Dear Alice,

Is there a link between constant fatigue and serotonin levels?

— Budding Scientist

Answer

Dear Budding Scientist,

The link between serotonin and fatigue has been established, although it is not clear whether serotonin levels are directly responsible for fatigue or vice versa. What is known is that higher serotonin levels are related to a more positive mood and higher energy levels. Lower serotonin levels, on the other hand, may be related to lower energy levels, negative moods, increased irritability, and depression. Studies suggest that increasing brain levels of serotonin may be a good approach for relieving fatigue symptoms in healthy individuals.

When it comes to fatigue, there is more than meets the eye. Both environmental conditions and chemicals inside your body are presumed to play significant roles. Serotonin is a neurotransmitter (a chemical involved in the transmission of nerve impulses between nerve cells) that is made from tryptophan, an amino acid found in food. Serotonin is primarily found in three parts of the body — the brain, the lining of the digestive tract, and in blood platelets. In the brain, where it is produced, serotonin's main effects include improving mood and giving you that "satisfied" feeling from food. It is also thought to help promote sleep and relaxation.

While low levels of serotonin may contribute to feelings of fatigue, exercise, diet, and exposure to light can also have an effect. The following tips have been recommended to help reduce fatigue and increase serotonin levels:

- Get adequate, regular, and consistent amounts of sleep each night.
- Eat a healthy, well-balanced diet and drinking plenty of water throughout the day.
- Exercise regularly.
- Learn better ways to relax, such as yoga or meditation.
- Maintain a reasonable work and personal schedule.
- Change your stressful circumstances, if possible.
- Take a multivitamin, particularly one with tryptophan, which contributes to serotonin levels.
- Steer clear of alcohol, nicotine, and drugs.
- Get more exposure to sunshine.
- Think positively!

You should keep in mind that chronic fatigue can also be a symptom of more serious conditions such as chronic fatigue syndrome (CFS) [2], depression, or thyroid disease. If you're feeling fatigued, it is advisable to stay away from stimulants or sedatives; these may worsen the problem in the long run. Speaking with your health care provider may be helpful in finding a fatigue-busting and serotonin-boosting plan that works best for you. Here's to positive energy, relaxation, and feeling great!

Alice!

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