
The 5R Framework for Gut Restoration

A properly functioning digestive system is critical to good health. Problems with the gastrointestinal (GI) tract can cause more than just stomach upset, gas, bloating, and diarrhea. GI issues may underlie chronic health problems that seem unrelated to digestive health, including autoimmune diseases (such as rheumatoid arthritis), skin problems (such as eczema and acne rosacea), and heart disease, among others.

In the bigger picture, how can we deal with all that can go wrong in the gut? In functional medicine, we use a program that goes by the simple acronym of the **5Rs: remove, replace, reinoculate, repair, and rebalance**. When applied to various chronic health issues, the 5R program can lead to a dramatic improvement in symptoms and sometimes even complete resolution. The elements of the 5R program are described briefly here.

1. Remove

Remove stressors. Get rid of things that negatively affect the environment of the GI tract, including foods you are sensitive to, parasites, and potential problematic bacteria or yeast. This might involve using an elimination diet to find out what foods are triggering GI symptoms. It may also involve taking medications or herbs to get rid of an infection.

2. Replace

Replace digestive secretions. Add back things like digestive enzymes, bile acids, and hydrochloric acid that are required for proper digestion and that may be compromised by diet, medications, diseases, aging, or other factors.

3. Reinoculate

Help beneficial bacteria flourish by eating probiotic-rich foods or taking supplements that contain “good” bacteria, such as *Bifidobacteria* and *Lactobacillus* species, and by eating high-fiber foods that supply prebiotics to nourish good microbes.

- **Probiotics** are beneficial microorganisms found in the gut and are also called “friendly bacteria.” The use of antibiotics kills both good and bad bacteria. Probiotics from supplements or food are often needed to help



reestablish a balanced gut flora. Fermented foods, such as yogurt, miso, and tempeh, can provide probiotics.

- **Prebiotics** are food components that selectively stimulate the growth of beneficial microorganisms already in the large intestine. In other words, prebiotics feed probiotics. Prebiotics are available in many foods that contain a fiber called inulin, including artichokes, garlic, leeks, onions, chicory, tofu, and other soy products. Grains and seeds such as barley, oats, wheat, flaxseeds, and chia seeds are also good sources of prebiotics. Another prebiotic source is a supplement ingredient called fructooligosaccharides (FOS).

4. Repair

Help the lining of the GI tract repair itself by supplying key nutrients that are often in short supply in a compromised gut, such as zinc, antioxidants (such as vitamins A, C, and E), omega-3 fish oils, and the amino acid glutamine.

5. Rebalance

It is important to pay attention to lifestyle choices. Sleep, exercise, and stress can all affect the GI tract. Managing and balancing those factors helps promote optimal digestive tract health.

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