What illnesses have been associated with deficiency in EPA/DHA?

Omega 3 EFAs are extremely important in the structure and function of every cell in the body and the function of your cells is what determines your health. Your cells are what determine your immune function, healing, hormone levels, heart function, cholesterol levels, blood pressure, digestion, moods etc. Literally, the function and health of your cells determines every aspect of your health.

EPA and DHA omega 3 EFAs are part of every cell membrane and are required to maintain the proper shape, flexibility or fluidity, and “slipperiness” of cell membranes.

The flexibility and “slipperiness” of cell membranes is important for the flow of blood through blood vessels and decreasing the risk of high blood pressure, stroke and heart attack. This fluidity or flexibility of cell membranes is also crucial to ensure the proper flow of nutrients into cells as well as the proper shape of cell receptors for hormones such as insulin (insulin sensitivity).

In addition, EFAs are required for proper nerve signal transmission (memory, concentration, cognitive ability, muscle coordination and strength) and immune function including defence against cancer. This is why EPA and DHA deficiency are linked with cognitive impairments and learning and behaviour disabilities such as ADHD, with depression, and with decreased cognitive ability and increased risk of Alzheimer's and dementia in the elderly. EPA and DHA deficiency is also highly correlated with increased risk of breast, colon, and prostate cancer.

EPA and DHA omega 3 EFAs also play a major role in regulating inflammation via substances called prostaglandins. EPA and DHA Omega 3 fatty acids produce anti-inflammatory prostaglandins while Omega 6 fatty acids produce pro-inflammatory prostaglandins.

Having a diet that is toxic with Omega 6 or deficient in Omega 3 EFAs creates a pro-inflammatory state within the body. This is very significant because inflammation is at the root of virtually all of the common chronic illnesses such as heart disease, stroke, diabetes, and depression as well as the autoimmune and atopic diseases such as arthritis, Crohn's Disease, irritable bowel, psoriasis, eczema, allergies, fibromyalgia, lupus, and multiple sclerosis. Inflammation is also a major factor in dysmenorrhea (menstrual pain and/or cramping), headaches, and back and neck pain.

Omega 3 EFAs play a role in virtually every human function including growth and development, digestion, brain and nerve function, immune function, hormone production and regulation, maintenance of skin and bones, regulation of healing and inflammation, heart function, vision, cholesterol levels, and even emotions and behaviour.