Research finds cerebrospinal fluid flow is decreased in Huntington's disease

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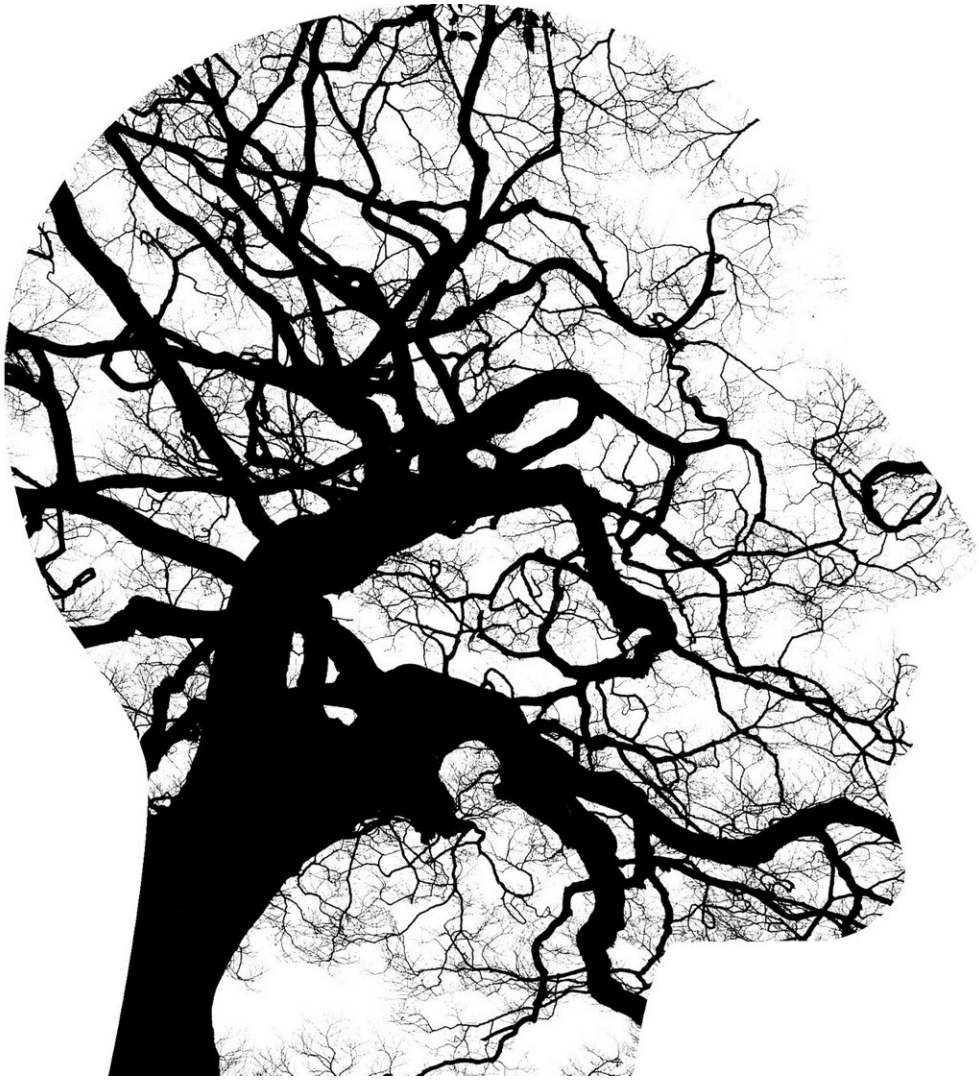

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New research from Vanderbilt University Medical Center finds that cerebrospinal fluid (CSF) net flow is markedly decreased in Huntington's disease (HD), with the decrease being greater in later stages of the disease.

The study was reported in the *Annals of Neurology* by Kilian Hett, Ph.D., Daniel Claassen, MD, MS, both from the Department of Neurology, and colleagues from Neurology and Radiology and Radiological Sciences.

The team assessed 29 HD patients and 51 age-matched controls. Relative to controls, CSF average net flow in HD was about half, and in later stages it was only about 13%. The finding may bear implications for disease progression and treatment, the authors write.

One concern is that decreased CSF flow might impair distribution of HD medications delivered via the spinal cord.

HD is genetic, involving the toxic accumulation within brain cells of mutated huntingtin protein. Considering that CSF, among its other functions, helps remove waste products from the brain, there's some question of whether its impaired flow could contribute to retention and buildup of the mutated protein in the brain.

Additional findings from the study point to multiple contributors to CSF pathophysiology in HD involving fluid velocity, ventricle volumes and severity of huntingtin protein mutation.

More information: Kilian Hett et al, Cerebrospinal Fluid Flow in Patients with Huntington's Disease, *Annals of Neurology* (2023). DOI: 10.1002/ana.26749

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