

# Functional Nutrition Explained!

## Broad-Spectrum Micronutrients



### BASICS

Micronutrients are water-soluble vitamins, fat-soluble vitamins, macro-minerals and trace minerals

- Deficiencies of micronutrients are associated with many psychiatric symptoms, treatment resistance and other health problems.
- However, research has found that single-nutrient replacement is not effective for treating mental health symptoms. This is because the nutrients work together in a complex way that we still do not fully understand so broad-spectrum nutrients are preferred.
- Beware! Not all micronutrients are made equal. Many multivitamins that are available at local drugstores are not regulated so the ingredients that they claim may not be what is actually in the bottles. In addition, many micronutrients are not 'bioavailable' in the standard capsule forms. This means that they are not properly absorbed or converted into its active form for the body to use. Look for high quality products or speak to a professional for recommendations.

### Key ingredients to look out for:



#### FOLATE AND VITAMIN B12

Folate and B12 are essential for brain and overall health. Folic acid is a synthetic version and is the most common form of folate that is available. However, 40-60 % of the population have a genetic polymorphism (a different expression of the gene) that may prevent them from properly converting folic acid to folate. Furthermore in Canada, flour and some other grains are fortified with folic acid. In those who cannot convert folic acid properly, too much folic acid can lead to a build-up of a substance called homocysteine which is detrimental to our brain and heart health.

**Instead of folic acid, look for methylfolate: available as 5-methyltetrahydrofolate or folinic acid (not to be confused with folic acid!).**

**Vitamin B12 are available as methylcobalamin (preferred) or cyanocobalamin.**

\*Speak to a doctor before starting supplementation\*

**FOOD SOURCES OF FOLATE:** Beans, liver, spinach, eggs, asparagus, brussel sprouts, broccoli, peanuts.

**FOOD SOURCES OF B12:** Clams, beef, liver, trout, salmon.

#### VITAMIN D

Most of us are deficient of vitamin D due to lack of direct sunlight in the winter. Darker skin tones are at higher risk.

**To prevent deficiency, take 800 -1000 IU per day. \*Sunlight is the main source of D.**

**FOOD SOURCES OF VITAMIN D:** Salmon, tuna, milk, egg yolk, liver.

#### ZINC AND MAGNESIUM

Deficiencies of zinc and magnesium are associated with numerous mental health disorders yet we often miss it because we do not routinely check for zinc levels and we only look for blood levels of magnesium, which is not as useful as intracellular levels.

**FOOD SOURCES OF ZINC:** Oysters, crab, beef, legumes, seeds, nuts.

**FOOD SOURCES OF MAGNESIUM:** Pumpkin seeds, almonds, cashews.