



CTE and Genetic Profiling

A Study of Altered Gene Activity in the Brains of Athletes with CTE

Athletes with repeated Traumatic Brain Injuries (TBIs) may be at risk to develop chronic traumatic encephalopathy (CTE), a type of dementia. Researchers looked at the donated brains of 17 deceased athletes from professional boxing, football and hockey, all who had multiple TBIs and also CTE. The researchers found:

- ★ CTE dementia is more likely when you've had years of concussions and "jarring" your head.
- ★ While both CTE and Alzheimer's dementias have "tangles" on autopsy, it seems that there are different genes that cause each one.
- ★ Studying the genes and gene activity linked with CTE dementia may lead to treatment.

Take Home: While having many concussions may make it more likely that you will develop dementia, there also seem to be differences caused by the types of genes you have.



For more information on CENC, visit:

<http://www.cencstudy.org>

Reference:

Mufson, E.J., He, B., Ginsberg, S.D., Carper, B.A., Bieler, G.S., Crawford, F., Alvarez, V.E., & Perez, S.E. (2018). Gene profiling basal tau containing neurons in chronic traumatic encephalopathy: A chronic effects of neurotrauma consortium study. *Journal of Neurotrauma*, 1260-1271.