

Brain Health & Menopause

Hormonal shifts that occur during the menopausal transition appear to have an effect on brain health. This overview highlights issues that may arise in patients who express concern about cognitive and memory changes.

Estrogen and Brain Structure

- Estrogen declines during menopause, effecting brain regions linked to memory and cognition.
- Research Insights: Reduced estrogen levels may lead to structural changes in the brain.
- Discussion Tip: More studies are needed to better understand the role of estrogen in brain health and cognition.

Cognitive Function and Menopause

- During menopause, changes in memory, attention, and processing speed may arise.
- Research Insights: Hormonal changes, lifestyle, genetics, and other factors influence cognitive shifts.
- Discussion Tip: Discuss physical activity, cognitive activity, sleep, and social contact. as beneficial strategies for early intervention.

Metabolism

- Menopause impacts brain communication and energy use.
- Research Insights: Reduced brain connectivity and changes in metabolism may increase the risk of neurodegenerative diseases including dementia.
- Discussion Tip: Emphasize preventive strategies such as a Mediterranean diet, physical activity, adequate sleep, and other lifestyle behaviors (eg, sleep, stress, social contact) shown to support brain health.

Amyloid-Beta Deposition

- Menopause may accelerate amyloid-beta accumulation, which is linked to Alzheimer's disease.
- Research Insights: Estrogen decline might increase dementia risk.
- Discussion Tip: Discuss family history and preventive strategies with your doctor.

Preventive Strategies to Promote Brain Health

- Regular physical activity improves brain function, cognitive function, and mental wellbeing
- Healthy eating patterns are linked to cognitive benefits; Choose a Mediterranean-style diet.
- Mental stimulation, including puzzles, reading, new hobbies.
- Alleviate stress: engage in meditation, deep-breathing, yoga, Tai Chi, or other relaxation techniques that may help
- Adequate sleep: ask patients about their sleep habits
- General health screenings and vaccination.

Sources:

Boyle CP, et al. Estrogen, brain structure, and cognition in postmenopausal women. *Hum Brain Mapp.* 2021;42(1):24-35.

Maki PM, Thurston RC. Menopause and Brain Health: Hormonal Changes Are Only Part of the Story. *Front Neurol.* 2020;11:562275.

Mosconi L et al. Menopause impacts human brain structure, connectivity, energy metabolism, and amyloid-beta deposition. Available at: bit.ly/3LqN973

NIA. What do we know about diet and prevention of Alzheimer's disease. Available at: bit.ly/3yaZol8

CDC. Physical Activity Boosts Brain Health. Available at: bit.ly/4f8DkbN