

Dr. Charly Abi Ghanem
Albany Medical College
OSSD Council

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Summary:

Alzheimer's disease (AD) is the most common form of dementia. Two thirds of those with AD are women. This sex difference persists even after correcting for a longer lifespan of women. Studies reviewed by Guo et al have investigated sex specific mechanism in the underlying neuropathology of AD. Findings highlight several sex-biased molecular pathways such as neuroinflammation and bioenergetic metabolism. The different mechanisms going all the way to the gene expression have been found to be influenced by sex hormones and/or chromosomes, and even an interplay with the APOE4 genotype. This points to the importance of being open to customizing preventive and therapeutic measures based on an individual's hormonal, chromosomal and genetic status. Considering sex as a biological variable in pre-clinical and clinical studies relating to AD remains a top priority.

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