Auto-Immune Disease

Auto-immune diseases now affect 1 in 10 people in the UK (1 in 7 women and 1 in 13 men). Auto-immune diseases include rheumatoid arthritis, Crohn's disease, ulcerative colitis, SLE (lupus), MS (multiple sclerosis), type 1 diabetes and many other rarer syndromes. What's worrying is the marked increase over the last 30 years – going up by 3 - 7% per year, depending on the disease. If you read most of the medical literature, the verdict is that the reason for this increase is a mystery. The reality is that we have plenty of clues as to why it's been happening. Once you know why it is happening, it then becomes possible to do something about it. This is important as mainstream medicine has limited options in terms of treatment. These diseases can be helped but not cured by medication.

So why we are seeing so much auto-immune disease?

WHAT TO REMOVE

Ultra-processed Foods

A major clue came from a landmark paper by Lerner and Matthias https://doi.org/10.1016/j.autrev.2015.01.009 . They found that a range of industrial food additives was contributing to auto-immune disease by causing leaky gut (known as increased intestinal permeability). Leaky gut allows foods and other substances to escape from the gut wall into the bloodstream triggering an immune reaction and hence auto-immune disease. The main source of these additives are ultra-processed foods (UPFs). UPFs have been in the news recently due to their link with a number of serious diseases, but autoimmunity is one of the least recognised dangers of these foods.

This study was important as these foods make up over 50% of the typical UK diet. It also points to how we can treat these diseases, by reducing or stopping these industrial foods.

One diet that has been used to treat autoimmune diseases is the autoimmune protocol diet which has been found helpful in Crohn's disease, ulcerative colitis and autoimmune thyroid disease. It is a tough diet to do, especially in the initial stages and has similarities with the keto and paleo diets. The aim of the diet is to help the microbiome in the gut and reduce inflammation. The diet allows many fruits, vegetables, animal proteins and

healthy fats but removes sugars, processed foods, grains, dairy and nightshade vegetables.

Gluten

Another known trigger for auto-immunity is gluten. As far back as 1970 Lancet suggested gluten sensitivity was a cause of auto-immunity. Wheat has changed almost beyond recognition; the amount of gluten in wheat increasing from 10% in its original form to 80% today. With this increase, the incidence of coeliac disease (caused by a reaction to gluten) has risen dramatically from 1 person in 8000 in 1950 to between 1 in 30 and 1 in 100 today. But it's not just coeliac disease that's increasing. Many people have a lesser but significant reaction to gluten called non-coeliac gluten sensitivity (NCFGS). Much of this is due to the higher levels of gluten we consume, but also due to a form of processing used by the food industry called deamination which makes wheat more water soluble. Another issue is traces of the toxic herbicide, glyphosphate can be found in nearly all wheat samples, which have added to the problem. One study found 54% of neurological patients had antibodies to gluten.

Testing is not straightforward. The standard test used for coeliac (transglutaminase or TTG) disease is likely to be negative, except in coeliac disease. More complex tests are available but not on the NHS. These include ELISA antibodies to gluten and the Cyrex Series 3 test. These are available privately but are expensive. The renowned Tahoma clinic in the US used the sigA antigliadin antibody test and found 90% of patients with autoimmune disease tested positive for this antibody to gluten.

A trial without gluten for three months is another option. A less common trigger is milk protein and it is interesting that the autoimmune protocol diet cuts out grains, dairy and UPFs, all known to trigger autoimmune disease is some people.

WHAT TO ADD IN

But it's not just about what to cut out it's also about what needs to be added in. Two vitamins play an important role.

Vitamin D

For a long time, it has been known that the closer we get to the equator the less autoimmune disease we see. Sunlight, and with it, Vitamin D, increase as we get closer to the equator. Is this a protective factor for

autoimmune disease? Could Vitamin D reduce the incidence of autoimmune disease?

Cicero Coimbra, a neurologist and professor of neuroscience at the Federal university of Sao Paulo, Brazil, is best known for his work with high dose Vitamin D and multiple sclerosis. He believes that patients with auto-immune diseases are "resistant" to normal amounts of Vitamin D and need much higher doses than normal. He has had great success treating MS but has also had success with psoriasis, Crohn's disease, vitiligo (for which no successful treatment exists) and ankylosing spondylitis.

A study by Hahn in 2022, the VITAL study, found that 2000 iu of vitamin D reduced auto-immune disease by 22%.

It wasn't the only study to reach this conclusion. Murdaca, in 2019, found that there is an inverse relationship between Vitamin D levels and many auto-immune diseases, including Crohn's disease, ulcerative colitis, psoriasis, rheumatoid arthritis, systemic lupus erythematosus (SLE), multiple sclerosis, iridocyclitis, type 1 diabetes mellitus and thyrotoxicosis. In other words, low levels of vitamin D make these auto-immune diseases more likely. High levels can help prevent and treat these diseases.

Vitamin D is known to be remarkably safe, even at high dosage and is known to modulate the immune system. A Canadian study found that it took an average 4000 to 12,000iu to maintain serum Vitamin D levels at the ideal level of 100-150nmol/l and that substantial numbers of people were taking 20,000 iu daily (above the recommended dose) with no adverse effects. However, Prof Coimbra found giving very high doses of between 25,000 and 50,000 iu daily achieved the best results. (His aim was to increase Vitamin D enough to maintain parathormone levels at the low end of normal). Because these doses are extremely high, it was necessary to monitor calcium levels in the urine and levels of parathormone in the blood.

Although most people with autoimmune disease will not be able to use this protocol, it is still crucial to be getting high enough levels of vitamin D to optimise immunity. Most doctors recommend far too little vitamin D. By enough vitamin D, I mean enough vitamin D to keep blood levels in the upper part of the normal range (around 150nmol/l). For most people will this mean taking between 4000 and 10,000 iu of vitamin D daily. Ideally have blood levels checked.

Vitamin D is cheap, easy to take and easy to monitor. In my opinion, everyone with an autoimmune disease needs to be certain they are getting enough.

Vitamin B12

Vitamin B12 deficiency is greatly underdiagnosed. Dr Chandy, an international authority on B12 found 18% (1 in 5) of his patients were deficient in B12 and Katherine Tucker in the USA found an even higher incidence. The incidence of deficiency is even higher in vegetarians and vegans and in the elderly. One of the reasons that patients are routinely underdiagnosed is because the test for B12 is highly inaccurate (giving normal results in deficiency) and alternative tests are rarely done (see vitamin B12 leaflet).

Dr Chandy discovered that if Vitamin B12 deficiency is left untreated, it can progress from a deficiency to an autoimmune disease (and can then be diagnosed with auto-antibody testing: anti-parietal cell and intrinsic factor antibodies). Other autoimmune diseases can then develop in its wake. He found an unusually high incidence of other autoimmune conditions in his B12 deficient patients, particularly disorders of the glands such as hypothyroidism and hypoadrenalism. For instance, just over 1 in 3 of his B12 deficient patients had hypothyroidism. Sometimes, if the B12 deficiency was left untreated the autoimmunity would spread from one gland to another. Despite this, his patients usually recovered well, once the B12 deficiency was treated. He also found that autoimmune polyglandular syndrome (APS), where multiple glandular disorders are present, often responded to treatment with B12. Pender found that CD8 T cell deficiency was a feature of many autoimmune diseases https://doi.org/10.1155/2012/189096. A Japanese team found giving B12 increased CD8 T cells and concluded that vitamin B12 was immunomodulatory for cellular immunity https://doi.org/10.1046/j.1365-2249.1999.00870.x. Clearly, B12 has an important role in autoimmunity.

Dr Chandy gives an example of a lady who was previously been diagnosed with B12 deficiency. She had mistakenly discontinued her B12 treatment after improving, but later developed rheumatoid arthritis. She was then given methotrexate for the arthritis by a consultant. On going back on her B12 injections, she fully recovered from her rheumatoid arthritis and was able to stop the methotrexate.