

INFLAMMATION and Auto-immune Disease

Across the diverse range of chronic diseases a common feature is an increase in low-grade inflammation which predicts both the appearance and progression of disease.

There are various factors influencing inflammation – these include

- environmental triggers such as diet, exercise deficiency, stress, and infection
- physiological triggers including overweight, toxicity, digestive problems, cell replication, oestrogen and other hormonal imbalances

Left unattended, a low-grade inflammatory state **produces dysfunction and disease**, feeding on itself to perpetuate an **immunological imbalance** which may lead to **autoimmune disorders**.

Conditions classified as autoimmune include Rheumatoid arthritis, Hashimoto's Thyroiditis, Multiple Sclerosis, Type I Diabetes, Psoriasis, Crohn's disease, Ulcerative colitis, Sarcoidosis, Alopecia, Vitiligo, Raynaud's syndrome, recurrent abortions, acute allograft rejection, sunburn, Alzheimer's dementia, Parkinson's disease, Sjorgren's syndrome, Systemic Lupus Erythematosus, fibromyalgia, chronic fatigue syndrome, ALS, Grave's Disease, and Irritable Bowel Syndrome.

Autoimmunity arises when the body's immune system cannot differentiate between self and other resulting in self destruction of tissues. While an estimated 5% of the population have a diagnosed autoimmune disease, early stage autoimmune symptoms and immune dysregulation are present in 10-20% of the population, making autoimmune disorders nearly as prevalent as chronic diseases such as hypertension and metabolic syndrome. It is easy to speculate that, like many common diseases, **chronic low-grade inflammation acts as a precursor to the development of autoimmunity**.

Common **side effects** of medications used to treat autoimmune diseases include:

- ⊗ gastropathy
- ⊗ kidney damage
- ⊗ cardiovascular risk
- ⊗ opportunistic infections (such as tuberculosis)
- ⊗ lymphoma
- ⊗ anaemias
- ⊗ bone loss and breakdown of connective tissue and skin