Genetic Markers Linked to Alcoholism Recovery

In an international study published in *Translational Psychiatry*, Mayo Clinic researchers and collaborators identified genetic markers that may help identify individuals who could benefit from the alcoholism treatment drug acamprosate. Patients carrying these genetic variants have longer periods of abstinence during the first 3 months of treatment.

The association between variation in candidate genes and the length of sobriety in alcohol-dependent patients treated with acamprosate in community-based programs was studied. When other environmental and physiological factors were considered, patients with the common allele of the genetic variant rs2058878, located in the GRIN2B gene, stayed sober more days than those with a variant allele of the same polymorphism.

The findings support evidence implicating an important role of the n-methyl-d-aspartate receptors in the effects of acamprosate. More studies are needed to determine potential importance of identified genetic variants in the long-term effects of acamprosate, as well as the molecular and physiological mechanisms behind the drug’s action.


Cannabinoids Causing Weight Gain in Individuals With Schizophrenia

Cannabinoids may be involved in the weight gain that occurs in individuals with schizophrenia who are treated with the antipsychotic agent, olanzapine, according to a pilot study published in the *Journal of Clinical Psychopharmacology*.

Researchers studied the eating behavior of 15 individuals with schizophrenia who were treated for 16 weeks with olanzapine, an atypical antipsychotic agent known to stimulate appetite. Participants viewed neutral images or images designed to stimulate their appetites during a functional magnetic resonance imaging scan before and after 16 weeks of treatment. The team also measured the participants’ fasting glucose, insulin, lipid, and endogenous cannabinoids levels.

After treatment, the researchers observed hyperactivation in the left amygdala, which was relative to a control group of healthy participants. These brain changes were associated with increased levels of glucose, triglycerides, and anandamide (i.e., the main cannabinoid neurotransmitter). During treatment, participants gained weight and had fewer positive symptoms (i.e., delusions and hallucinations). The statistical analysis suggests the involvement of anandamide in amygdala hyperactivation in participants who viewed images that stimulate appetite.


Traumatic Experiences Impact Children’s Futures

Approximately one half of all children in the United States are exposed to at least one social or family experience (e.g., having their parents divorce, death of a parent, living with someone who abuses alcohol or drugs) that can lead to traumatic stress and impact their healthy development, increasing the risk of negative long-term health consequences or falling behind in school, suggests new research published in *Health Affairs*.

Data were analyzed from the 2011-2012 National Survey of Children’s Health, which surveyed parents of 95,677 children younger than 17 throughout the United States. The survey included questions about nine adverse childhood experiences, as reported by parents: (a) extreme economic hardship, (b) parental divorce/separation, (c) living with someone with a drug or alcohol problem, (d) witnessing or being the victim of neighborhood violence, (e) living with someone who was mentally ill or suicidal, (f) witnessing domestic violence, (g) parent served time in jail, (h) being treated or judged unfairly due to race/ethnicity, and (i) the death of a parent.

More than 22% of children represented had two or more of these traumatic childhood experiences. Utah had the lowest number of children experiencing two or more traumatic experiences (16.3%), whereas Oklahoma had the highest (32.8%).

Children with two or more adverse experiences were approximately 2.5 times more likely to repeat a grade and be disengaged in school compared to those without any traumatic experiences, after adjusting for confounding factors such as race, income, and health status. They were also more likely to have a wide range of chronic health problems, including asthma, attention deficit hyperactivity disorder, autism...
Involuntary Hospitalization for Anorexia Nervosa Saves Lives

Involuntary hospitalization of patients with anorexia nervosa in severe condition is not detrimental to their recovery process and achieves similar positive results to those of patients who were willingly hospitalized, according to a new study conducted by the University of Haifa.

Anorexia nervosa affects 0.5% to 1% of women during their lifetimes, and about one tenth that number of men, putting the lives of patients with anorexia at risk in severe cases. Even when the condition of patients is life-threatening, they are not defined under the Treatment of Mental Patients Law of 1991 as mentally ill and cannot be hospitalized involuntarily.

In extreme cases, the court may appoint a guardian who can agree to the involuntary hospitalization of the patient—a process that results in very few patients being forcibly hospitalized.

In the current study, researchers sought to examine claims concerning the ineffectiveness of involuntary hospitalization and examined whether a difference exists between patients who were forcibly hospitalized and those who were hospitalized willingly. Seventy-nine patients were examined over the past decade; 28 were involuntarily hospitalized by the courts and 51 were hospitalized of their own free will.

The clinical data (e.g., body mass index, blood pressure, pulse) on admission of those hospitalized involuntarily were similar to those hospitalized voluntarily. Compulsory and voluntary treatment both led to the same positive outcome.

Despite the declared reluctance to receive treatment of those involuntarily hospitalized, response to treatment was good. Compulsory treatment could reduce guilty feelings in patients in relation to receiving suitable treatment and nutrition, and the duration of hospitalization for both groups was similar, as was the rate of mortality. Patients from both groups gained weight at a similar rate and a similar percentage joined rehabilitation programs after being released from the hospital.

Prisoners Not Receiving Mental Health Treatment

A significant portion of state and federal prisoners are not receiving treatment for mental health conditions, according to research published in the American Journal of Public Health. State and federal courts mandate that inmates must have access to adequate health services in prison. However, that mandate usually covers only “severe or serious” mental illnesses.

Data were obtained from a 2004 national sample of state and federal prisoners, which included 14,499 participants in state prisons and 3,686 in federal prisons. Participants self-reported whether they had been taking medication for a mental health condition upon entering the facility, and whether they were still taking medication while in prison.

At the time of admission, 18% of both samples were taking medication for a mental health condition, but only 52% of that subset of the population in federal prisons and 42% in state prisons received medication during their sentence.

African American individuals were 36% more likely than other inmates to have medication continuity in prison, regardless of their diagnosis. Likewise, individuals with schizophrenia were more than twice as likely to take medication in prison and have treatment continuity.

Researchers concluded that, of participants who were taking medication for a mental health condition in prison, 61% used no other form of treatment.

Bringing Back Asylums

The number of inpatient psychiatric beds in the United States has been cut by approximately 95%—a wholly inadequate equation when there are currently 10 million U.S. residents with serious mental illness. New research in the Journal of the American Medical Association discusses (a) the evolution of moving away from inpatient psychiatric beds, (b) evaluates the current system for housing and treating the...
mentally ill, and (c) suggests a modern approach to institutionalized mental health care as a solution.

The researchers claim that the civil rights movement propelled deinstitutionalization, reports of hospital abuse offended public consciousness, and new drugs gave patients independence. In addition, economics and federal policies accelerated the transformation because outpatient therapy and drug treatment were less expensive than inpatient care, and the federal legislation led to states closing or limiting the size of institutions for mental diseases.

Some patients with chronic psychiatric diseases were moved to nursing homes or hospitals. Others became homeless, using hospital emergency departments for both care and housing.

Reforms need to expand the role of these institutions to address a full range of integrated psychiatric treatment services—from providing care to patients who cannot live alone or are a danger to themselves and others, to patients with milder forms of mental illness who can thrive with high-quality outpatient care.

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The research shows that brain scans could predict which patients would respond to a specific kind of talk therapy—an effective treatment that has been shown to change patterns of brain activity. They recruited 23 patients with major depressive disorder who were not yet being treated. The patients underwent resting-state functional connectivity MRI, or rs-fcMRI, which visualizes the coordinated activity of brain regions within known functional networks of neurons while the brain is not engaged in any tasks. By using this technique, the researchers could identify brain regions that light up or activate in unison. This, in turn, could help them uncover networks of activity that might be linked to certain behaviors or responses to therapy.

If doctors can identify the best treatment immediately, patients could avoid months of trial and error, thus reducing the often debilitating effects of depression for patients and their families.

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After patients were scanned, they met with counselors for an average of 12 weekly talk therapy sessions using behavioral activation talk therapy, which focuses on the immediate behaviors associated with depression, such as difficulty getting to work on time or not spending time with loved ones. During the talk therapy sessions, patients set goals to address these behaviors.

Results showed patients had greater connectivity between the anterior insular cortex (i.e., a prune-sized region involved in assigning importance to events) and the middle temporal gyrus (i.e., a flattened section of brain tissue that plays a role in the subjective experience of emotion). Patients also had stronger connections between the intraparietal sulcus (i.e., a snake-like structure involved in maintaining focus) and the orbital frontal cortex (i.e., a crescent-shaped region behind the eyes involved in assigning positive or negative values to events).


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**ADHD Linked to Increased Alcohol and Tobacco Use**

A new study, published in Drug and Alcohol Dependence, links attention deficit hyperactivity disorder (ADHD) and conduct disorder in young adolescents with increased alcohol and tobacco use.

The study included data on more than 2,500 teens between ages 12 and 15. The data came from the 2000-2004 National Health and Nutrition Examination Survey, which is a nationally representative sample of the U.S. population, designed to collect information about health.

Teens diagnosed with ADHD and conduct disorder had a three- to five-times increased likelihood of using tobacco and alcohol and initiated use at a younger age than those who had neither disorder. Having ADHD alone was associated with an increased likelihood of tobacco use, but not alcohol use.


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**Using Brain Scans for Talk Therapy**

A study published in Neuropsychopharmacology is the first to use a technique known as resting-state functional brain connectivity magnetic resonance imaging (MRI) to identify differences in brain wiring that predict therapeutic responses to talk therapy.

The research shows that brain scans could ultimately be used as a diagnostic tool to determine the best course of treatment for individuals with depression.

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