower intestinal water content as well as reduce fermentation and gas production in the colon. While FODMAPs are always poorly digested, healthy individuals may not experience any adverse gastrointestinal symptoms.

## Health benefits of the low-FODMAP diet

Managing symptoms in certain conditions, including:

- Celiac disease (CD)
- Healthy athletes who experience gastrointestinal issues during training
- Inflammatory bowel disease (IBD)
- Irritable bowel syndrome (IBS)
- Non-celiac gluten sensitivity

## Low-FODMAP diet apps

- Low FODMAP diet A to Z ([App Store](#)) ([Google Play](#))
- [Monash University FODMAP diet](#)
- [Spoonful](#)



# Following the low-FODMAP diet

The low-FODMAP diet generally consists of three phases:

- 1. Restriction**, where all FODMAPs are restricted from the diet for a period of four to six weeks
- 2. Re-challenge**, where high-FODMAP foods are reintroduced by each FODMAP component to identify personal triggers and tolerance levels
- 3. Personalization**, where individuals follow an individualized long-term low-FODMAP diet based on their personal tolerance

## Low-FODMAP diet food list

The following table outlines dietary FODMAPs to restrict, their gastrointestinal effects, and common food sources.

Component	Effects	Common food sources
<b>Oligosaccharides</b> (e.g., fructans, galactooligosaccharides (GOS))	No human enzymes for digestion	Artichokes Allium vegetables (e.g., garlic, onions)
	Highly fermentable; produces gas, bloating, and abdominal pain	Certain fruits (e.g., ripe bananas, dates, dried apricots) Legumes (e.g., beans, lentils) Nuts Grains (e.g., rye, wheat)
<b>Disaccharides</b> (e.g., lactose)	Malabsorption occurs if transport proteins are altered or if the individual is enzyme-deficient	Dairy (e.g., butter, cheese, cream, milk)
	Unabsorbed components are fermented in the large intestine; may result in gas and bloating	
<b>Monosaccharides</b> (e.g., fructose)	Draws water into the bowel contents	Certain fruits (e.g., apples, cherries, figs, mangoes, pears, watermelon)
	Leads to pain, bloating, distension of the small intestine	Certain vegetables (e.g., beets, sugar snap peas) High-fructose corn syrup
	May result in diarrhea	Honey
<b>Polyols</b> (e.g., mannitol, sorbitol)	Likely to draw water into the bowel	Certain fruits (e.g., apples, pears, stone fruit)
	Leads to pain, bloating, distension of the small intestine	Certain vegetables (e.g., cauliflower, mushrooms, snow peas)
	May result in diarrhea	Artificial sweeteners (e.g., chewing gum, mints)

## References

1. Altobelli, E., Del Negro, V., Angeletti, P. M., & Latella, G. (2017). Low-FODMAP diet improves irritable bowel syndrome symptoms: A meta-analysis. *Nutrients*, 9(9), 940.
2. Barrett, J. S. (2017). How to institute the low-FODMAP diet. *Journal of Gastroenterology and Hepatology*, 32, 8–10.
3. Biesiekierski, J. R., Peters, S. L., Newnham, E. D., Rosella, O., Muir, J. G., & Gibson, P. R. (2013). No effects of gluten in patients with self-reported non-celiac gluten sensitivity after dietary reduction of fermentable, poorly absorbed, short-chain carbohydrates. *Gastroenterology*, 145(2).
4. Geary, R. B., Irving, P. M., Barrett, J. S., Nathan, D. M., Shepherd, S. J., & Gibson, P. R. (2009). Reduction of dietary poorly absorbed short-chain carbohydrates (FODMAPs) improves abdominal symptoms in patients with inflammatory bowel disease—a pilot study. *Journal of Crohns and Colitis*, 3(1), 8–14.
5. Gibson, P. R., & Shepherd, S. J. (2005). Personal view: Food for thought - Western lifestyle and susceptibility to Crohns disease. The FODMAP hypothesis. *Alimentary Pharmacology and Therapeutics*, 21(12), 1399–1409.
6. Lis, D., Ahuja, K. D., Stellingwerff, T., Kitic, C. M., & Fell, J. (2016). Food avoidance in athletes: FODMAP foods on the list. *Applied Physiology, Nutrition, and Metabolism*, 41(9), 1002–1004.
7. Lis, D. M., Stellingwerff, T., Kitic, C. M., Fell, J. W., & Ahuja, K. D. K. (2018). Low FODMAP: A preliminary strategy to reduce gastrointestinal distress in athletes. *Medicine & Science in Sports & Exercise*, 50(1), 116–123.
8. Lis, D. M., Kings, D., & Larson-Meyer, D. E. (2019). Dietary practices adopted by track-and-field athletes: Gluten-free, low FODMAP, vegetarian, and fasting. *International Journal of Sport Nutrition and Exercise Metabolism*, 29(2), 236–245.
9. Thomas, J. R., Nanda, R., Shu, L. H. (2012). A FODMAP diet update: Craze or credible? *Practical Gastroenterology*, 36(12), 37–46.
10. Tuck, C., & Barrett, J. (2017). Re-challenging FODMAPs: The low FODMAP diet phase two. *Journal of Gastroenterology and Hepatology*, 32, 11–15.
11. Zahedi, M. J., Behrouz, V., & Azimi, M. (2018). Low fermentable oligo-di-mono-saccharides and polyols diet versus general dietary advice in patients with diarrhea-predominant irritable bowel syndrome: A randomized controlled trial. *Journal of Gastroenterology and Hepatology*, 33(6), 1192–1199.



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This handout was developed and medically reviewed by Fullscript's Integrative Medical Advisory team.

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