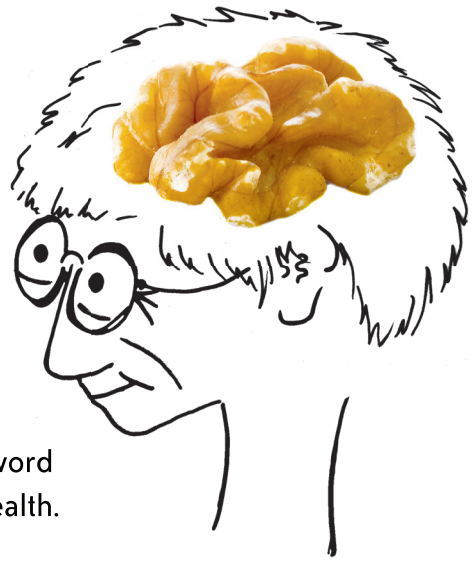


# Engage Your Brain

Studies suggest that consuming specific foods, such as walnuts<sup>1</sup>, being physically active<sup>2</sup> and doing crossword puzzles<sup>3</sup> may help maintain and improve cognitive health.

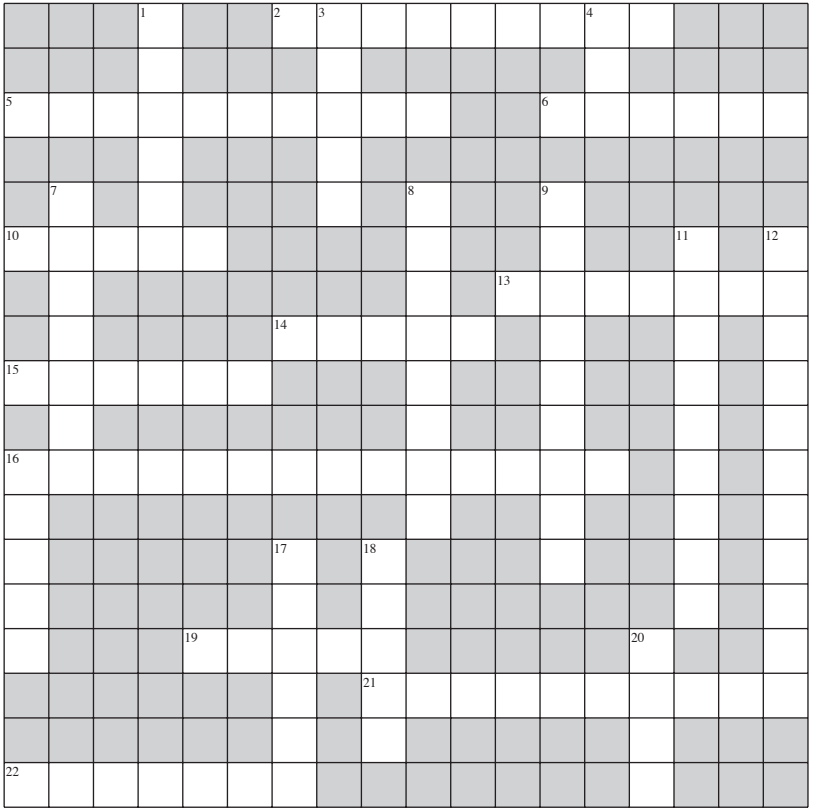


## ACROSS

2. \_\_\_ is a combination of mental processes that includes the ability to learn new things, intuition, judgment, language and remembering.
5. The state of \_\_\_ has more than 4,600 walnut growers.
6. Eating a handful of walnuts daily can play an important part in improving your heart \_\_\_.<sup>4</sup>
10. A serving of walnuts has two grams of \_\_\_, which aids in satiety.<sup>5</sup>
13. A handful of walnuts has four grams of plant-based \_\_\_.<sup>5</sup>
14. The human \_\_\_ is the center of the human nervous system.
15. Including walnuts in your meals, adds a delightful \_\_\_.<sup>5</sup>
16. \_\_\_ acid is the plant-based source of essential omega-3 fatty acids.<sup>5</sup>
19. Walnuts are the only nut with a significant amount of alpha- linolenic (ALA), the plant-based source of \_\_\_-3 fatty acids.<sup>5</sup>
21. Walnuts are a nutritious and \_\_\_ snack choice.
22. Walnuts aid in \_\_\_, a feeling of fullness.

## DOWN

1. \_\_\_ among nuts, walnuts are the only nut comprised primarily of polyunsaturated fat.<sup>5</sup>
3. An \_\_\_ of walnuts contains 10% of your daily value of magnesium (44.79 mg/oz) and phosphorus (98.09 mg/oz).
4. \_\_\_ serving of walnuts is equal to a handful.
7. Walnuts contain magnesium (45 mg per ounce), a \_\_\_ vital to energy production.



8. Walnuts may have the ability to protect the brain by quenching the age-related free \_\_\_.<sup>6</sup>
9. Walnuts are a \_\_\_ ingredient that can be used in salads, entrées and other tasty dishes.
11. Walnuts boost the body's \_\_\_ levels, which can encourage restful sleep.<sup>7</sup>
12. Walnuts are known for their high \_\_\_ activity, which can help fight free radicals.<sup>5</sup>
16. Maintaining cognitive health is a vital part of healthy \_\_\_.<sup>5</sup>
17. Walnuts can help athletes of all levels maintain their \_\_\_.
18. Walnuts are a convenient and heart-healthy \_\_\_ for people on the go.
20. Walnuts are a traditional component in the Mediterranean \_\_\_.

1 Protective Effects of Walnut Extract Against Amyloid Beta Peptide-Induced Cell Death and Oxidative Stress in PC12 Cells  
<http://www.springerlink.com/openurl.asp?genre=article&id=doi:10.1007/s11064-011-0533-z>  
 2 <http://sites.sir.umich.edu/dnn/pag/ResearchProjects/LongitudinalandSurveyResearch/HealthandRetirementStudy/tabid/643/Default.aspx>  
 3 <http://www.nia.nih.gov/NewsAndEvents/PressReleases/PR20020212UseItOrLoseIt.htm>  
 4 Supportive but not conclusive research shows that eating 1.5 ounces of walnuts per day, as part of a low saturated fat and low cholesterol diet, and not resulting in increased

caloric intake may reduce the risk of coronary heart disease. U.S. Food and Drug Administration, March 2004.  
 5 One ounce of walnuts provides 18g of total fat, 2.5g of monounsaturated fat, 13g of polyunsaturated fat, including 2.5 grams of alpha linolenic acid – the plant-based omega-3; 2g of fiber; 4g of protein, 3.68mmol/28g of antioxidants.  
 6 Dose-dependent effects of walnuts on motor and cognitive function in aged rats. British Journal of Nutrition 009;101:1140-1144.  
 7 Melatonin in walnuts: influence on levels of melatonin and total antioxidant capacity of blood. Nutrition. 2005 Sep;21(9):920-4.

# Feed Your Brain

ANSWER A CROSSWORD PUZZLE AND SNACK ON SOME WALNUTS TO KEEP YOUR BRAIN ENGAGED AND ACTIVE!

According to the National Institute of Health, as many as 5.1 million Americans may currently have Alzheimer's disease. The disease is the fifth leading cause of death in Americans age 65 and older and is expected to increase considerably with the aging of the baby boomer generation<sup>1</sup>. Although research has not found a way to prevent dementia or Alzheimer's disease, cognitive decline may be preventable.

New findings reported in *Neurochemical Research*<sup>2</sup> found walnut extract to offer cell protection against oxidative stress and cell death

caused by Amyloid beta-protein — the major component of amyloid deposits in the brain of individuals with Alzheimer's disease.

Additional animal research published in the *British Journal of Nutrition*<sup>3</sup> found a diet containing as much as 6 percent walnuts (equivalent to one ounce or 1/4 cup in humans) was able to reverse age-related motor and cognitive deficits in aged rats.

Studies have also shown that keeping the brain active (through activities such as crossword puzzles, reading and listening to the radio) is associated with reduced AD risk.<sup>4</sup>



1 [http://consensus.nih.gov/2010/docs/alz/ALZ\\_Final\\_Statement.pdf](http://consensus.nih.gov/2010/docs/alz/ALZ_Final_Statement.pdf)

2 Protective Effects of Walnut Extract Against Amyloid Beta Peptide-Induced Cell Death and Oxidative Stress in PC12 Cells <http://www.springerlink.com/openurl.asp?genre=article&id=doi:10.1007/s11064-011-0533-z>

3 *British Journal of Nutrition* (2009),101,1140-1144: Dose-dependent effects of walnuts on motor and cognitive function in aged rats. <http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=5465528>

4 <http://www.rush.edu/rumc/page-1099611542043.html>

