

for example, is a critical component of enzymes that are essential for protein synthesis and cell membrane structure. For this reason, tissues that grow rapidly, particularly the intestinal epithelium, heavily depend on zinc. A deficiency can disrupt this process, leading to an unhealthy gut epithelium.

Unfortunately, industrialized agriculture and soil degradation mean our food often lacks essential minerals. This is why I recommend you consider supplementing with micronutrients, including zinc. Note that men need more zinc than women.

You'll find this nutrient's importance highlighted in connection to several DILL+ factors.

See also:

- Key 2 > Supplements and Inflammation > Zinc

VITAMINS

Because gut epithelium regenerates quickly and has a fast metabolism, it is particularly susceptible to nutrient deficiencies. A further complication is that an unhealthy epithelium affects nutrient absorption. Also, bacterial overgrowth in the small intestine robs you of essential nourishment. As a result, you may not absorb all the vitamins your food contains. To offset this, boost the intake of micronutrients during your healing journey with supplements. Among vitamins, the most important ones to consider for our purpose are A, C, D, K, and E.

- **Vitamin A:** Vitamin A deficiency can damage the structure of the intestinal lining and impair mucus production.
- **Vitamin C:** Vitamin C is key for any regeneration and is crucial for the constant renewal of the gut epithelium. Studies also suggest it enhances microbiome diversity and promotes short-chain fatty acids production.
- **Vitamins D and K:** I've touched upon the roles of vitamins D and K in relation to microbiome health and inflammation. Both vitamins also play pivotal roles in preserving a robust

intestinal lining. Since they work hand in hand, supplement them together.

- **Vitamin E:** Vitamin E improves the gut epithelium's barrier function and mitigates inflammation. A deficiency is associated with a heightened risk of *inflammatory bowel disease (IBD)*.

By following the 5R+ dietary guidelines in this book, you will already have a higher-than-average vitamin intake. However, this may not be enough. As previously discussed, modern agricultural practices, that 'squeeze' as much as possible from the fields, mean many products nowadays are micronutrient deficient. In light of this, I recommend including vitamin and mineral supplements in your diet. As always, consult your physician to decide your optimal regimen.

See also:

- Key 1 > Feeding your Allies > Vitamin K
- Key 2 > Supplements and Inflammation

WATER-FASTING

Besides good nutrition, every healing process demands time. During this restoration period, the healing organ should remain undisturbed. When you sustain a skin wound or a pulled muscle, you understand the importance of not aggravating it. You know that constantly scratching a wound or overstretching a hurt muscle delays recovery.

The same principle applies to your gut epithelium. A healthy gut lining regenerates quickly, often within hours. However, this rejuvenation process slows down as we age. That's why I advocate reduced meal frequency and eliminating snacking. This is beneficial even for healthy people.

In the presence of a disease characterized by an unhealthy gut epithelium, dysbiosis, and inflammation, gut healing can be very slow, requiring extra support. Water fasting is the most efficient tool to provide your digestive system with the rest it needs.

Note: In this book, "fasting" refers to water fasting for health purposes, not religious fasting that excludes water.

This method, recognized since ancient times, has been a potent remedy for many ailments. Within the framework of the 5R+ strategies, water fasting provides benefits in several ways:

- **Rest for the Gut Epithelium:** Water fasting provides a much-needed break for your gut. An *elemental diet* is often prescribed to give the gut a relative rest (a topic we'll explore in the next chapter). However, entirely abstaining from food establishes even better conditions for repair.
- **Eliminating Toxins:** The digestion of food invariably produces toxins. This is a standard process, usually well-managed by your body. Through fasting, you not only avoid introducing new toxins but also actively flush out accumulated ones with water. Unless you have a "Lazy Gut," bowel movements continue even without food. They can be enhanced by drinking plenty of water, physical activity, and special gut-flushing exercises, which we will cover in *Key 4*. Water-fasting removes toxins from both the digestive tract and bloodstream, giving the liver a well-deserved break. Altogether, this creates a better environment for gut cells.
- **Enhanced Motility:** You may be surprised to learn that in a healthy gut, hunger can stimulate bowel movements.
- **Rest for Immune System:** The gut's many chemical and biological activities keep your immune cells very busy. Fasting provides a hiatus, easing their workload in the gut. Consider how you lose your appetite when you have an infection. By reducing the digestive burden, the immune system can direct its energy toward fighting the new enemy elsewhere. This instinct proves correct—indeed, abstaining from food facilitates the healing of infections. Similarly, a refreshed immune system can better resolve chronic inflammation.
- **Reduced Inflammation and Autoimmune Reactions:** Most people report a drop in systemic autoimmune activity from the second day of fasting. For many, it feels like a big step closer to normal health. Research supports its efficacy in

conditions like IBS, IBD, rheumatoid arthritis, lupus, and other autoimmune disorders. I have already described this tactic for *Reset* in the *Eliminate-Reintroduce-Reset Technique (ERR)*. However, fasting alone is not a cure-all; it is just one tactic in our toolbox.

- **Effect on the Microbiome:** Fasting proves to be a mighty weapon against SIBO. Without a steady food supply, the bacterial population in the small intestine dwindles, and the microbes are flushed away along with their toxins.

Reduced inflammation during fasting also promotes microbiota diversity. It supports the growth of healthy microbiota, notably *Faecalibacterium prausnitzii* and *Akkermansia*. A deficiency in *Faecalibacterium prausnitzii* is associated with Crohn's disease. *Akkermansia* also offers many health benefits. It reduces inflammation, improves gut barrier function, and protects against obesity and diabetes. With this in mind, it is alarming that these bacteria have become deficient in many individuals. Notably, *Akkermansia* mainly thrives during periods of hunger.

Starting with short water fasting is simple: skip a meal or two, replacing it with a bottle of mineral water. If you've integrated the 5R+ tactic of reduced meal frequency (as discussed earlier), you're almost there. If you've transitioned to consuming just one meal a day (as I do), you're consistently practicing what's known as *intermittent fasting*. It can become second nature over time and feel quite ordinary, but it is a very effective health-promoting tool. By following such a fasting routine, you regularly give your intestinal lining most of the day to rejuvenate undisturbed.

For more substantial results, consider going a step further: skip an entire day of eating a couple of times a month. Most people find a 1-day water fast easily manageable and tolerate it well. Once you're comfortable with this, you can progress to periodic 2- and 3-day fasts. In combination with healthy eating in between, these fasts often yield significant benefits.

There are a few crucial points to bear in mind about fasting. Let's address them.

See also:

- Key 3 > Obstacle #8: Snacking and Frequent Meals
- Key 4 > Flushing the Gut: Ayurvedic Shankha Prakshalana Technique Simplified
 - Key 4 > Water-Fasting for Active Motility
 - Key 2 > Eliminate-Reintroduce-Reset Technique (ERR)
 - Key 1 > Other Tactics for Fixing SIBO and Normalizing Microbiome Distribution

RULE #1: SAFETY FIRST

Always consult your doctor. Certain medical conditions may restrict your ability to fast or require a specialized regimen. For instance, the length of your fast may be limited if you have diabetes or prediabetes. For some, the *Elemental*, *Semi-Elemental*, and *Quasi-Elemental Diet*, a topic we'll explore in the next chapters, might be a more suitable alternative.

RULE #2: HYDRATION

Drinking plenty of water is essential when fasting for health. This method, distinct from religious fasting, is commonly called "water fasting." By consuming ample water, you help your body flush out toxins and any food remnants that might affect the gut lining or trigger an immune reaction. Moreover, consistent hydration supports active gut motility. Feeling hungry? Drink more mineral water.

RULE #3: PHYSICAL ACTIVITY

While you shouldn't do intense workouts while fasting, still maintain some level of activity. In other words, don't spend most of your day seated or lying down. Movement promotes intestinal motility, improves blood circulation, and aids the overall cleansing process. Even after days of water-fasting, many report having enough energy for daily tasks and a moderately active lifestyle. I recommend simple exercises such as stretches, gardening, or a stroll in the park. Always keep a positive mindset throughout.