Be Well Aware – Health Article

The Brain and Happiness Chemicals

The Happy Chemicals in the Brain

The chemicals in the brain that affect mood and happiness are neurotransmitters. Neurotransmitters are chemical messengers that carry signals from a neuron to the next target cell, which can be found throughout the body. Common neurotransmitters that are affected by exercise are endorphins, endocannabinoids, dopamine, serotonin, and norepinephrine.

Endorphins and Endocannabinoids

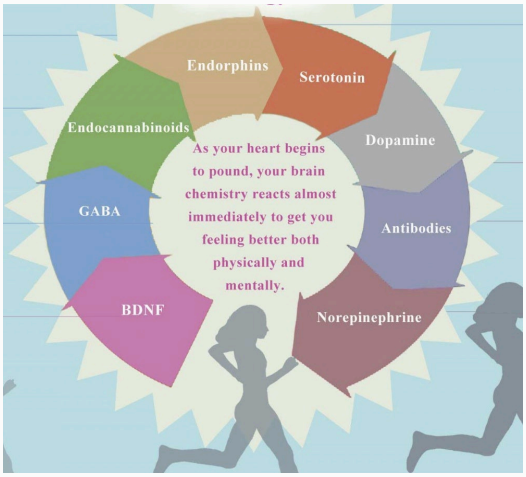
Endorphins help the body to block pain and increase the feeling of pleasure. Endocannabinoids are responsible for the calm sensation after a strenuous workout. Endorphins and endocannabinoids work together to bring the euphoric sensation that people can feel after a hard workout.

Dopamine, Serotonin, and Norepinephrine

Dopamine is commonly known as the "happy hormone." Dopamine is released when a person does an activity that they enjoy. Dopamine reinforces the cycle of motivation because the brain is sent signals that the workout performed was a pleasurable experience, which reinforces to repeat and complete the action. Not only is dopamine increased in the body due to exercise, but so are serotonin and norepinephrine. Serotonin helps to stabilize mood. Norepinephrine helps to increase heart rate and break down fat. Serotonin and norepinephrine can work together to fight depressive episodes and increase energy and alertness.

Mental Health Benefits of Exercise

The neurotransmitters that are affected by exercise have a beneficial effect on mental well-being. The mental health benefits could include improved mood and energy, decreased stress, enhanced sleep, and mental clarity, as well as improved relationships and self-esteem.



Continued on next page…

Along with the general mental health benefits of exercise, it can also help with specific mental health conditions such as depression, anxiety, ADHD, bipolar, obsessive-compulsive disorder, and PTSD.

Depression

In depression, exercise helps to manage symptoms and can provide a sense of higher self-esteem, enhanced life satisfaction, and not as many negative thoughts. Common symptoms of depression are depressed mood, loss of interest in pleasurable activities, low self-worth, sleep disruption, and thoughts of suicide.

Attention Deficit Hyperactivity Disorder (ADHD)

Exercise can help with ADHD symptoms because exercise can help regulate the amount of dopamine levels that are released in the brain, which dopamine is usually at an imbalance with ADHD. Therefore, exercise can improve executive functions and attention.

Generalized Anxiety Disorder (GAD)

A purposeful high intensity exercise regiment can relieve symptoms associated with generalized anxiety disorder in combination with medications. Common symptoms of GAD include restlessness, fatigue, irritability, and sleeplessness for at least six months.

Bipolar Disorder

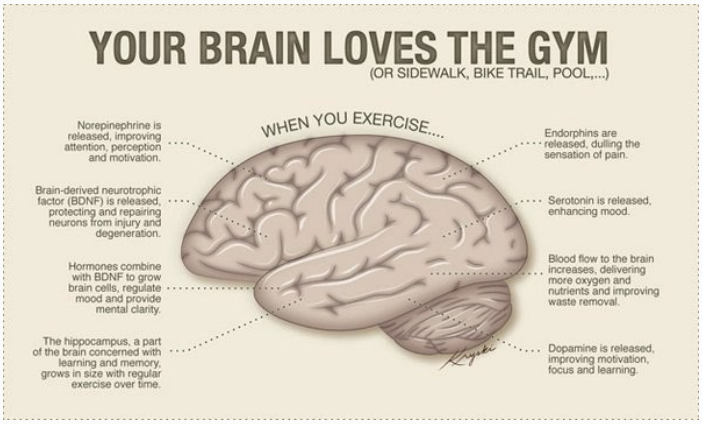
For bipolar disorder regular physical activity can aid in a reduction in shifts in mood, an improved sense of well-being , and to limit weight gain side effect of some medications used to treat bipolar.

Obsessive Compulsive Disorder (OCD)

Exercise **c**an help elevate symptoms of OCD and be used a complementary treatment to medications. Obsessive compulsive disorder is characterized as uncontrollable recurring thought (obsessions) and behaviors (compulsions) that the person feels the urge to keep repeating.

Post Traumatic Stress Disorder (PTSD)

Exercise can help reduce symptoms of PTSD such as: desensitizing a person to internal arousal cures, enhancing brain function, help to regulate the hormones associated with stress, and promotes neuroplasticity. Neuroplasticity is the ability of the brain and nervous system to change their response to different internal and external stimuli. Exercise can be used to compliment other treatment recommendations.



References:

https://mydoctor.kaiserpermanente.org/mas/news/regular-exercise-benefits-both-mind-and-body-a-psychiatrist-explains-1903986https://www.somewebsitenamehere.com/example1
https://my.clevelandclinic.org/health/articles/22513-neurotransmitters
https://www.healthline.com/health/depression/exercise#Exercise-and-bipolar-disorder
https://images.app.goo.gl/FTpJZibCBLdhhigHA
https://images.app.goo.gl/HL1qwEss4gqGjAfZ6