

## **An Overview of Happy Hormones: Implications to the Physical and Mental Health**

S. Mishra

CEHESH TRUST OF INDIA, Keonjhar, Odisha

**Abstract:** Hormones are secreted by different glands that act in regulating normal physiological functions and act like messenger molecules in the body. Mental health includes our emotional, psychological, and social well-being. It affects how we think, feel, and act. It also helps to determine how we handle stress, relate to others, and make healthy choices. Happiness can be defined as an enduring state of mind consisting not only of feelings of joy, contentment, and other positive emotions but also of a sense that one's life is meaningful and valued. Happiness energizes us and is a highly sought-after state of being. True happiness comes from within yourself. It is basically a state of mind. Moreover, it can only be achieved by being positive and avoiding any negative thoughts in mind. And if we look at the bright side of ourselves and others only then we can be happy. The main purpose of this paper is to correlate happy hormones with physical and mental health. When it comes to happiness, in particular, the primary signaling hormones include Serotonin, Dopamine, Endorphins, and Oxytocin (neurotransmitters). In this paper, the impact of hormones on physical and mental health has been discussed.

### **Introduction**

Hormones are chemicals produced by different glands across our body. They travel through the bloodstream, acting as messengers and playing a part in many bodily processes. The attributes of hormones are pleasurable sensations, mood regulation, bonding relationships, and stress-free conditions. Happiness is a subjective feeling of an individual where emotionally feeling of good is accomplished. It has been found related to the physiological conditions of an individual and controlled by a set of hormones, Simple exercises, Yoga, Meditation, listening to music, etc. release these hormones making a person happy or feel-good sensation.

### **Factors contributing to happiness**

It differs from person to person.

- Doing the things you want to do and having the freedom to choose your own path in life
- Maintaining positive relationships and being accepted into society
- Feeling content with your situation and not comparing yourself unfavourably to others
- Maintaining a positive attitude and not allowing yourself to be upset or put off by the many changes that occur in life
- Achieving goals that you have set out for yourself and keeping positive when trying to achieve them
- Keeping fit both mentally and physically, thus reducing the likelihood of developing illness and disease

Certain hormones are known to help promotion of positive feelings, including happiness and pleasure. These “happy hormones” include,

- Dopamine: Known as the “feel-good” hormone, dopamine is a neurotransmitter that’s an important part of your brain’s reward system. It is associated with pleasurable sensations, along with learning, memory, and more.
- Serotonin: This hormone and neurotransmitter helps to regulate mood as well as sleep, appetite, digestion, learning ability, and memory of a person.
- Oxytocin: Often called the “love hormone,” oxytocin is essential for childbirth, breastfeeding, and strong parent-child bonding. It can also help promote trust, empathy, and bonding in relationships. Levels generally increase with physical affection.
- Endorphins: These hormones are body’s natural pain reliever, which your body produces in response to stress or discomfort. Levels may also increase when you engage in activities such as eating and working out.

### **Factors for the increase of these hormones**

#### **Food and gut health**

The microbiome is the collection of all microbes, such as bacteria, fungi, viruses, and their genes, that naturally live on our bodies and inside us. The human microbiome is diverse, and each body site – for example, the gut, skin, and oral and nasal cavities – has a different community of microbes. The gut microbiome produces 85% of our serotonin (that is the reason our digestive system is called the second brain) which is one of the neurotransmitters. Nutritious and healthy food habits help in maintaining our gut health and food plays a major role in keeping us happy.

### **Outside movement**

According to research, exposure to ultraviolet (UV) radiation from the sun can increase the production of serotonin. One can try spending about 15 minutes outside in a day. An exploration of a new neighborhood or an eco-park are also essential to increase serotonin.

### **Exercises and workout**

Exercise has multiple physical and mental benefits. It can also have a positive impact on emotional well-being. Regular physical activity can also increase one's dopamine and serotonin levels, making it a great option to boost happy hormones. More benefits from exercise are due to,

- *Few friends association:* A study of medical students in 2017 found evidence to suggest group exercise offers more significant benefits than solo exercise. However, one can also adopt solo exercise.
- *Exposure to sun:* Outdoor workouts maximize one's serotonin boost.
- *Time:* At least 30 minutes of aerobic exercise at a time may be devoted. Any amount of physical activity has health benefits, but research Source says higher-intensity workouts with a greater release of endorphins.

### **Meditation**

Meditation is a practice in which an individual uses a technique – such as mindfulness, or focusing the mind on a particular object, thought, or activity – to train attention and awareness, and achieve a mentally clear and emotionally calm and stable state.

Research findings suggest that meditation techniques raise our dopamine levels. Getting a surge of dopamine helps improve our memory, focus, and problem-solving capabilities. Dopamine is one of the “happy hormones” of our body which released during exercise. It causes feelings of pleasure, motivation, and satisfaction.

One study on eight experienced meditation teachers found a 65% increase in dopamine production after meditating for 1 hour, compared with other persons not doing meditation.

To get started with meditation,

- Choose a quiet, comfortable place to sit.
- Get comfortable, whether that's standing, sitting, or lying down.
- Let all your thoughts — positive or negative — rise and pass you by.
- As thoughts come up, try not to judge them, cling to them, or push them away. Simply acknowledge them.
- Yogic Exercises

According to scientific studies, those who practice yoga have lower levels of cortisol ( stress hormone ) and higher levels of endorphin (happy hormones) afterward, which is known as the "yoga high." These substances are easily responsible for the all-pervasive joy and stress alleviation. So, practice these yoga asanas which can make you happy instantly,

- Adho mukha svanasana (downward-facing dog pose) ...
- Ushtrasana (camel pose) ...
- Baddhakonasana (butterfly pose) ...
- Ananda balasana (happy baby pose) ...
- Cat-cow pose. ...
- Uttanasana (standing forward bend) ...
- Virabhadrasana (warrior pose) ...
- Natarajasana (dancers' pose)

### **Release of Hormones during Yoga**

During yoga, the brain releases all sorts of chemicals that not only help you relax but also lower your stress and anxiety levels including, gamma-aminobutyric acid (GABA), and happy hormones like dopamine, oxytocin, endorphins, and specifically serotonin leading to improved sense of well-being overall. Yoga's incorporation of meditation and breathing exercises (pranayam) can help to improve a person's mental well-being. “Regular yoga practice creates mental clarity and calmness; increases body awareness; relieves chronic stress patterns; relaxes the mind; centers attention; and sharpens concentration,” says Dr. Nevins., an osteopathic doctor in the USA.

## **Laughter**

Who hasn't heard the old saying, "Laughter is the best medicine?" Of course, laughter won't treat ongoing health issues. But it can help relieve feelings of anxiety or stress, and improve a bad mood by boosting dopamine and endorphin levels. According to a research finding derived by taking 12 young men into the experiment, social laughter triggered endorphin release. So, a funny video, joke book, or watching a comedy special with a friend or partner shall boost dopamine and endorphins. Bonding over something hilarious with a loved one might even trigger oxytocin release. Cooking a favourite meal with a loved one. This tip can boost all four happy hormones. The enjoyment you get from eating something delicious can trigger the release of dopamine along with endorphins. Sharing the meal with someone you love, and bonding over meal preparation, can boost oxytocin levels. Certain foods can also have an impact on hormone levels, so note the following when meal planning for a happy hormone boost,

- yogurt, beans, eggs, meats with low-fat content, and almonds are just a few foods linked to dopamine release
- foods high in tryptophan have been linked to increased serotonin levels
- foods containing probiotics, such as yogurt, kimchi, and sauerkraut, can influence the release of hormones.

## **Supplements**

There are several supplements that may help increase one's happy hormone levels. They are as follows.

- tyrosine (dopamine production)
- green tea and green tea extract (dopamine and serotonin)
- probiotics (serotonin and dopamine production)
- tryptophan (serotonin)

Experts studying the effects of supplements have found varied results. Many studies are involved in animals only, so more research is needed to help support the benefits of supplements for humans. Supplements may be helpful, but some aren't recommended for people with certain health conditions. They can consult their healthcare provider before trying them. If one takes any supplements, read all package instructions and stick to the recommended dose, since some can have negative effects at high doses.

## **Listening to music**

Music can boost more happy hormones. Listening to instrumental music, especially music that gives you chills, can increase dopamine production in your brain. But if one enjoys music, simply by listening then it may help to put him in a good mood. This positive change in one's mood can increase serotonin production. One can also experience an endorphin release while performing music, especially in a large group. For example, a research study indicates that choir members experienced increased endorphin release during rehearsals.

## **Planning a romantic evening**

Oxytocin's reputation as the "love hormone" is well known. Simply being attracted to someone can lead to the production of oxytocin. But physical affection, including kissing and cuddling also contributes to oxytocin production. Just spending time with someone you care about can also help boost oxytocin production. This can help increase closeness and positive relationship feelings, making one happy, blissful, or even euphoric.

- going to bed and getting up around the same time every day.
- creating a quiet, restful sleeping environment (try reducing light, noise, and screens).
- decreasing caffeine intake, especially in the afternoon and evening.

## **Sleep at night**

The lack of quality sleep can affect one's health in multiple ways. For one, it can contribute to an imbalance of hormones, particularly dopamine, in one's body. This can have a negative impact on one's mood as well as physical health. Seven to nine hours of sleep each night can help to restore the balance of hormones in one's body and to feel better.

## **Stress management**

It's normal to experience some stress from time to time. However, living with regular stress or dealing with highly stressful life events can cause drops in dopamine and serotonin production. This can negatively affect

one's health resulting in stress. If one is under a lot of stress, the American Psychological Association recommends:

- taking a brief break from the source of stress
- laughter
- taking 20 minutes for a walk, run, bike ride, or other physical activity
- meditation
- social interaction

Any of these approaches may help relieve your stress while also boosting your levels of serotonin, dopamine, and even endorphins.

### **Massage**

Massage can boost all four happy hormones. According to studies, massage boosts endorphins and oxytocin. Older research found that massage also increases serotonin and dopamine.

### **Takeaway**

Serotonin, dopamine, endorphins, and oxytocin help promote happiness and pleasure while reducing depression and anxiety. You can give these feel-good hormones a natural boost with some simple activities. If you're having difficulty regulating your mood, talk with a healthcare provider, who can recommend therapies or treatments that may help.

### **Conclusion**

Happy hormones are important chemical messengers in the human body that play a constructive and significant role in controlling, regulating, and organizing physiological and psychological activities in the body. These happy hormones like dopamine, serotonin, oxytocin, and endorphin are reflections of our environment, relationships, diet, and exercise regime along with yoga, meditation, sound sleep, laughing, and in some cases, even our gut microbes. Approximately 50% of dopamine is produced in the gut. There's a second 'brain' in our gut (the enteric nervous system). The perception of happiness differs among people however, we have the power to influence our mood through the choices we make in our daily lives. Understanding these hormones and how they work can help us to plan specific strategies to feel better and to remain happy.

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