

# FOOD INTOLERANCES AND GUT HEALTH

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Autoimmune conditions arise for unclear reasons, but represent a combination of genetic risk, random events, and environmental triggers. Conditions such as lupus display multiple genetic risk factors, but even accounting for these known predisposing factors, there are important contributions from environmental agents.

Whilst pharmacological agents are offering growing benefits in terms of improvements in quality and duration of life, there is a clear interest in finding non-drug therapies to complement these approaches, and much enthusiasm surrounds the potential for dietary modification to improve symptoms.

Dietary supplements are not regulated for safety, effectiveness and standardisation, but, keeping this in mind, I've listed some of these potential diet-based approaches below:

- "Anti-Inflammatory diet" – evidence is growing, but still actively discussed, for the role of dietary manipulation as an "anti-inflammatory" approach. The recommended regimen is close to the Mediterranean diet (lots of fruits, vegetables, beans & nuts, healthy grains, fish, olive oil, small amounts of meat and dairy, and red wine), and there are many non-immunological reasons why many of these principles could be helpful in autoimmunity, inflammation, and general health. The key directives are - minimise saturated and trans fats; increase omega3 (fish, walnuts); watch the refined carbs (pasta, white rice); ingest lots of whole grains (brown rice, bulgur wheat)(unless you have coeliac disease!); eat lean protein (chicken; watch red meat and full fat dairy foods); and avoid refined and processed foods



- Probiotics are moving into the medical mainstream, with approved indications for their use including various diarrhoeal syndromes and the potential to enhance the process of outgrowing some types of allergies. For example, *Lactobacillus rhamnosus* GG is being administered within clinical trial settings to facilitate tolerance (non-reactivity) development in peanut allergy. Probiotics can help to move the "microbiome" (the bugs that travel along with your body, colonising gut, skin and other surfaces) towards a healthier spectrum of organisms, which in turn can drive the immune system towards more adaptive, less inflammatory pathways. For example, sufferers of psoriatic arthritis randomised to receive *Lactobacillus casei* probiotics showed reduction in serum inflammatory markers compared to those receiving placebo in one small study (2014, Nutrition).
- Supplements – many supplements provide more than the body needs and could extract from a healthy, balanced diet, and water-soluble vitamins consumed in excess create expensive urine. However, supplementary micronutrients and calcium are required for people on long-term steroids, and many coeliac patients on gluten-free diets also benefit from a daily multivitamin preparation. There are, however, three agents for which extra supplementation may be warranted – omega-3 fatty acids, vitamin D, and calcium.
- Vitamin D. This vitamin is critical not only for the health of bones, but also immune function. Levels of vitamin D in foods are often scant, and sun exposure is the best way to stimulate the body's own vitamin D manufacturing machinery, but where sun protection is required (as in lupus), or in situations such as long-term steroids or coeliac disease, supplementation with 600IU/day is recommended
- Calcium. Along with vitamin D, calcium provides bone protection in settings where bone thinning is a risk. Many individuals avoid dairy products due to perceived intolerance or "inflammatory" effects, and these people should also supplement their diets with calcium and vitamin D.
- Omega-3 fatty acids are an important contributor to the anti-inflammatory effects of the Mediterranean "anti-inflammatory" diet. Two weekly servings of fatty fish such as salmon or sardines can get you some of the way there, but the optimal effect is seen with doses of 3 – 4 grams of fish oil daily, which also offers cholesterol-lowering effects
- Magnesium is needed for many critical bodily reactions and pathways, serving to maintain normal nerve and muscle function, healthy immunity, and normal metabolism. Adults consuming less than 300-400mg daily are at risk of deficiency symptoms, which include fatigue, weakness, numbness and muscle cramps. Often, a magnesium supplement is suggested for muscle cramps in settings where low magnesium is suspected or proven, such as dietary imbalance or steroid therapy.
- Haematinics. Whenever fatigue is a dominant complaint, these factors should be assessed. The so-called haematinics, named because of their importance in haemoglobin and red cell function, consist of iron, folate, and vitamin B12. It is not an uncommon error to think of these three very different agents as one and the same, but each should be individually assessed in settings of fatigue, anaemia, or unexplained neurological or immune conditions.



Perhaps, along with any over-indulgence in the holiday season, you could keep in mind some of the "antidotes" that help maintain bodily health. Happy New Year.

Regards, Glenn.



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