Physical Exercise May Help Improve Cognitive Performance of Young Individuals with Schizophrenia

Schizophrenia affects 1% of the population, and research has shown that computer-based brain games can sometimes reverse one quarter to one third of the deficits in the areas of memory, thinking skills, and social cognition. A team of researchers at a free schizophrenia clinic at University of California, Los Angeles found that those benefits increase with aerobic exercise, according to a new report in Schizophrenia Bulletin.

In the initial 10-week study, researchers treated 16 young adults who had recently experienced their first schizophrenic episode. Nine participants participated in a computerized course of neurocognitive training for perception and memory skills and then social cognitive training for emotional intelligence, each for 4 hours per week for 5 weeks. The remaining seven participants took the same computer training and added four sessions per week of aerobic exercise for a weekly total of 150 minutes; they wore monitors to ensure they exercised in their target aerobic zone.

Cognitive performance of participants who only completed brain training did not change, but improved significantly for those who participated in physical exercise.

In the second 6-month study, 32 individuals who had recently experienced their first schizophrenic episode trained for 4 hours per week with the same computer-based brain games as in the pilot study. One half of participants vigorously exercised in addition to participating in the mental training. Performance on a whole battery of cognitive tests improved three times more among those who exercised than among those who did not exercise.

Researchers said the improvements are due to a brain protein, brain-derived neurotrophic growth factor, which is released during aerobic exercise.


Blood-Based Biomarkers May Help Identify Women With Psychiatric Disorders at Risk of Suicidal Ideation

Researchers have identified blood-based biomarkers and developed questionnaire-based apps that may help clinicians identify which of their female patients being treated for psychiatric disorders are at greatest risk of suicidal ideation or behavior, according to a study in Molecular Psychiatry.

Researchers regularly assessed 51 female patients diagnosed with psychiatric disorders, such as bipolar disorder, depression, and schizophrenia, noting any instances when they changed between testing visits from no thoughts of committing suicide to high levels of suicidal ideation. In 12 patients with such changes, genomic analyses were

Assessing Young Adult Use Disorders With Peer-Focused Efforts

New findings in the Journal of Addiction and Dependence show that college-aged youth are more likely to identify a potential alcohol disorder in their friends before they are able to make the same assessment about themselves.

Findings were obtained through a 13-question survey targeting students and non-students between the ages of 18 and 24 who reported engaging in binge drinking within the past 30 days. Questions were based on three focus areas: (a) personal drinking habits, (b) personal perceptions of alcohol consumption in relation to peers, and (c) beliefs about friends thought to consume alcohol more excessively than most peer group members.

Forty-seven percent of participants perceived their alcohol consumption to be less than their specific group of friends. However, data showed that a majority (51%) of participants accurately assessed their alcohol consumption when compared to the self-reported responses from the rest of their peer group.

conducted to identify genes whose activity was significantly different between two states. Candidate biomarkers were prioritized using the Convergent Functional Genomics approach. Researchers then validated 50 prioritized biomarkers using blood samples from six women who had committed suicide.

The two app-based questionnaires assessed patients’ risk of suicidal thoughts and attempts, with one using measures of mood and anxiety and the other using questions about life issues, such as physical and mental health, social isolation, and environmental stress.

Researchers also used blood samples and medical records from different groups of 33 women with the same psychiatric diagnoses to confirm that the biomarkers and apps predicted suicidal ideation, and also examined their ability to predict future hospitalizations for suicide attempts.

The biomarkers and apps were able to predict future instances of suicidal thoughts with 82% accuracy and future suicide-associated hospitalizations with 78% accuracy.


Early Treatment of Posttraumatic Stress Disorder Does Not Shorten Recovery Time

The majority of individuals with posttraumatic stress disorder (PTSD) recover after early treatment, but many continue to experience PTSD for years after a traumatic event even with early clinical interventions, according to a study in the Journal of Clinical Psychiatry.

Over a 12-week period, researchers evaluated several groups of non-military individuals (N = 232) experiencing PTSD after a single traumatic event. All participants received either prolonged exposure therapy, cognitive therapy, treatment with selective serotonin reuptake inhibitors, or a placebo pill 1 month after the traumatic event. They also followed individuals who declined treatment. Participants were reassessed at 5 and 36 months.

Although the groups who received prolonged exposure and cognitive therapy showed a significant reduction of symptoms by 5 months (61% better than the other groups), and their symptoms remained low for 3 years, the other groups (including those who declined treatment) reached the same level of low symptoms by 3 years. Early prolonged exposure and cognitive therapy significantly shortened the time to recovery, but did not reduce a 3-year prevalence of PTSD.


Diagnosis and Treatment of Mental Health Conditions Varies Based on Race and Ethnicity

A large study in Psychiatric Services, involving >7 million adults, found significant differences in the diagnosis and treatment of mental health conditions based on race and ethnicity of patients, and that regardless of race or ethnicity, patients were more than twice as likely to receive medication for a mental health condition than formal psychotherapy.

Researchers analyzed the electronic medical records of 7.5 million adult patients across 11 health care systems participating in the Mental Health Research Network, a consortium of public-domain research centers. Of these patients, 1.17 million (15.6%) received a mental health diagnosis in 2011.

Native American/Alaskan Native patients had the highest rates of diagnosis (20.6%), whereas Asian patients had the lowest rates of diagnosis (7.5%). In general, patients from most racial and ethnic minority groups had lower rates of mental health diagnosis compared to non-Hispanic White patients, ranging from 64% lower for Asian patients to 28% lower for Hispanic patients.


Activation of Area in the Brain’s Reward System Explains Smoking Addiction

Smoking addiction in schizophrenia can be explained by significantly increased activation of the ventro-medial prefrontal cortex (vmPFC), a region involved in the brain reward system, according to researchers from the Institut Universitaire en Santé Mentale de Montréal and the University of Montreal.

Researchers used neuroimaging techniques to compare the brain responses of 18 smokers with schizophrenia and 24 smokers without psychiatric disorders while viewing appetitive cigarette images. Participants were also asked to complete a questionnaire to assess their depressive symptoms.
Greater neuronal activation of vmPFC was observed in smokers with schizophrenia compared with healthy participants. At the behavioral level, smokers with schizophrenia also had more depressive symptoms than the control group.


Patients at Greater Risk for Depression, Anxiety, and Posttraumatic Stress Disorder After Leaving an Intensive Care Unit

Results of a multi-institutional national study, in Critical Care Medicine, of approximately 700 individuals who survived life-threatening illness with a stay in an intensive care unit suggest that a majority are at high risk for persistent depression, anxiety, and posttraumatic stress disorder (PTSD)—especially if they are female, young, and unemployed.

Researchers recruited 698 participants. A total of 645 survivors had a phone-based assessment to collect data at 6-month follow up, and 606 had a similar follow up at 1 year. A total of 613 participants completed at least one psychiatric measure at 6 months using the Hospital Anxiety and Depression Scale and the Impact of Event Scale-Revised surveys. There were 316 female and 297 male participants with an average age of 49. At 1-year follow up, 576 participants completed at least one psychiatric self-assessment.

According to a multivariable analysis across four age groups (18 to 39, 40 to 49, 50 to 59, and 60 to 89), younger age groups were 16% and 23% more likely to experience anxiety or PTSD, respectively, than their next older age group. Female patients had a 26%, 43%, and 80% higher risk than male patients for depression, anxiety, and PTSD symptoms, respectively.


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Video Game Addiction Linked to Impaired Health

Video game addiction appears to be associated with attention-deficit/hyperactivity disorder, obsessive-compulsive disorder, and depression, according to a study in Psychology of Addictive Behaviors.

The study used seven criteria to identify video game addiction, scored on a scale from never to very often:

- You think about playing a game all day long;
- You spend increasing amounts of time on games;
- You play games to forget about real life;
- Others have unsuccessfully tried to reduce your game use;
- You feel bad when you are unable to play;
- You have fights with others (e.g., family, friends) over your time spent on games; and
- You neglect other important activities (e.g., school, work, sports) to play games.

Scoring high on at least four of the seven items may suggest the individual is addicted to video gaming, which is associated with impaired health and work, school, and/or social relations.