Exercise Improves Brain Function

Research question

Does completing 30-60min of aerobic exercise 3 times per week reduce the effects of depression and anxiety?

Rational

The claim is “exercise improves brain function.” Exercises such as aerobic exercises are jogging, swimming and cycling such exercises increase lung capacity letting more oxygen into the blood and the brain. Brain function is reduced by things like depression that can reduce the speed in which neutrons are produced this can lead to things such as memory problems. Depression it is a mental condition characterised by feelings of severe despondency and dejection, typically also with feelings of inadequacy and guilt, often accompanied by lack of energy and disturbance of appetite and sleep. Anxiety is a nervous disorder marked by excessive uneasiness and apprehension, typically with compulsive behaviour or panic attacks. The research question is does completing 30-60min of aerobic exercise 3 times per week reduce the effects of depression and anxiety? The reason the exercises is done 3 times a week (Monday, Wednesday and Friday) is because the human body requires a 32 hour rest period after intense exercises.

Evidence

This questions is easily answered if it is split into two parts what does aerobic exercises do and what does depression and anxiety do to the brain. Aerobic exercises increase the lung capacity of a person and increase the amount of oxygen in the blood of the person. When exercise it triggers the release of mood-altering chemicals, such as endorphins and serotonin, in the brain. Getting physical is also a welcome break from daily routine. And building a strong and healthy body can improve a person's self-image. Although some people can become depressed because of an addiction to physical activity’s. This information is from Body & Mind: Don't worry, be peppy: Getting physical found to ease anxiety, depression: [FINAL Edition]. Numerous studies conducted in the 1980s and '90s looked at the effectiveness of aerobic exercise and resistance training. The researchers recruited more than 200 patients with mild or moderate depression. The patients in the exercise groups were instructed to engage in three 45-minute workouts per week, with the focus on a 30-minute aerobic session, a 10-minute warm-up and a five-minute cool down. this was a small study, the findings suggest that exercise might be as good as medication in this context. but these studies were plagued with problems that rendered them less than reliable. A major issue involved the lack of a placebo comparison group in many of the studies. What's the take-home lesson? This study jibes with the previous research, and brain chemistry research suggests that exercise offers definite mood-lifting properties, in addition to so many other benefits. One should bear in mind that while this study showed a benefit, patients in this study were generally eager to take part in this research. While they showed modest benefit, the same may not hold true for the majority of patients who battle depression. This information was from An active ingredient in treating mild depression; Study

supports findings that exercise can help beat the blues and might reduce need for medication: [Final Edition]. what does depression do to the brain? To know what happens we need to know that the hippocampus is located near the center of the brain. It stores memories and regulates the production of a hormone called cortisol. The body releases cortisol during times of physical and mental stress, including during times of depression. Problems can occur when excessive amounts of cortisol are sent to the brain due to a stressful event or a chemical imbalance in the body. In a healthy brain, brain cells (neurons) are produced throughout a person's adult life in a part of the hippocampus called the dentate gyrus. In people with MDD, however, the long-term exposure to increased cortisol levels can slow the production of new neurons and cause the neurons in the hippocampus to shrink. This can lead to memory problems. This information was from a website called healthline with the title on the page 'The Effects of Depression on the Brain.'

Evaluation

The sources that I have used in this investigation are reliable. The source Body & Mind: Don't worry, be peppy: Getting physical found to ease anxiety, depression: [FINAL Edition] is reliable as it has many quotes from many books and articles that talk about exercises and it's effects on mental issues. An active ingredient in treating mild depression; Study supports findings that exercise can help beat the blues and might reduce need for medication: [Final Edition] is reliable as it is a study from 1980 to 1990 and is analysed by medical journalist Evra Taylor Levy and emergency physician Eddy Lang on its reliability. Even the healthline website has four sources that it has based its information on. The sources are about psychotherapy, depression statistics

Conclusion

The claim is 'does exercise improve brain function'. The research question is 'does completing 30-60min of aerobic exercise 3 times per week reduce the effects of depression and anxiety?' the answer is yes aerobic exercises do increase brain function by reducing the effects of depression and anxiety on the brain.

Reference

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