

The promise of N-acetylcysteine in neuropsychiatry

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Source

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Abstract

N-Acetylcysteine (NAC) targets a diverse array of factors germane to the pathophysiology of multiple neuropsychiatric disorders including glutamatergic transmission, the antioxidant glutathione, neurotrophins, apoptosis, mitochondrial function, and inflammatory pathways. This review summarises the areas where the mechanisms of action of NAC overlap with known pathophysiological elements, and offers a précis of current literature regarding the use of NAC in disorders including cocaine, cannabis, and smoking addictions, Alzheimer's and Parkinson's diseases, autism, compulsive and grooming disorders, schizophrenia, depression, and bipolar disorder. There are positive trials of NAC in all these disorders, and although many of these require replication and are methodologically preliminary, this makes it **one of the most promising drug candidates in neuropsychiatric disorders. The efficacy pattern of NAC interestingly shows little respect for the current diagnostic systems. Its benign tolerability profile, its action on multiple operative pathways, and the emergence of positive trial data make it an important target to investigate.**

The usual reminder: n-acetylcysteine is cheap, has a remarkably good safety profile, and is over-the-counter. If it could put even a small dent in the use of current prescription psychiatric meds, that would be something.