



Negative impact of female sex on outcomes from repetitive mild traumatic brain injury in hTau mice is age dependent: A chronic effects of neurotrauma consortium study

Purpose

To determine how sex influences mTBI outcomes.

Participants

Transgenic mice (n= 100) with gene hTau were followed 15 days after given repetitive mTBIs. A control group of mice with the same gene was not given any injuries.

How was the study conducted?

mTBI mice underwent surgery to administer a strike injury. Researchers who administered the neurological tests (Rotarod & Barnes Maze) were blind to the groups.

Findings

Female mice showed cognitive impairments different from that of male mice (in the injury group). But female control mice outperformed all groups in the Barnes Maze test.

Military Impact

Examining sex differences in mTBI help can help researchers better understand differences in mTBI by sex in Veterans and service members, and may have implications for different treatments for men and women.

Ferguson, S., Mouzon, B., Lynch, C., Lungmus, C., Morin, A., Crynen, G., Carper, B., ... & Crawford, F. (2017). Negative impact of female sex on outcomes from repetitive mild traumatic brain injury in hTau mice is age dependent: A chronic effects of neurotrauma consortium study. Aging Neuroscience, 1-15.