



Factors for Prevention of Alzheimer's Disease

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Dear Editor-in-Chief

Alzheimer's disease is a disease that society knows little about. This is the great evil of the century, predetermined to become a major concern for the health of our societies in the coming years, but an evil that research and medicine still do not know how to cure. The signs/symptoms of the disease are memory problems, loss of autonomy, dementia and progressive apathy. This disease deprives us of the most precious things we care about - our memories and our identity (1).

The International Alzheimer's Federation estimates that there are 50 million people worldwide suffering from the disease, and predicts that the number will rise to 152 million by 2050 (2). The purpose of this Letter to the Editor is to provide information on the disease prevention factors.

In connection with the prevention of the disease, the idea is promoted: "Healthy lifestyle for a healthy brain". Several factors are crucially important for the prevention of diseases such as Alzheimer's (3).

In Alzheimer's disease, inflammation and insulin resistance injure neurons and inhibit communication between brain cells. Extremely carbohydrate-rich foods that developed societies are accustomed to, lead to insulin resistance (4). Patients with Alzheimer's disease have brain insulin resistance that leads to problems with learning and

reduced cognitive function. Various diets, such as intermittent fasting, the keto diet or the Mediterranean diet of omega-3 fats, fruit and vegetables, nuts and whole grains, and reduced carbohydrates, can reduce the risk of the disease (5).

Regular physical exercise can reduce the risk of developing Alzheimer's disease by up to 50%, moreover, exercise can also slow down the further deterioration of cognitive problems (6). Exercise protects against Alzheimer's disease and other types of dementia by stimulating the brain's ability to maintain old connections, renew and detoxify completely. Given this, aerobic exercise once a week is recommended to build good muscles and maintain them over time (7).

Humans are highly social beings. Older people need to remain socially involved in the prevention of Alzheimer's disease. The priority is to keep in touch with friends and develop new friendships. Activities that can be useful in this direction are organizing a weekly meeting with friends, visiting museums and other public places, as well as caring for a pet (5).

Older people who challenge their brains throughout their lives are less likely to develop Alzheimer's disease. Brain's activity and commitment to solving tasks and problems, such as crossword puzzles and sudoku, have a good effect on brain function (4). Adults who received



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only ten cognitive training sessions not only improved their cognitive functioning in daily activities in the months after training but also continued to show long-term improvement over a long time (2).

Good sleep is extremely important for the brain because it helps the brain get rid of accumulated proteins and neurotoxic wastes that contribute to neurocognitive diseases. Sleep has important functions related to learning and memory. Regular sleep of 7-8 h a night is very important to prevent diseases such as Alzheimer's (8).

Breathing is a major source of energy and proper breathing, supported by special breathing techniques, has a very beneficial effect on the brain. Breathing techniques reduce stress levels, improve the mind's focus and ability to learn, thus preventing brain diseases such as Alzheimer's. This leads to improved cognitive function, memory, concentration and emotional control (9).

Conflict of interest

The authors declare that there is no conflict of interest.

References

1. Dubois B (2019). *Alzheimer. La vérité sur la maladie du siècle*. Editor: Grasset et Fasquelle, pp.: 12-30. ISBN: 9782246817352
2. Decelle D-A (2013). *Alzheimer*. Éditeur: Albin Michel, pp.: 84-104. ISBN: 9782226251527
3. Amouyel P (2018). *Le guide anti-alzheimer; Les secrets d'un cerveau en pleine forme*. Editeur: Cherche midi, pp.: 56-57. ISBN: 9782749155838
4. Held C, Ermini-Fünfschilling D (2010). *Maladie d'Alzheimer: accueillir la démence*. Editeur: Médecine & Hygiène, Collection: Hors collection, pp.:25-82. ISBN: 9782880492717
5. Joyeux H, Vialard D (2017). *Tout savoir pour éviter Alzheimer et Parkinson*, Editeur: Pocket, Collection: Pocket evolution, pp.:12-43. ISBN: 9782266279154
6. Magnon (2015). *Accompagner un Proche en Alzheimer*. Editor: Chronique sociale, pp.43-52. ISBN: 9782367171418
7. Ploton L (2010). *Ce que nous enseignent les malades d'alzheimer*. Editeur: Chronique sociale, pp.:120-123. ISBN: 9782850087967
8. Gitenet M (2021). *Réversibilité de la maladie d'Alzheimer. Clarté Mentale et Mémoire*. Editeur: Dangles, pp.:61-63. ISBN: 9782703312758
9. Colleau I (2015). *Alzheimer*. Editor: Josette Lyon, pp.:78-80. ISBN: 9782843193538