Serotonin, What You Need to Know About the Body's Key to Health and Happiness

We all know that sunny days, sweet treats, warm bread, and the scent of vanilla make most of us feel better when we've got a case of the blues, but the reason why is not common knowledge. The answer lies deep in our nervous systems and the intricate communication between nerve cells. Neurotransmitters, chemical messengers that catalyze a myriad of metabolic functions, also affect our moods and behaviors. Some calm the body, promote digestion, and support good immunity while others are involved in keeping memory sharp, triggering the fight or flight stress response, and filling us with feelings of euphoria when we are in love or engaging in daredevil behavior. There are many neurotransmitters, but the body's heavy hitters are serotonin, dopamine, acetylcholine, norepinephrine, and GABA. All of these are essential to life and well-being and work with each other toward the body's homeostasis or state of equilibrium.

Poor diet, unrelenting stress, too much coffee or sugar, not enough physical activity, inadequate rest, and predisposed genetic deficiency all contribute to neurotransmitter dysfunction, especially that of serotonin. Inadequate *or* too much serotonin—as well as impairment of how the body utilizes it—has numerous consequences that can be the underlying factor in depression, anxiety disorders, obesity, Seasonal Affective Disorder (S.A.D.), premenstrual syndrome (PMS), Irritable Bowel Syndrome (IBS), osteoporosis, chronic insomnia, low energy, compromised immunity, even diseases of the cardiovascular system.

Serotonin disruption can also play a vital role in the insidious development of addiction, eating disorders such as bulimia and anorexia, obsessive-compulsive disorders (OCD),

body dysmorphia, and other neuropsychological conditions. In short, proper serotonin levels play a central role in our quality of life, and we do not usually consider it until we are in the grips of its shadow side. If the problem is not addressed early, more and more unpleasant symptoms and syndromes may manifest down the road, consequently affecting other neurochemicals and body systems.

Serotonin is produced in the brain, but *ninety-five percent* of this neurotransmitter is made and used in the digestive tract along with *twenty-nine* other neurotransmitters. The human gut is often referred to as our "second brain", but medically, it is called the *enteric nervous system*. No wonder our emotions are so often accompanied by physical responses! What is even more profound is the fact that good intestinal flora is essential for adequate serotonin.

Pharmaceutical antibiotics are prescribed in near-reckless proportions, and judging by the fact that it takes up to one year to restore beneficial gut flora after a single round of antibiotic use, it is not surprising that serotonin-related conditions and syndromes both physical and "emotional" are increasing at staggering rates. It is not uncommon for a person who has gone through rounds of antibiotics over a certain period of time to become clinically depressed, but the connection is rarely recognized.

On the other side of the coin, too much serotonin can also be a problem and contribute to digestive woes including nausea, vomiting, and diarrhea. It can also be a contributing factor in osteoporosis and certain types of heart disease. Since serotonin is usually known to be a calming chemical in the body, it is surprising to learn that too much of it can cause certain types of depression and extreme anxiety.

Excessive serotonin leads to depletion of many other neurotransmitters, especially dopamine, acetylcholine, and norepinephrine. On the emotional front, too much of this

neurotransmitter can make one incredibly fearful of criticism, easily yielding to anger, feelings of inadequacy, and sadness. Prolonged lack of sleep can also contribute to serotonin excess, which would explain why most people “lose it” emotionally after a period of inadequate rest. Social interaction becomes difficult, though the individual desires it.

Too much serotonin can result by taking pharmaceutical antidepressants in conjunction with each other or combined with natural serotonin-affecting supplements, herbs, or even foods that stimulate serotonin. A medical condition called Serotonin Syndrome is also possible as a side effect of antidepressants, and can be a very dangerous thing. Physical symptoms can include trembling, sweating, vomiting, diarrhea, fever, and seizures. In many cases, ginger is given to the person afflicted to counteract the excessive serotonin in the system.

It is a balancing act for many of us to bring this neurochemical into balance. Putting these pieces together, one cannot help but come to the conclusion that supporting and harmonizing the body’s serotonin supply can be an integral piece in achieving better health. Vitamins, herbs, clinical aromatherapy, gentle exercise, Swedish massage, cranial-sacral therapy, meditation, and finding alternatives for prescribed antibiotics can all be mediators in our sometimes-rocky relationship with serotonin and other vital neurotransmitters. The following is a list of modalities, supplements, and tools to better nourish the production and utilization of this precious, life-enhancing neurochemical. *Note: if you are taking prescribed antidepressant medication, please consult your doctor before taking any of the following:*

Vitamins, Supplements, and Herbs

B6. This B vitamin is essential for nerve health and enzyme

production, which are both critical for regulating mood and nourishing and balancing hormone levels, especially that of the female reproductive system. All B vitamins are important for neurotransmitter production and balance, but B6 is essential for serotonin.

Inositol. Inositol, a B vitamin component much like what bioflavonoids are to vitamin C, is a powerful yet gentle supplement for the entire nervous system, including the brain. There are few, if any, side effects with regular to high doses. Inositol can be extremely helpful in the withdrawal of drugs and alcohol, which is especially useful for repairing an overwrought nervous system. Inositol is a reliable supplement for serotonin deficiency and may be extremely helpful for anxiety, panic attacks, trembling, insomnia, chronic pain syndromes, and nervousness that is especially worse in the morning hours and during the hormonal shifts of menstruation and ovulation.

5-HTP (5-Hydroxytryptophan). Derived from the grafonia seed, 5-HTP is a natural amino acid involved in the conversion of tryptophan to serotonin and melatonin. In Europe, 5-HTP is sold by prescription under numerous trade names to treat major depression. Here, in the United States, 5-HTP is sold as a supplement, the most reliable being the *enteric coated* variety that is not destroyed by stomach acid on its way to the small intestine where it is utilized. 5-HTP is extremely helpful for PMS, general anxiety, irritability, mild-moderate insomnia, certain pain syndromes, and food cravings (carbs and sugar).

Damiana. Damiana, native to Mexico, is an aromatic herb mainly used for sexual dysfunction, but its value goes way beyond the reproductive system. Damiana increases neurotransmitter production including serotonin and dopamine and is reliable in reducing pain, easing anxiety, soothing digestive troubles, and increasing pleasure.

Ginger root. Ginger is an ancient as well as modern remedy for

a plethora of ailments and a powerful player in neurotransmitter production. In cases of too much serotonin in the body, ginger is reliable in lowering it. In some people, ginger helps decrease symptoms of depression and anxiety. Individual chemistry is key, but this herb is definitely one to consider.

Kava Kava Root. Kava kava root is a centuries-old Polynesian herb used in ceremonial drinks as well as a libation in social situations. It is a powerful sedative that not only affects serotonin but other key players in the nervous system. It is reliable for panic attacks, trouble sleeping, and digestive distress related to "nerves."

Lavender Flowers. Commonly grown for cosmetic and culinary use, lavender flowers can also be made into a tea that will naturally nourish the nervous system, namely serotonin production and utilization. Smaller quantities are recommended for calming the body, as larger doses prove to be stimulating.

Lemon Balm. A common garden herb, lemon balm (also called melissa) is a gentle but reliable remedy to boost serotonin levels in the body. It is highly useful for digestive upsets, insomnia, nervousness, and depressive states.

Olive Leaf. Olive leaf is a wonderful alternative to pharmaceutical antibiotics. It is the strongest antibiotic and antiviral in the plant world and is a powerful warrior against everything from malaria to viruses, the common cold to food poisoning. It is excellent for all bacterial and viral conditions as well as building good microbes in the gut, which is essential for healthy levels of serotonin.

St. John's Wort. St. John's wort is an age-old herbal remedy for melancholy, depression, and nervousness. It is valuable in the production of not only serotonin but other neurotransmitters such as dopamine and norepinephrine.

Foods

Foods that stimulate serotonin production include chocolate, avocado, chicken, turkey and most protein sources, flaxseed, sunflower seeds, sugar and all carbohydrates, wheat germ, and dairy such as cheese and cottage cheese.

Clinical Aromatherapy/Essential Oils

Bergamot Essential Oil. Bergamot essential oil boosts serotonin and is highly useful for depression and lowered immunity. Add a drop or two to a tissue and inhale for 5-minute intervals throughout the day.

Cacao Essential Oil. Essentially chocolate essential oil, cacao stimulates both serotonin and dopamine production and is a good oil to use to curb sugar cravings, ease despondency, and increase feelings of enjoyment and pleasure. It is especially beneficial for premenstrual-related food cravings and sadness. Add a drop or two to a tissue and inhale for 5 minute intervals throughout the day.

Frankincense Essential Oil. Frankincense essential oil is a wonderful ally for all forms of anxiety and is a key oil in aromatherapy for brain and nervous system health. Frankincense helps the body make and utilize serotonin and dopamine. Add a drop or two to a tissue and inhale for 5-minute intervals throughout the day. Frankincense essential oil can also be applied to the soles of the feet for quick absorption and results. Application: apply 3 drops of the essential oil to each sole of the foot 1-2x a day. Allow to absorb before putting on socks and do not shower for a few hours after application.

Ginger Essential Oil. Ginger essential oil can be applied undiluted to the soles of the feet for quick absorption in

cases of excessive serotonin. Ginger is an antagonist to the neurotransmitter and can relieve severe anxiety, digestive distress, and other symptoms springing from too much serotonin in the body due to various factors. Application: apply 3 drops of the essential oil to each sole of the foot 1-2 x a day. Allow to absorb before putting on socks, and do not shower for a few hours after application.

Lavender Essential Oil. Lavender essential oil, long associated with calm feelings, is the CEO of essential oils that stimulates serotonin production in the body. It can be used to boost immunity, improve mood, promote sleep, quell general anxiety, and even prevent anxiety from escalating to panic. Add a drop or two to a tissue and inhale for 5-minute intervals throughout the day. Lavender essential oil can also be applied to the soles of the feet for quick absorption and results. Application: apply 3 drops of the essential oil to each sole of the foot 1-2x a day. Allow to absorb before putting on socks and do not shower for a few hours after application.

Neroli Essential Oil. Neroli essential oil reduces stress hormones in the body and is known to increase serotonin. It is almost unequaled in stopping trembling, anxiety, and nervous agitation. It is also used to decrease symptoms of depression and calm an overexcited state. Add a drop or two to a tissue and inhale for 5-minute intervals throughout the day.

Roman Chamomile Essential Oil. Roman chamomile is a wonderful ally for a stressed nervous system and can be inhaled to calm emotions and accompanying, unpleasant physical responses. It brightens the mood and outlook, soothes digestive storms, and promotes a feeling of wellbeing and hope. Add a drop or two to a tissue and inhale for 5-minute intervals throughout the day.

Sandalwood Essential Oil. Much like frankincense, sandalwood is a deeply nourishing oil for the entire nervous system. Add a drop or two to a tissue and inhale for 5-minute intervals

throughout the day. Sandalwood essential oil can also be applied to the soles of the feet for quick absorption and results. Application: apply 3 drops of the essential oil to each sole of the foot 1-2 x a day. Allow to absorb before putting on socks and do not shower for a few hours after application.

Sweet Orange Essential Oil. Sweet orange oil is highly useful for decreasing obsessive thoughts and/or behaviors, calming the body, and promoting serotonin and other neurotransmitters. It also quells anxiety, chronic worry, and feelings of dread. Sweet orange oil also elevates the mood and combats depression. Add a drop or two to a tissue and inhale for 5-minute intervals throughout the day.

Ylang Ylang Essential Oil. Ylang ylang essential oil unsurpassed for calming excitatory neurotransmitters and kicking in calming neurochemicals like serotonin. It also regulates adrenaline in the body. Add a drop to a tissue and inhale for 5-minute intervals throughout the day, but no more than 2-3 times or a headache may result. Ylang ylang essential oil can also be applied to the soles of the feet for quick absorption and results. Application: apply 3 drops of the essential oil to each sole of the foot 1-2 x a day. Allow to absorb before putting on socks and do not shower for a few hours after application.

Lifestyle Changes

One can do everything right to have better nervous system health, but without positive, serotonin-friendly lifestyle changes, the body and mind will always fall short of reaching homeostasis. In the quest for serotonin balance, don’t forget to:

Get more rest. 8 or more hours of sleep a night and periods of non-doing during the day are critical in normalizing neurotransmitters and boosting immunity. Non-doing means

designating 5-minute intervals to one-hour timeslots to doing nothing but lying back and zoning out without guilt. Insomniacs might find it surprising that non-doing during the day promotes better sleep at night.

Unplug. from the computer, cell phone, iPad, radio, etc. Electronic screens and noise all negatively affect the brain and its chemical activity. Using devices non-stop contributes to neurotransmitter disruption.

Get out into nature. It is proven that being outside, especially in sunlight, or looking out a window onto greenery instantly boosts neurotransmitters. When you are outside, breathe deeply, notice the beauty around you, and take in the soothing sounds of birds, water, or wind.

Do more gentle exercises. Working out in the gym, running for miles, or taking high-energy exercise classes boost stimulating neurotransmitters like dopamine and norepinephrine, but our friend serotonin needs yoga, creative movement, ballet, tai chi, qigong, and deep breath work to be utilized in the body.

Receive more massage and bodywork. Swedish massage is known to boost serotonin and other calming chemicals in the body by triggering the autonomic (fight or flight) nervous system to yield to the parasympathetic (rest and digest mode). If you want to stimulate serotonin, avoid deep tissue work or more aggressive modalities. Opt for flowing, gentle massage, preferably set to beautiful music.

Listen to calming music and nature sounds. Ditch the driving percussion of rock music once in a while for more calming music. Even better, listen to real or recorded nature sounds including birdsong, ocean waves, crickets, gentle wind, or streams.

Whatever way you choose to boost serotonin and other calming neurotransmitters, nature will work with your unique

chemistry, and it won't take long for you to know what works best for your body and psyche. Happiness and wellbeing are indeed rooted in the physical; the more harmonious we are on this level, the more harmonious on every other level, even in the face of adversity and stress. With serotonin on our side, come what may- we can be ready!

For more about neurotransmitters, nervous system health, and clinical aromatherapy, see my new release, *Multidimensional Aromatherapy: Clinical, Practical, and Vibrational Applications.*

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DISCLAIMER

The statements contained herein have not been evaluated by the Food and Drug Administration, and the material presented in this article is not intended to treat, prescribe for, cure, mitigate, or prevent any disease or to replace conventional medical treatments.

Recommended Supplements:

- Shillington's Female Formula
- B-Complex #6 – Thorne Research
- Shillington's Male Energy Formula
- Niacinate – Douglas Labs (Niacin with Inositol)
- Kava Kava – Gaia Herbs
- Olive Leaf Extract – Pure Encapsulations
- Female Hormone Support • 60c – Gaia Herbs
- Sleep & Relax • 50c – Gaia Herbs
- Lavender Essential Oil

Recommended Reading:

- *Multidimensional Aromatherapy: Clinical, Practical, and Vibrational Applications*
- *How Candida Leads To Depression*
- *The Power of Our Hormones and How To Balance Them*

- *Understanding Stress, Chronic Stress, and Adrenal Fatigue*
- *Natural Remedies for PMS, Mood Swings, Bloating, Cramps, Etc.*
- *Understand Hypothyroidism – Prevention and Natural Remedies*

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