Gut Health Program

This program was created with the following key considerations:

Gluten & Grain-Free

[Gluten](https://www.mdpi.com/2076-2607/5/4/66/htm) may affect the microbiome composition and diversity and enhance intestinal permeability. Following a gluten-free diet can also be helpful for certain non-celiac [autoimmune diseases](https://academic.oup.com/nutritionreviews/article/75/12/1046/4675264). This gluten-free and grain-free plan uses nutrient-dense alternatives like sweet potato, broccoli, cabbage, and cauliflower which provide indoles, such as [indole-3-Carbinol](https://www.ingentaconnect.com/contentone/ben/cdm/2016/00000017/00000004/art00011) to support immune function.

Fiber

Eating [fiber-rich foods](https://www.sciencedirect.com/science/article/abs/pii/S0924224416305283) is linked to an increase in short-chain fatty acids. These [short-chain fatty acids](https://physoc.onlinelibrary.wiley.com/doi/10.1113/JP276431) may help reduce intestinal permeability and promote the growth of [good gut bacteria](https://www.sciencedirect.com/science/article/pii/S0092867416314647). Fiber also lowers [C-reactive protein (CRP)](https://faseb.onlinelibrary.wiley.com/doi/abs/10.1096/fasebj.31.1_supplement.648.8), a substance in the blood that indicates inflammation. This meal plan includes fiber at every meal from fruits and vegetables.

Quality Protein

High-quality protein sources with a variety of amino acids can help improve [gut microbiota](https://www.frontiersin.org/articles/10.3389/fphys.2017.01047/full) and [wound healing](https://journals.lww.com/aswcjournal/Fulltext/2006/03000/Pressure_Ulcer_Healing_with_a_Concentrated%2C.11.aspx). Low [collagen](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1770111/) is a marker for inflammation in inflammatory bowel disease and is added to this plan from bone broth, salmon, and eggs. [Glutamine](https://www.mdpi.com/1422-0067/20/20/5232/htm) plays an important role in gut microbiota and immunity and is found in chicken, spinach, and cabbage.

Anti-Inflammatory Foods

This meal plan contains polyphenols and antioxidants to help manage [inflammation](https://journals.lww.com/shockjournal/Fulltext/2009/10000/SYSTEMIC_INFLAMMATION_INCREASES_INTESTINAL.5.aspx). [Polyphenols](https://www.frontiersin.org/articles/10.3389/fimmu.2015.00612/full) are found in apples, berries, parsley, celery, and kale. The polyphenol [curcumin](https://www.mdpi.com/1422-0067/20/19/4830) in turmeric is incorporated in the meal plan as it is a powerful anti-inflammatory agent. Essential fat-soluble [antioxidants](https://www.hindawi.com/journals/omcl/2016/5276130/) like [vitamin A](https://www.cambridge.org/core/journals/proceedings-of-the-nutrition-society/article/vitamin-a-as-an-antiinflammatory-agent/D34D3DA1E422A71291BD7440AC1A32A9) and [vitamin E](https://iubmb.onlinelibrary.wiley.com/doi/full/10.1002/iub.1976) reduce oxidative stress. This meal plan is packed with vitamin A sources like sweet potato, carrots, spinach, and incorporates vitamin E through a daily dose of healthy oils and seeds.

Probiotics & Prebiotics

[Illness](https://journals.lww.com/co-criticalcare/FullText/2017/08000/Gut_microbiota_and_host_defense_in_critical.3.aspx?casa_token=VC__QkKUZ4cAAAAA:DJccqJfdI54iP16TU6kL_cwoC1qXgDhTk7cSpFVKD6GRfvtsZW5NOUbWAnjRS10RcaAXGjf0rRiug3sHjJUSQLHpzHs) and physical [stress from exercise](https://link.springer.com/article/10.1186/s12970-016-0155-6) can impact your gut microbiota. This program incorporates prebiotics and probiotics to bring good bacteria into the gut. [Probiotics](https://academic.oup.com/advances/article/10/suppl_1/S49/5307225) found in fermented foods like sauerkraut are live bacteria that can help stabilize the [intestinal barrier](https://www.jpeds.com/article/S0022-3476%2804%2900634-1/fulltext) and reduce inflammation. [Prebiotics](https://academic.oup.com/cdn/article/2/3/nzy005/4828321) are added to this plan from flaxseeds, bananas, garlic, and onion. These foods support digestive health by feeding the good bacteria and are important to create a [healthy gut microbiome](https://jbiomedsci.biomedcentral.com/articles/10.1186/s12929-018-0493-6).