TMS TRENDS

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DEPRESSION AND STRESS MEDIATED BY SINGLE BRAIN PROTEIN

http://www.medscape.com/viewarticle/835217

According to a study conducted at Mount Sinai, the brain's ability to effectively deal with stress or to lack that ability and be more susceptible to depression depends on a single protein type in each person's brain. This single brain protein may offer targets for novel and more effective antidepressants. Researchers found that the beta-catenin activity in D2-type dopamine receptor neurons in the nucleus accumbens plays a central role in the ability to deal with stress and be resilient to depression.

The current findings challenge the predominant view of depression and how it should be treated, as the current treatments available for depression are based on discoveries made half a century ago. Dr. Eric Nestler, the lead researcher on the study, noted that "current antidepressants activate norepinephrine or serotonin in the brain. They are very nonspecific, so the drugs are useful for a wide range of disorders, not specifically depression." With higher specificity, novel antidepressants may lead to more favorable outcomes, though their development will come with some difficulties and not necessarily be straightforward. Additionally, rather than examining ways to minimize the negative effects of stress, the study is looking for ways to induce resilience in order to make individuals who are inherently more susceptible become more resilient to stress and depression.

Season's Greetings from the TMS Institute of Pennsylvania!

VIRTUAL REALITY MAY HELP WITH DEPRESSION AND SELF-CRITICISM

http://www.sciencedaily.com/releases/2014/11/141112144823.htm

A team of psychologists and computer scientists from University College London, University of Barcelona, and University of Derby have found that self-compassion can be learned by using avatars in an immersive virtual reality. This innovative approach was found to reduce self-criticism and increase self-compassion and feelings of contentment in naturally self-critical individuals. In the study, healthy but self-critical women experienced a life-size virtual body substituting their own, giving a first person perspective through the eyes of the avatar. The participants were all trained to express compassion toward a distressed virtual child while in their adult virtual body. Half the participants were then transferred to the virtual child body, and the other half observed their original virtual adult body from a third person perspective. Those who experienced a first person perspective through the eyes of the virtual child were soothed—they felt safe and content and had increased self-compassion and lower levels of self-criticism. Excessive self-criticism plays a prominent role in the development and persistence of many mental health problems including depression. The researchers report that people who are self-compassionate tend to have lower levels of self-criticism and are better able to cope with negative life events because self-compassion acts as a buffer, helping to promote a positive mood and general wellbeing. They hope that virtual related-based therapy will become a viable, low-cost treatment that people can use in their own homes.