**BE THE BOSS OF YOUR BRAIN**
What balances your blood sugar balances your brain chemistry

Our three brain chemicals that produce happy, relaxed feelings and resilience to stress are **SEROTONIN, BETA-ENDORPHINS** and **DOPAMINE**.

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### BETA-ENDORPHINS

**What are beta-endorphins?**

Beta-endorphins are neurochemicals that are known as the brain's painkiller. Increased levels of beta-endorphins are associated with good self-esteem and general coping mechanisms. Lower levels of beta-endorphins result in feelings of inadequacy and being stuck.

**Reason why we crave refined sugar to increase our beta-endorphin levels**

Sugar temporarily increases beta-endorphin levels, which leads to improved self-esteem and resilience to stress.

**Ways to increase beta-endorphins:**

- Replace refined white sugar with low glycemic sweeteners. Research shows that simply a sweet taste on your tongue increases beta-endorphins. Satisfy your sweet tooth with coconut sugar or stevia instead.
- Include ample low glycemic foods like blueberries. Beta-endorphin boost bonus; find pleasure by savoring each bite!

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### DOPAMINE

**What is dopamine?**

Dopamine is an excitatory neurotransmitter in the brain that produces feelings of pleasure, alertness, concentration, euphoria, and motivation. The amino acid tyrosine synthesizes dopamine in the brain.

**Reason why we crave refined sugar to increase our dopamine levels**

Sugar, or a sweet taste on the tongue, will increase the release of opiates in the brain and this releases dopamine. The release of dopamine creates good feelings such as pleasure, alertness and euphoria that feel like a reward.

**Ways to increase dopamine:**

- Eating tyrosine rich foods stimulates dopamine production. Enjoy almonds, avocados, bananas, lima beans, pumpkin seeds and sesame seeds.
- Vitamins A and D work together to support the production of dopamine. High quality fermented cod liver oil delivers the perfect blend.
- A little sweet treat (free of refined sugar) goes a long way! Just a taste of sweetness on your tongue stimulates the release of opiates in the brain which increase dopamine.

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### SEROTONIN

**What is serotonin?**

Serotonin is an inhibitory neurotransmitter that is our “feel good” chemical. It is responsible for helping to quiet the brain and create a peaceful, relaxed feeling.

**Reason why we crave refined sugar to increase our serotonin levels**

Tryptophan is the amino acid precursor to serotonin. Elevated insulin in the blood increases the amount of tryptophan that crosses over into the brain. That makes us feel good and triggers the desire to eat more refined sugar to quickly raise insulin levels—setting off the cascade that creates a serotonin-induced relaxed mood. The problem with the cascade is that prolonged elevated insulin levels lead to complications like adrenal fatigue and insulin resistance.

**Ways to increase serotonin:**

- Maintain balanced blood sugar to ensure enough tryptophan is able to cross the blood brain barrier.
- Include tryptophan rich foods in your diet like turkey, shrimp, tamari, mushrooms, fish, mustard greens, spinach, chicken, lamb, liver, and pumpkins seeds.
- Magnesium and B6 helps convert tryptophan to serotonin. Get them both in fish, seeds, spinach, and bananas.
- Research shows that repetitive movements like chewing gum (xylitol-sweetened) increases serotonin.

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