**How to Increase Serotonin Naturally**

Neurotransmitters are brain chemicals that help transmit information from one neuron to another. There are several types of neurotransmitters, each with their own functions. One neurotransmitter called serotonin is associated with mood, pain and gut function. Below are common symptoms associated with a deficiency in serotonin:

Anger/irritability, Increased pain sensitivity, Craving for sweets/sugars, Digestive complaints, Insomnia, Sadness/depression, Anxiety/excessive worry, Migraines, Negative thoughts and increased preoccupation on negative events

Antidepressants called selective serotonin reuptake inhibitors (SSRIs) are designed to increase concentrations of serotonin in the brain. It does this by reducing the breakdown of serotonin. Interestingly, despite what is commonly believed, SSRIs don’t actually make more serotonin, but rather increase levels by reducing its breakdown. Examples of SSRIs include Zoloft, Prozac, and Paxil.

**How is serotonin made?**

**Step 1:** We eat protein-containing foods e.g., chicken, turkey, fish, eggs, beef, legumes

**Step 2:** We digest this protein and break it down into smaller components known as amino acids. One amino acid called tryptophan is used to make serotonin. To break protein down into amino acids, we need adequate levels of stomach acid.

**Step 3:** Enzymes in the body convert tryptophan into 5-hydroxytryptophan (5HTP) and then into serotonin. These enzymes require several vitamins and minerals to work efficiently. These include B-vitamins (particularly vitamin B6), folate, zinc, magnesium, vitamin D, and selenium.

**There are several nutritional and physiological factors that can affect serotonin production:**

* Not eating enough protein daily
* Not adequately breaking down the protein into the amino acid, tryptophan. This is primarily due to digestive problems including low levels of hydrochloric acid. People who regularly take antacids or are on proton-pump inhibitors (chronically) are susceptible to low stomach acid.
* Being deficient in several nutrients (cofactors) that are essential for enzymes to work in the conversion of tryptophan to serotonin. Such nutrient deficiencies are common in people eating a poor (nutrient deficient or narrow) diet.
* To ensure you are effectively producing serotonin it is absolutely ESSENTIAL that the above processes are working effectively. Taking an antidepressant (SSRI) does not necessarily correct the underlying problem.

**Recommendations to increase serotonin production:**

* Eat high-quality protein every day such as eggs, fish, chicken, meat, nuts, and legumes
* Eat foods high in vitamins and minerals, particularly vegetables and spices. In fact, several studies have now confirmed that the spice saffron (at certain levels) can improve mood and is as effective as antidepressant medications for people with depression.
* Chew your food well
* Eat in a relaxed state
* Treat digestive problems.
* Take a high-quality multivitamin or B-complex. Taking magnesium supplements may also be helpful.
* Take fish oils or eat fish regularly. This does not directly increase serotonin but helps serotonin to get into the cells to do their work.
* Get out in the sun to get your regular dose of vitamin D (but don’t go too crazy).
* Reduce or manage your stress levels. Stress produces cortisol which breaks down serotonin.