



# Happiness Hormones and their Impact on Mental Health

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**ABSTRACT:** Hormones are biochemical substances that regulate and control physiological functions in the body; it affects emotions, feelings, and mental health. Mental health is defined as a state of health in which a person realizes his or her abilities, can cope with the normal pressures of life, can act effectively, and participate in the affairs of his or her community as a healthy person. Happiness means having positive feelings, Life satisfaction, Social interaction, and goals in life. Happiness also means health or mental wellbeing. The main purpose of this research is to study the hormones of happiness and its role in mood, emotions, and mental health. The method used in this research is a descriptive study that has been used to collect information from the library method using new and valid scientific books, articles, dissertations, and useful scientific websites. The findings of this study show that serotonin, oxytocin, dopamine, melatonin, endorphins, estrogen, progesterone, and testosterone are the important hormones of happiness that play a constructive and important role in happiness and sadness, mood and humor, health and lack of mental health.

**Keywords:** *Hormone, Happiness, Mental Health.*

## INTRODUCTION

**Happiness hormones:** Hormones are important chemicals substances in the body that are secreted by the endocrine glands and transported through the blood to various organs. These substances are responsible for transmitting messages from the brain and control the health and function of various organs. Klein and Rosmanit (2016) write in the book *Hormones and the Endocrine System* that: Hormones are involved in various functions of the body such as eating, sleeping, sexual desire, birth, as well as emotions and feelings. Emotions such as happiness, sadness, irritability, anger, etc. are often associated with hormones. Therefore, the disorder in the secretion of these substances not only affects physical health but also affects the human spirit and emotions. Feeling happy is just one of the things that hormones are responsible for, and many of the things you do in your daily life affect the condition of your hormones. Metabolism, reaction to injury, stress levels, and reproduction

are some of the things that regulates by endocrine system. Hormones are the messengers that control many of the body's functions. They are involved in regulating our physical and mental health.

Mansouri (2019) wrote that different organ of the body work together to provide the desired function. However, some things can be done to help with this process. Serotonin, dopamine, and endorphins are three hormones that play a role in human happiness and well-being. Humans react differently when faced with different situations. The different emotions we experience are the result of chemical reactions that take place inside our bodies. The hormones that are released in our body may make us feel good or feel bad. Stimulating hormones that inject good emotions into you is a good way to deal with pain and feel good. The human body is usually in two states: war or flight (sympathetic) and rest and digestion (parasympathetic). Due to the various daily stresses, the human body is usually in a state of spasm, and we must stimulate hormones that lead the body to parasympathetic states to relax.

**Happiness:** Machado & Tavares (2015) stated that; Happiness can be defined as a basic feeling that is defined as a steady-state with a lack of negative emotions. It means the existence of positive emotions; Life satisfaction; Social interaction and goals in life. Another concept that has been widely used to define happiness in the literature is mental health. Rahman, 2016 wrote that happiness is an important factor in improving a person's well-being and mental health. When a person is mentally healthy, he can cope better with a difficult situation. Because research shows that mental health is the biggest factor and the most effective factor for happiness and happiness. Therefore, happiness can increase a person's mental health and a person can enjoy a satisfying and successful life. Shafiq, Naz, and Ansar (2015) also found that there is a positive and significant relationship between happiness and mental health. The findings also show that there is a significant gender difference in terms of happiness and mental health among young people.

**Mental health:** Aggarwal & Sriram (2018) explained in their article that; mental health is defined as a state of health in which a person realizes their abilities, can cope with the normal pressures of life, can act productively and effectively, and participate as a healthy person in the affairs of their community. Mental health means emotional and psychological health, in a way that a person can use his thinking and abilities, function in society, and meet the normal needs of daily life. Preventing the emergence of mental illness and improving the mental environment of Basic mental health needs are considered. A person who can overcome the usual pressures of daily life and have an independent life can be introduced as a person with mental health. Health, temperament, and appearance that we often do not think about unless we have a physical or mental illness. Hormones affect emotions and factors related to the human lifestyle, and paying attention to them can help to have a healthy lifestyle in humans.

## Importance and necessity of research:

Whereas hormones are important chemical messengers in the human body that play a constructive and significant role in controlling, regulating, and organizing physiological activities in the body. Activities such as growth, development, metabolism, heart rate, blood pressure, reproduction, puberty, body temperature, sleep, wakefulness, appetite, sexual arousal, feelings, and emotions ... are regulated and controlled by hormones. Therefore, the normal and effective function of hormones not only promotes physical health but also mental health, and brings happiness and vitality. Therefore, the subject of hormones and its role in mental health is one of the most important and debatable topics in the field of psychology and biology, and the content of this article is useful and important for the scientific enrichment of professionals, professors, and students in the aforesaid field.

## Research Objectives

### The main objective:

The main purpose of the current research is to study and scientific assessment of the role of happiness hormones in mental health.

### Sub-objectives

1. Introducing the types of important hormones that play an effective and significant role in human mood, happiness, and vitality.
2. A scientific study of the physiological mechanism of happiness hormones and its effect on mood, emotions, feelings, and mental health.
3. Study of the role and effect of happiness hormone in lifestyle and social relationships.
4. Finding important ways and methods to increase and stimulate the production of happiness hormones in the body.
5. The effects of reducing happiness hormones on the mental health, mood, feelings, and emotions of individuals.

## Research Methods

The research method used in this study is descriptive research that has been used to collect the necessary data and information using the library method and written sources, books, articles, and scientific treatises. The researcher has also tried to use reputable scientific websites and doctrinal theories, experts, professionals, and theories of former experts on the physiological function of hormones, the role of happiness hormones in mental and emotional health, to further clarify the issue.

## Happiness hormones

Kleine & Rossmanith have written in the book of Hormones and Endocrine: Hormones are biochemical substances that regulate the body's metabolism. Everything depends on them: health, mood, and appearance.

Hormones affect emotions and factors related to the human lifestyle, and paying attention to them can significantly contribute to a healthy lifestyle in humans. Hormones are transferred from the secretory organ to the target organ using blood. Some hormones require a special vehicle for this transport. However, most hormones travel through the bloodstream without a vehicle. During transport, hormones are prone to enzymatic analysis. To achieve the inappropriate concentration of the target organ, many hormones are released by the coordinated action of many cells.

Lehrer (2007) writes in the book *Principles of Stress Management*: Mental health experts believe that happiness and the feeling of enjoyment are associated with changes in the chemical structure of the body, but can we say that whether hormones are responsible for creating happiness in the body? The regulation of the happiness hormone largely depends on people's lifestyle and outlook. In people with depression, the secretion of this hormone is reduced to a minimum. Many antidepressants also affect these hormones, but taking these medications will not have much effect without changing thinking. It has also been shown that during exercise, stress decreases, and relaxation increases, which is directly related to hormonal changes in the body.

Dfarhud, Malmir & Khanahmadi (2014) found that: Research in neuroscience and psychiatry shows that happiness is associated with changes in the human brain and nervous system. Contrary to public belief, however, these changes are not related to hormones, but to neurons and the type of neurotransmitter they release. Neurotransmitters that can affect happiness are serotonin, norepinephrine, and dopamine. For this reason, most medications prescribed for depression alter the serotonin production system and try to break the cycle of sadness and grief by increasing this substance. Neuroscience studies have shown that certain parts of the brain (such as the amygdala, hippocampus, and limbic system) and neurotransmitters (e.g., dopamine, serotonin, norepinephrine, and endorphins) play a role in controlling happiness. Several other studies have suggested the role of cortisol and adrenaline (adrenal glands) and oxytocin (pituitary gland) in controlling happiness.

Hormones affect emotions and factors related to the human lifestyle so that if a person has a low level of happiness, that person will still be able to choose and achieve happiness by stimulating happiness hormones. Happiness hormones help to enjoy life.

In this discussion, we will study and assess a number of important and effective hormones that help the human body and soul to cope with difficult situations and give us happiness, vitality, and peace. Happiness hormones help people enjoy life. To have a good life, we must always have them in us.

## Types of happiness hormones

### 1- Serotonin

Salamat News, 2017 wrote that: Serotonin, also known as the happiness hormone, this hormone is secreted from the hypothalamus of the brain. Serotonin is responsible for transmitting information to the brain, improves sleep quality, and has a calming effect. Serotonin regulates mood, prevents depression, regulates blood pressure, plays an important role in regulating the menstrual cycle in women, and makes you feel happy. Serotonin is one of the most effective neurotransmitters in the human mood. The deficiency of this hormone causes insomnia, mood disorders, and feelings of sadness, depression, aggressive behavior, and eating disorders.

Muradian, 2018 in her article noted that: Antidepressant medicines often try to prevent excessive reabsorption of this substance to increase its level to the optimal level and improve mood. These include fluoxetine and sertraline. Some substances with excessive serotonin can lead to feelings of extreme happiness and pleasure in the person, for example, substances that people use at night parties, such as LSD, act by the same mechanism and lead to severe stimulation of nerve cells in the person. And they cause many side effects. The reason many people turn to these substances is that they try to alleviate their depression and mental problems through short-term external factors while using services such as psychological counseling help people to identify the root of their problems and By eliminating them, they can experience a stable mood in the long run.

Salamat News, 2017 wrote that: This hormone increases relaxation during the day and improves sleep quality at night. In addition, serotonin is involved in many major bodily functions such as appetite control and libido. This hormone is produced from the amino acid tryptophan in 2 steps. These biochemical changes require iron, vitamins B6 and B12, niacin, folic acid, and magnesium. Exercise 30 to 45 minutes a day to increase serotonin levels, eat carbohydrate-rich foods, get regular sun exposure, get enough sleep, and don't forget foods that contain vitamin B. Vitamin B is found in cereals, nuts, and sprouts.

#### **Increase serotonin with nutrition to have good mood:**

Klein and Rosmanit (2016) found in the book *Hormone and the Endocrine System*: Serotonin is a hormone that helps regulate appetite, regulates mood, reduces anxiety, and increases concentration. According to Philip J. Quinn, a serotonin expert at Oxford University, serotonin helps you cope with anxiety and can be called the "do not disturb". Serotonin levels in the brain can play a role in depression and other mood disorders control in the brain. Of course, there are many factors that contribute to the risk of depression, but regulating serotonin levels can help people with depression. Serotonin reuptake inhibitors can help some people with depression. These drugs help keep serotonin levels in the brain at a good level. In addition to the use of serotonin reuptake inhibitors, diet can also play an important role in the amount of serotonin in the brain. The amino acid tryptophan is the building block of serotonin.

Muradian, 2018 has found that: However, increasing serotonin in the brain requires more than just eating protein foods. In fact, eating protein foods alone cannot significantly increase serotonin levels. Carbohydrates can increase serotonin levels in the brain more than protein foods. Choosing the right type of carbohydrates and proteins can help regulate serotonin in general health care. Consuming fermented foods such as kefir, yogurt, or fermented vegetables can include probiotics in your diet and increase the production of serotonin in the intestines.

## 2- Dopamine

Salamat News, 2017 wrote that: dopamine is a hormone that keeps a person mentally conscious and is also known as consciousness hormone. Dopamine is secreted by cells in the brain and spinal cord. When a scene in a movie makes you happy or you enjoy watching a scene, the hormone dopamine is released in your body. The deficiency of this hormone causes a lack of concentration, inattention, insomnia, laziness, and mood disorder. People who drink a lot of coffee or energy drinks during the day have lower dopamine levels. To increase dopamine levels, check your bedroom before going to bed so that nothing interferes with your sleep. Dopamine can be increased by eating protein-rich foods. Do not forget to eat fruits like bananas. Exposure to sunlight regularly. Include foods rich in antioxidants in your meals.

Hami Zindagi, 2018 stated: Dopamine is known as a neurotransmitter responsible for the feeling of pleasure in humans. There are many types of drugs that over-stimulate dopamine-producing neurotransmitters that cause addiction. In fact, these substances create artificial and destructive pleasure for a person, which is not only constructive but also leads to other side effects.

Ghosh (2018) stated in his article that: Dopamine is a hormone and neurotransmitter that is related to the reward and pleasure centers of the brain. It is related to motivation, memory, attention, and concentration and is released when a person moves towards a goal. The secretion of this hormone gives us a sense of action and motivates us to strive to achieve the satisfaction of achieving the goal. Dopamine can be increased, and a person can effectively improve their motivation, concentration, and mood by taking natural steps to increase dopamine levels in their brain.

## 3- Oxytocin

Salamat News, (2017) points to the role of oxytocin: Oxytocin is one of the most important hormones of happiness, also known as the love hormone. Oxytocin is made in the hypothalamus and then transported to the pituitary gland. This hormone keeps people together, brings family members closer together, increases love between couples and parents and children. During pregnancy and lactation, the hormone oxytocin is released in women and causes them to have a deeper connection with their baby. Oxytocin reduces stress and increases social interactions. This hormone protects the heart against all kinds of stress. To increase your oxytocin levels, spend more time with friends, family, and loved ones. Help the others around you, do not forget the massage and try to love people, and stay in love.

Kleine & Rossmannith (2018) wrote in the book *Hormones and Endocrine* that: During pregnancy, the mother's body regularly uses oxytocin compounds to start and end the birth process. This is the main reason why this hormone is so well known. But what is less noticed is that the normal production of this hormone after the birth of the baby stimulates the breast milk to leave the mammary ducts. It is also linked to orgasm and bonding between couples. These additional functions have led to this hormone being labeled a multifunctional hormone: "bonding hormone", "soothing hormone", "hugging hormone", "love hormone" and even "happiness hormone". Because oxytocin significantly affects the brain as well as the reproductive organs. Dr. Hyun Jin Lee and colleagues considered it worthy of being called the "great facilitator of life." Oxytocin is often injected intravenously into pregnant women during hospital delivery for two reasons: first, to stimulate the baby to be born and second, to intensify the contractions that are necessary for birth. Also, after the baby is born, oxytocin causes strong contractions that cause the placenta to come out and reduce bleeding. This is a very dangerous time because postpartum hemorrhage is the leading cause of maternal death in backward societies.

Ghosh (2018) stated in his article that: When people make a social bond, the hormone oxytocin is released, thus affecting social behavior. This hormone increases trust, empathy, and relationship among people. The benefits of the oxytocin, which he called the "moral molecule," are centered on its strong links to trust, empathy, and prosperity. Deficiency of oxytocin reduces love between people, makes individual depressive, anxious or scared, angry, aggressive, and makes it difficult to enjoy social interactions.

Researchers are now focusing on the role of oxytocin (a peptide molecule found in the brain that is released when touched), well-being, and social bonding," said Joseph in his book *Positive Psychology in Practice*. Higher levels of oxytocin have been associated with increased self-confidence and emotional support in couples, as well as increased positive effects and reduced stress, fear, and anxiety. Klein and Rosmanit (2016) wrote in the book *Hormones and the Endocrine System* that: Apart from the direct effects on oxytocin delivery, it creates social behavioral patterns in animals that ensure the care of the baby: nest building, carrying a bed together, Licking the baby. Oxytocin is not limited to women but is also made by men. Oxytocin facilitates mating due to its role as an antihypertensive hormone.

Neave said in her 2007 book *Hormone and Behavior*: Oxytocin levels increase significantly before, during, and after orgasm or sexual arousal. Likewise, Blaicher et al. (1999) reported that the highest levels of oxytocin were measured in women during or shortly after orgasm. Salonia et al. (2005) monitored plasma oxytocin levels in 30 young women who cycled normally. Oxytocin significantly during the menstrual cycle creates a sexual function questionnaire evaluation was also performed, and there is a positive and significant relationship between oxytocin levels and sexual arousal.

#### 4- Melatonin

Salamat News, 2017 has written about the effects of the melatonin hormone on the body: It is an anti-aging hormone and is known as the body clock. Melatonin is secreted from the pineal gland. This hormone regulates sleep at night. If you smoke and do not sleep at night, you probably suffer from a deficiency of this hormone. Disruption of day and night period severely affects melatonin secretion. It is better not to go to laptops and tablets much at night and do not use smartphones in bed. To increase melatonin levels, say goodbye to technology tools two hours before bedtime. Try to have a regular life; For example, eat at a set time every night and go to bed. Sleep in a well-ventilated room. Try to eat vegetables and protein-rich foods and eat them together. Expose your body and soul to fresh air.

#### 5- Endorphins

Ghosh (2018) said in his article: In fact, endorphins are known as an analgesic hormone, which reduces the feeling of pain and prevents anxiety and has a calming effect. Endorphins are secreted from the mucous glands and the hypothalamus. This hormone helps you feel positive about life. Endorphins are one of the body's natural painkillers. This hormone is released during exercise to produce resistance with exercise pain. Endorphins also create a positive feeling that leads to euphoria (intense happiness). The feeling of happiness is a positive feeling evoked by endorphins. Therefore, exercising becomes enjoyable. Endorphins help reduce anxiety and depression by being released in response to pain. Endorphins can make you feel great. There are natural ways to increase endorphin levels, so you can achieve happiness, vitality, and peace in your life by following those methods.

Salamat News, 2017 wrote that: To increase endorphin levels, be sure to exercise. You do not need to do heavy exercise. 30 minutes of walking a day help to increase this hormone in your body. Sweating also helps release this hormone. Steam baths and saunas make the muscles sweat and relax and relieve stress. Do not forget to eat spicy foods. Pepper is one of the great foods for producing endorphins. Spicy foods in contact with receptors on the tongue send signals similar to pain signals to the brain that release endorphins in the body.

#### 6- Estrogen

Saed News, (2019) has stated that: Estrogen is a female sex hormone that is secreted by the ovary. Estrogen is a stress reliever and keeps a person's mood constant. Smoking and strenuous exercise reduce the amount of this hormone. Studies have shown that the hormone estrogen helps in the formation of serotonin. Factors that can affect the secretion of this hormone are avoiding stress and avoiding smoking and strenuous exercise. Stress affects the imbalance of the two hormones estrogen and progesterone.

Neave has written in her book (Hormone and Behavior) that: Estrogen plays an important role in women's ovulation order and fertility. However, its ups and downs also affect emotions. For example, postmenopausal women are more likely to develop depression due to low estrogen levels. Excessive exposure to hazardous chemicals can also increase estrogen production in the body, psychological fluctuations, and irritability. Increased estrogen levels can play a role in menstrual irregularities, decreased sexual arousal, bloat, and water



retention, bloating and chest pain, headaches and mood swings, irritability, and depression, but if estrogen levels are higher than progesterone. Balanced, women are in a better psychological state and stability. Similarly, Jasienska et al. (2004) found that women with the most attractive body shape (large breasts with a waist-to-hip ratio) had higher estrogen than women with less attractive shapes. Salamat News, 2017 wrote that: To increase estrogen levels, you can use different foods. Fruits, vegetables, and grains such as apples, dates, plums and cherries, lettuce, tomatoes, cabbage, Berkeley, cucumber and eggplant, oats, wheat and rice, chamomile seeds and fennel help increase levels of this hormone in the body.

## 7- Progesterone

Neave stated in his book (Hormone and Behavior) that progesterone improves sleep quality and prevents anxiety, irritability, and mood swings. Excessive stress and lack of a healthy diet reduce the level of this hormone. Progesterone levels in women decrease with the onset of menopause. To keep this hormone balanced, instead of treating and using hormone pills, we need to take care of ourselves, eat healthy food, and avoid stress. The progesterone-compatible factor is estimated to be higher in pregnant women and in women taking tablets. Excess of progesterone levels is also associated with increased attractiveness to facial symptoms and satisfaction with facial relationships and desires. Researchers also studied 93 married women and found that high levels of progesterone were estimated to be positively related to male delicacy, attractiveness and that women at a stage of progesterone were more likely to be more committed to their relationships.

Progesterone is also considered to be another hormone that is effective in female reproduction and fertility. The effect of this hormone on mood creation depends on its ratio to estrogen. Progesterone plays an important role in maintaining sleep quality and sexual desire. Therefore, its imbalance can lead to insomnia, headaches, and anxiety.

## 8- Testosterone

The book (Hormone and Behavior) by Neave shows that testosterone is one of the male hormones produced in the testicles. The balance of this hormone is essential for the production and stimulation of sperm. Many major organs in the body, including the brain, also have testosterone receptors and need this hormone to maintain their normal function. Even women need small amounts of testosterone to stay healthy. Imbalance in testosterone secretion reduces energy levels and sexual desires, fatigue, erectile dysfunction, and decreased sperm production. In people with testosterone deficiency, this hormone can be replaced with medication and these symptoms can be returned to normal.

## 9- Norepinephrine

The book "Hormones and the Endocrine System" by Klein and Rosmanite shows that the excess and deficiency of this hormone is largely related to mood swings. Any drug that affects the level of this substance also affects a person's happiness and sadness. For example, in people with bipolar disorder, during periods of mania, the mood

rises sharply and the person abnormally feels extreme joy and excitement, so psychiatrists prescribe lithium medicine to reduce the substance to control the mental state.

Muradian, 2018 wrote that: Norepinephrine, which is one of the hormones that affect motivation, emotions, and feelings and is also known as (noradrenaline). Norepinephrine acts like adrenaline; a hormone that is released in times of fear and urgency. In fact, this hormone is released when exposed to dangerous conditions to stimulate the release of stress hormones and increase blood pressure, body temperature, heart rate, and metabolism. All of these increase a person's alertness and concentration when faced with risk. Epinephrine is another type of adrenaline that is involved in intense emotions such as fear, anger, or pleasure.

## Ways to Increase Happiness Hormones

Here we mention a series of methods and techniques, which is interestingly effective in stimulating the production of happiness hormones and give us happiness, peace, and vitality. In short, there are two ways to increase happiness hormones, one is unnatural or medicinal methods and the other is natural methods, which are separately discussed below.

**A- Medicinal method:** pana public association news (2019) has stated that: Psychiatric drugs such as fluoxetine and sertraline are among the methods that doctors consider increasing happiness-related neurotransmitters. But the important point is that these drugs alone do not lead to the treatment of depression because distress and depression have a variety of causes and factors that must be treated to solve these factors. That is why the combination of antidepressants with psychological therapies will be most effective. Participating in psychotherapy sessions on its own can restore normal donor transmission status by resolving the deep-rooted effects of depression. Also, doing daily activities such as exercising, doing aerobics activities, living in the moment, and doing things that interest you can increase the level of this substance in the body by creating pleasant emotions. If you still do not feel a change in your mood by doing these things, it is better to see a psychologist check for signs of depression in you.

Chemical changes in the body most often occur as a result of depression. In fact, they are not the cause of depression, but its consequences. Therefore, if the stressors and the root causes of depression are treated, these chemicals will return to normal levels. For this reason, antidepressants are preferably prescribed for severe depression and to motivate the individual to attend psychotherapy sessions. This is not the only effective treatment for depression but it gives the best results along with psychotherapy.

**B- The natural way to increase happiness hormones:** There are several natural methods that by doing it daily significantly increase the secretion of happiness hormones in our body and affect our mood or emotions.

**1- Consumption of nuts:** Iranians Students News “2019” stated that: the endocrine system is closely linked to the digestive system, eating foods that may help produce this hormone is a good, natural way to increase serotonin levels in the body. This is at a time when oxidative stress makes breathing difficult for the brain. Vitamin E, which is found in large amounts in nuts, protects our body cells against this oxidative stress and thus strengthens brain function.

**2- Consumption of salmon:** The omega-3 fatty acids in fish have been shown to help reduce inflammation and the risk of depression. Getting these nutrients from the diet is important because omega-3 considered an essential fatty acid, that the body is unable to produce. Some research has shown an association between fish consumption and lower levels of depression. Some researchers think that omega-3 fatty acids help increase dopamine and serotonin levels and, consequently, reduce the risk of depression.

**3- Consumption of blueberries:** ISNA (2019) wrote that: Increased bloodstream to the brain supports endocrine activity and facilitates the circulation of dopamine and serotonin in the body. Fruits such as blueberries are rich in antioxidants, carbohydrates, and fiber. Like nuts, the antioxidants in blueberries prevent free radical damage and also reduce inflammation. Flavonoids, found in blueberries also appear to interact with serotonin and dopamine receptors.

**4- Consumption of dark chocolate:** ISNA (2019) wrote: Are you looking for an excuse to eat chocolate? Improving your mood and boosting your happiness can be a good reason. The caffeine in dark chocolate helps block adenosine, a substance in the brain that causes drowsiness. As a result, you may experience higher levels of energy and greater concentration. Bitter chocolate is also rich in antioxidants, so it may have blueberry-like mood-boosting effects.

**5. Avocado:** Unsaturated fats are healthy fats in avocados. The human body needs fats to maintain its health and function properly because they help provide the body with the energy it needs. Monounsaturated fats do not clog blood vessels, so they allow blood to flow freely in the circulatory system, and dopamine and serotonin are more easily circulated throughout the body. Better blood circulation also means better blood flow to the brain, which allows the production of these hormones as possible.

**6. Use of lavender:** Aromatherapy can help release dopamine and serotonin in the body. Odor receptors in the nose send messages to the nervous and limbic systems that are parts of the brain related to emotions. Lavender has shown its ability to reduce stress and anxiety and enhance feelings of well-being and happiness in humans.

**7. Vanilla:** Like lavender, vanilla has a soothing scent that can help reduce stress and anxiety. Because depression has been linked to decreased serotonin levels, the use of vanilla to increase serotonin levels has been the subject of various scientific studies. The results of studies in the presence of animal and human subjects have shown that vanilla has antidepressant activity and enhances the feeling of well-being in the brain.

**8- Consumption of carbohydrates:** ISNA (2019) has written that: Spicy foods, nuts, chocolates, etc. increase the secretion of happiness hormone. The best way to boost serotonin and its effect on the psyche is to eat healthy high-fiber carbohydrates because carbohydrates increase serotonin levels. The craving for sugary and starchy foods can be due to a decrease in the body's serotonin.

**9 - Outdoor spending:** Some theories suggest that an imbalance in the biological clock causes hormonal fluctuations in the human body and leads to seasonal affective disorder. Exposure to sunlight can help boost serotonin levels in the body, so activities such as walking, cycling, or even sitting in the sun can help improve your mood. Enjoying exposure to sunlight activates the hormone melatonin, which regulates sleep and serotonin production.

**10. Exercise:** in the book Principles and Functions of Stress Management by Lehrer says regular, focused exercise can help release endorphins in the body and reduce feelings of anxiety and pain. Things like brisk walking and cycling can also help improve your mood. There is evidence that exercise increases levels of both the hormones norepinephrine and serotonin, which play a significant role in reducing depression and stress. In addition, exercise increases the sensitivity of serotonin receptors and makes these naturally occurring chemicals stronger in the process of reducing depression.

**11. Meditation:** Ghosh (2018) stated in his article that studies have shown that there is a link between meditation and increased dopamine levels in the body. Meditation can have a calming effect on your disturbed mind. Close your eyes for a few minutes and take a deep breath. A few minutes of meditation and relaxation can help calm the nerves and reduce the symptoms of depression.

**12. Gratitude:** Ghosh (2018) in his article states that for whatever reason, gratitude can form a positive feeling in humans. When you smile, dopamine, serotonin, and endorphins are released in the body. The best thing any human being should do is give thanks for the life they have because it creates positive energy that stimulates hormones.

**13- Trying to achieve a goal:** ISNA (2019) wrote that: The formation of positive emotions is also linked to following and achieving a goal. A sense of pride and happiness is associated with achieving a goal that brings a smile to your face, and this condition triggers the release of the three happiness hormones; dopamine, serotonin, and endorphins in the body.

**14. Doing something new:** Ghosh (2018) has stated in his article that doing something new in life can help increase happiness. From going to a new restaurant to exercising or learning a new language, new experiences can help improve your mood. because trying to do something new or accomplish, it is accompanied by a feeling of satisfaction, which leads to more dopamine secretion.

**15. Remembering happy memories:** When you are sad or upset, looking at old photos or spending time with a nostalgic object such as a gift you received years ago for your birthday can make you feel good. Recalling happy memories helps to release hormones that enhance the bloodstream and improve mood.

**16. Laughter:** is a direct method for the hormone of happiness: Ghosh (2018) has written that the brain does not recognize the difference between reality and fantasy, so laugh even when you have no reason to laugh because laughing stimulates the secretion of happiness hormones.

**17- Tea Treatment:** Iranians Students News 2019 Added: Lemon tea has similar effects to beverages containing citrus fruits and provides antioxidant benefits. On the other hand, turmeric tea reduces inflammation and chamomile tea can be soothing and relieve insomnia.

**18- Massage:** 2019 Saed News stated that muscle relaxation can help increase bloodstream. Receiving a massage can help achieve this goal and gain relaxation and strengthen the feeling of happiness by reducing fatigue and stress. Serotonin and dopamine levels in the body increase through massage, while levels of the hormone cortisol, a stress hormone, will decrease.

**19. Sleep:** in the book “Hormones and the Endocrine System” by Klein and Rosmanite; shows that: Adequate and high-quality sleep is essential to strengthening concentration, quick response, and healthy brain function. Reducing and relieving fatigue through high-quality sleep helps the brain regulate the endocrine system and reduce the symptoms of depression and anxiety.

**20. Hugging:** Iranians Students News 2019 added: Hugging helps the body release dopamine. Have you ever hugged someone and felt angry? This is unlikely to happen because hugging another person leads to a feeling of comfort and relief from dopamine secretion in the body.

**21. Sharing interest to others:** Ghosh (2018) states that: sharing an interest with others by exchanging information, hugging, holding hands and an expression of love and affection can increase the secretion of oxytocin. One of the best ways to increase oxytocin secretion is to spend pleasant moments with family and loved ones, hugging and caressing your partner, parents, and children.

**22. Enjoying scents:** Ghosh (2018) has stated that scents have an important effect on emotions, scents such as vanilla, coconut, rose ... make a person feel good. Choose the scent you like or lighten it in the form of scented candles and place it around the house.

**23. Crying:** without embarrassment strengthens the hormone of happiness: Iranians Students News 2019 added: Not only does laughter increase the secretion of the hormone of happiness. Crying also helps this process. So whenever you feel the need to shout or cry, do this because the hormone endorphins are released.

**24- Listening to music:** Ghosh (2018) has stated in his article that the power of music is great, it can take you to the depths of joy or despair. Listening to your favorite music is one of the effective ways to get dopamine if accompanied by a good feeling from listening to its melody.

**25- Learning and happiness hormone:** Seyed News stated in (2019) that; new skills such as new languages you do not know or playing with new equipment are all new conflicts that the mind loves and get pleasure.

## Conclusion

Happiness hormones play a constructive and graceful role in regulating and controlling our mood and mental health. Hormones affect emotions and factors related to the human lifestyle, and paying attention to them can significantly contribute to a healthy lifestyle in humans. Serotonin, also known as the happiness hormone, is responsible for transmitting information to the brain, improving sleep quality, and having a calming effect. Serotonin regulates mood, prevents depression. Dopamine is a hormone that is related to the reward and pleasure centers of the brain and is related to motivation, memory, attention, and concentration and is released when a person moves towards a goal. Oxytocin is one of the most important happiness hormones, also known as the love hormone, which reduces stress and increases social interactions. This hormone brings family members closer together, increases love between couples and parents and children. Melatonin is an anti-aging hormone and is known as the body clock. This hormone regulates sleep at night and disturbs the day and night, severely

affecting melatonin secretion. Endorphins are known as analgesic hormones, which reduce pain and prevent anxiety and have a calming effect. Estrogen is a female sex hormone that is secreted by the gonads and prevents stress and keeps a person's mood constant. Progesterone improves sleep quality and prevents anxiety, irritability, and mood swings.

The main methods that can stimulate the production of happiness hormones in the body are:

1. The use of psychiatric drugs such as fluoxetine and sertraline that doctors consider increasing happiness-related neurotransmitters.
2. Consumption of nuts, salmon, blueberries, dark chocolate, avocado, vanilla, and lemon tea are some of the fruits that are significantly effective in stimulating the production of happiness hormones.
- 3- Repetition of natural daily activities such as; Spending time outdoors, exercise, meditation, gratitude, trying to achieve a goal, doing new things, remembering happy memories, laughter, using pleasant scent, massage, sleep, sharing interests, hugging, listening music and learning are the most important methods that play a significant role in stimulating the production of happiness hormones and mental health improvement.

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