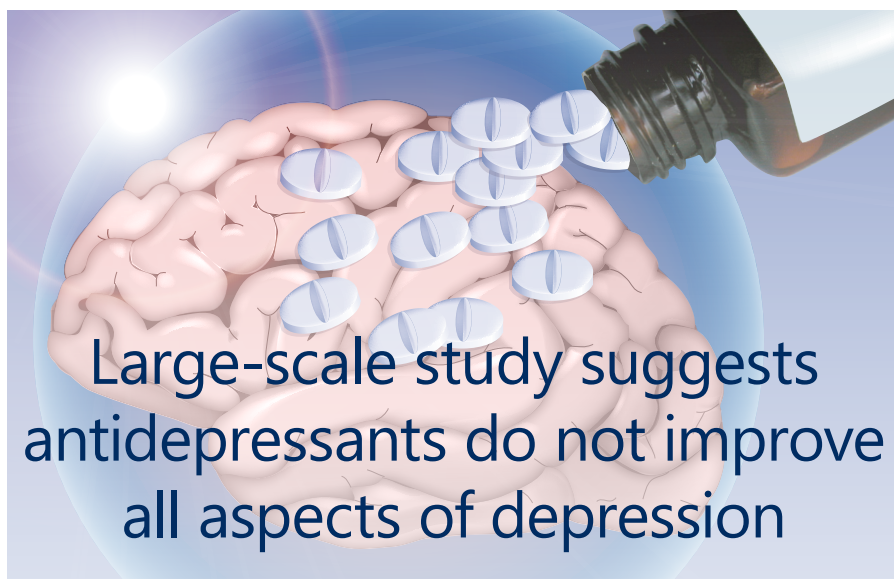
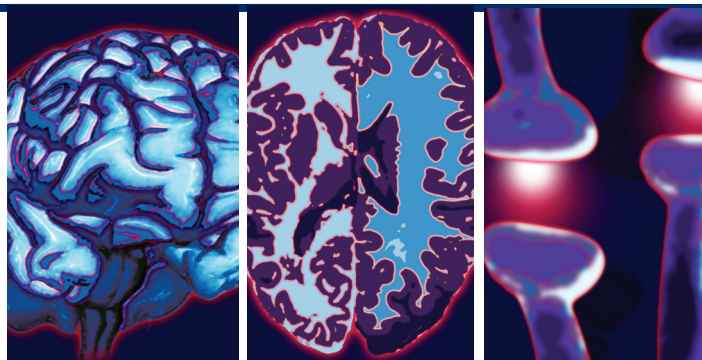


## NEWS

“...the results ... highlight that measurement-based care should be used in multiple settings including primary care offices and psychiatric specialty clinics.”



## Large-scale study suggests antidepressants do not improve all aspects of depression

A new analysis of a 6-year study looking at the progression of depression, published in the *Journal of Clinical Psychopharmacology*, has revealed the impact of antidepressant treatment on the numerous symptoms of the disease. The study looked at the resulting effects of antidepressant interventions for major depressive disorder in 4000 patients, demonstrating that whilst some symptoms were reduced, others persisted throughout treatment.

The purpose of this landmark study was to address the lack of long-term data relating to the effectiveness of antidepressant treatment, in order to accurately understand the progression of the disease throughout therapy. Speaking to *Neuropsychiatry*, Shawn McClintock, first author of the paper and Assistant Professor of psychiatry at The University of Texas Medical Center (TX, USA), commented on the importance of the work: “There are two significant findings to this work. First, it distinguished between two types of residual depressive symptoms, those that remain before

beginning treatment (persistent residual symptoms), and those that appear since initiation of treatment (treatment emergent residual symptoms). Second, our study highlights the need for measurement-based care, which can be used to inform the treatment team and the patient of the presenting residual symptoms”

Data for the analysis was gathered from the Sequenced Treatment Alternatives to Relieve Depression (STAR\*D) study, from which the researchers measured a wide range of depressive symptoms, including suicidal thoughts, sadness, sleep disorders and weight changes. These were used as outcome measures for the effectiveness of antidepressant therapy. The analysis demonstrated that even patients who responded to medication retained between three and 13 residual depressive treatments with 75% of patients describing five or more symptoms. The most common residual symptoms included insomnia, sadness and concentration problems, which were found in more than 70% of patients.

## News & Views

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The work is a very important step forward in the field of depression, as the study has revealed the need for more tailored therapeutics, a sentiment shared by McClintock, who commented “If sad mood, insomnia, and decreased concentration are still present, then the antidepressant strategy needs to be tailored to ameliorate those symptoms.”

Although this is an important advancement in the understanding of depression and treatment efficacy, McClintock remarks on the importance of future developments and the potential impact of the study: “I think the results from our study highlight that measurement-based care should be used in multiple settings including primary care offices and psychiatric specialty clinics. The use of measurement-based care confers the advantage of documenting the depressive symptoms and the impact of the antidepressant strategies to inform treatment decisions.”

It is clear that these data produced by the study are an important step in determining the complicated nature of depression and its treatment. It is hoped that through continued understanding and research, more effective and targeted therapies could be developed to treat this ever-growing problem.

Source: McClintock SM, Husain MM, Wisniewski SR *et al.*: Residual symptoms in depressed outpatients who respond by 50% but do not remit to antidepressant medication. *J. Clin. Psychopharmacol.* 31(2), 180–186 (2011).

## L-lysine in conjunction with normal medication may reduce the severity of symptoms in patients with schizophrenia

A new study published in *BMC Medical* has demonstrated the ability of L-lysine to reduce some of the negative symptoms associated with schizophrenia. The team behind the project administered L-lysine to ten patients with schizophrenia, in conjunction with their normal medication, and measured their symptom progression over 8 weeks. The results suggest that L-lysine may provide some therapeutic benefit in the reduction of symptoms in schizophrenia.

“Although numerous pharmacological interventions exist for the treatment of the disease, there is still a need for improved medications to ameliorate the numerous symptoms of the disease.”

Schizophrenia has become a major concern for many health authorities, with the worldwide prevalence of this debilitating disorder at around 0.3–0.7%. Although numerous pharmacological interventions exist for the treatment of the disease, there is still a need for improved medications to ameliorate the numerous symptoms of the disease.

In the study ten patients were administered 6 g of L-lysine a day for 4 weeks. The researchers measured the potential

improvements in the patients using the positive and negative symptom scale, specifically aimed at schizophrenia, along with more general measure of function such as the Wisconsin Card Sorting Test. The results showed an improvement in functioning in eight of the patients who had been administered L-lysine.

The study is an example of further work concerning the impact of nitric oxide in patients with schizophrenia. Some earlier studies suggested that nitric oxide signaling might be dysregulated in these patients, and thus L-lysine (which interferes with the production of nitric oxide) might be of some clinical benefit.

The first author of the paper, Caroline Wass, researcher at the University of Gothenburg (Gothenburg, Sweden), commented on the future prospects and impact of the study: “This study is a starting place for further research into the beneficial effects of L-lysine as part of the treatment of patients with schizophrenia. It was an extremely low dose, and a small sized trial, which limited the conclusions we could draw. Nevertheless this study suggests that L-lysine may be of benefit to patients in alleviating some of the negative and cognitive effects of schizophrenia.”

Source: Wass C, Klamer D, Katsarogiannis E *et al.*: L-lysine as adjunctive treatment in patients with schizophrenia: a single-blinded, randomized, cross-over pilot study. *BMC Medical*, 9(1), 40 (2011).

### About the News

The News highlights some of the most important events and research.

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# Cognitive behavioral therapy may help treat the symptoms of patients with Tourette's syndrome

A new study published in *International Journal of Cognitive Therapy* has revealed the potential therapeutic benefit of cognitive behavioral therapy in the treatment of tics in patients with Tourette's syndrome. In the investigation, led by Marc Lavoie, researcher at the Fernand-Seguin Research Centre of the Louis-H. Lafontaine Hospital and the Psychiatry Department of Université de Montréal (Montréal, Canada), the researchers looked at the effect of cognitive behavioral therapy on numerous outcome measures, including tics, behavior and brain activity.

Tourette's syndrome is a neuropsychiatric disorder that predominantly affects younger children, although the syndrome can continue into adult life. The hallmark features of the syndrome include motor and vocal tics, which can be highly disruptive to normal life for the patient.

The study included a group of ten adults diagnosed with Tourette's syndrome and a matched control group of 14 adults with no history of psychiatric problems. The participants were asked to perform an inhibitory task concerning a traffic light simulation, measured before treatment and after treatment (6 months). Recordings of event-related potentials were measured throughout the tasks through the use of an electroencephalogram.

The researchers not only found that the number of tics that the patients demonstrated after treatment had significantly decreased, but also a normalization of brain activity as measured by electroencephalogram.

When speaking to *Neuropsychiatry*, Lavoie commented on the importance of the work, stating "Our discovery could have major repercussions on the treatment of this illness. In some cases, physiological measures could allow for therapeutic improvement in order to tailor it to a specific type of patient. The individualization

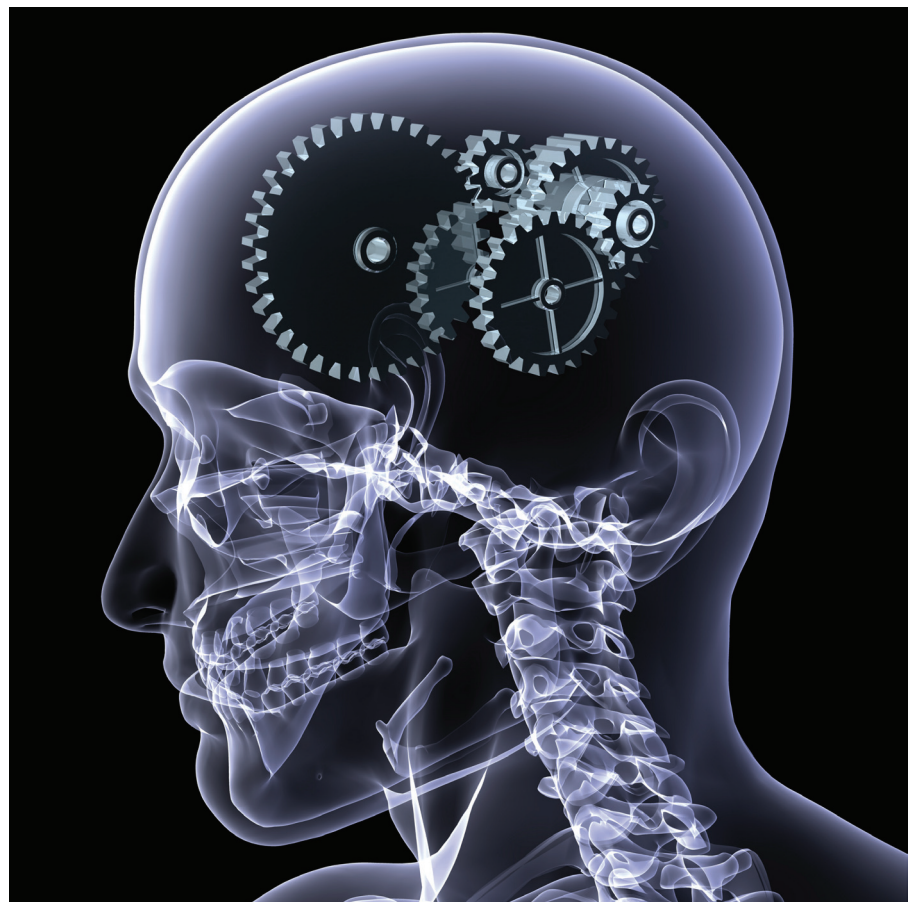
of treatment is an important goal in order to achieve better outcome and quality of life in these groups of patients."

Whilst cognitive behavioral therapy is utilized in many different areas of psychiatry and psychology, this is one of the first studies to look at a quantifiable improvement in patients with Tourette's syndrome.

When talking about the future prospects of the work, Lavoie said: "In a near future, we plan to offer knowledge transfer activities toward clinicians interested in our CBT package and apply our findings to children. We also plan to integrate physiological measures, such as biofeedback, in the psychotherapeutic strategy."

"The researchers not only found that the number of tics that the patients demonstrated after treatment had significantly decreased, but also a normalization of brain activity as measured by electroencephalogram."

Source: Lavoie ME, Imbriglio TV, Stip E, O'Connor KP: Neurocognitive changes following cognitive-behavioral treatment in Tourette syndrome and chronic Tic disorder. *Int. J. Cogn. Ther.* 4(1), 34-50 (2011).



# A new study investigates the link between epilepsy and psychiatric disorders

A paper published in the *British Journal of Psychiatry*, has examined in great detail the fundamental basis and link between epilepsy and psychiatric disorders. The investigation utilized MRI to scan and analyze the brains of patients admitted to the Beaumont hospital (Dublin, Ireland) over a 4-year time period.

Whilst the association of epilepsy and psychiatric disorders is well documented, the causal link and fundamental understanding behind this remains unknown. In particular one form of epilepsy, known as temporal lobe epilepsy, has a high concordance with comorbid psychiatric disorders.

In a statement to *Neuropsychiatry*, Frederick Sundram, senior registrar and honorary lecturer in psychiatry at Royal College of Surgeons in Ireland (Dublin, Ireland) said, "Given that schizophrenia is a disorder that causes much impairment (psychiatric, social and financial) and that psychotic symptoms occur in

a variety of disorders other than schizophrenia, identifying the regions potentially contributing to psychosis in disorders other than schizophrenia may inform us of core neuroanatomical abnormalities driving psychosis in schizophrenia as well as related disorders."

"...identifying the regions potentially contributing to psychosis in disorders other than schizophrenia may inform us of core neuroanatomical abnormalities driving psychosis in schizophrenia as well as related disorders."

Using MRI to scan patients with temporal lobe epilepsy and psychosis, the researchers analyzed cell densities of the gray and white matter found in their brains. The results demonstrated a similar profile found to that in patients with schizophrenia, including a decreased density of

gray matter in the temporal lobes and the cerebellum. A decrease of white matter was also found in numerous areas, including the hippocampus and the corpus callosum.

When asked about the challenges in running the investigation Sundram replied "Recruitment posed a challenge as patients had to fulfill strict neurological criteria for a diagnosis of temporal lobe epilepsy and furthermore, required interviews to clarify the presence of psychotic symptoms. After applying strict inclusion and exclusion criteria, our overall numbers were limited but served to enhance the precision of neurological and psychiatric diagnoses. The study also facilitated improved working relationships between neurology and psychiatry."

Sundram also believes that that this investigation is an important step forward in not only epilepsy-related psychiatric problems, but also schizophrenia: "We have identified certain regions as being abnormal in epilepsy related psychosis where these regions do also share overlap with the neuroanatomical findings in schizophrenia. Potentially, these abnormal regions may be candidate targets for further molecular work or drug development to ameliorate psychosis in the clinical setting."

Source: Sundram F, Cannon M, Doherty CP *et al.*: Neuroanatomical correlates of psychosis in temporal lobe epilepsy: voxel-based morphometry study. *Br. J. Psychiatry* 197, 482–492 (2011).

