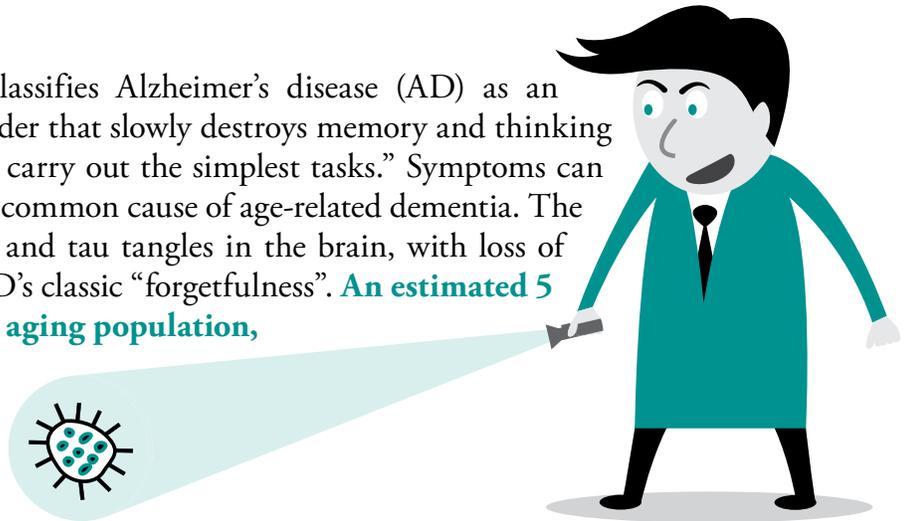


RESVERATROL

May Help Prevent & Treat Alzheimer's Disease

by Michael Smith PhD MDsc

The National Institute on Aging classifies Alzheimer's disease (AD) as an “irreversible, progressive brain disorder that slowly destroys memory and thinking skills and, eventually, the ability to carry out the simplest tasks.” Symptoms can appear in your mid-60s and AD is the most common cause of age-related dementia. The classic markers of AD are amyloid plaques and tau tangles in the brain, with loss of connections between neurons that causes AD's classic “forgetfulness”. **An estimated 5 million Americans have AD and with the aging population, that figure is expected to rise.** Part of the problem is that the disease process is silent and happens long before symptoms manifest. Perhaps a preventative, pro-active option is available.



Resveratrol is a small compound plentiful in red grapes, grape juice, cocoa and peanuts. In the early 1990s it became an interesting natural product for researchers to study and has been under intense investigation ever since.

It was thought years ago that resveratrol only protects against heart disease since French people, who drink a lot of red wine, have much less heart disease than other cultures. There is now abundant evidence that resveratrol is an excellent anti-oxidant as well as immune booster and the recent exciting news is that it may play a positive role fighting AD.

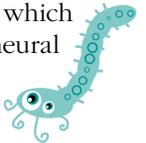
A very important fact about AD which was recently discovered is the correlation between AD and infections. People with weakened immune systems often suffer persistent infection which ends in AD. There are significant associations between AD and many pathogens, including Herpes simplex (HSV-1), *Herpesviridae*, *Chlamydomphila pneumoniae*, several spirochetes, *Helicobacter pylori* and many periodontal diseases₁.

Bacterial and viral DNA and RNA, and associated proteins from chronic infections, increase the expression of pro-inflammatory molecules which continually activate and challenge the human immune system. Chronic infections induce the pathology or disease process of AD which includes the accumulation of amyloid- β peptides A β 40 and A β 42 or plaques and phosphorylation of tau protein, neuronal injury, and cell



apoptosis (death). In other words, the unchecked pathology progresses to Alzheimer's disease.

We now finally understand that AD develops as a response to bacterial and/or viral invasion of nervous system cells and these cells respond by surrounding the invaders with amyloids and tau proteins₂. Chronic infections result in neurons “filling up” with amyloid which impairs neural function and causes neural cell death, hence AD.



Since there is no AD cure, there is good news about AD treatments coming from lab and clinical research. It was recently reported that amyloid- β peptide-induced neuronal death is reduced in the presence of resveratrol. Resveratrol plays a positive role against AD by promoting amyloid- β clearance₃. Also, resveratrol activates a newly discovered enzyme, SIRT-1, which may protect neurons against apoptosis, tissue inflammation and oxidative stress. SIRT-1 is an important protein involved with cell signaling and inflammation.

These study results suggest that SIRT enzymes might be new targets for the treatment of several neurological disorders such as AD, stroke and Parkinson's disease₃. Resveratrol also efficiently counteracts AD by improving mitochondrial function and through its antioxidant activity reduces peroxide (ROS) generation₄. The antioxidant activity of resveratrol has been well documented in many previous studies.

Continued

Resveratrol *continued*

Summary

Resveratrol exhibits several good properties which helps control AD; breaking down amyloid-peptides, stimulating energy production from the mitochondria, and reducing ROS damage. The only problem is that resveratrol is not produced by the human metabolism and like vitamins C, E and alpha-lipoic acid needs to be taken as a supplement in human daily diet. This good news has been recently reinforced by a strict clinical study of over 100 AD patients who nicely benefited by taking from 500 to 2,000 mg/day of resveratrol for a year₅. But why wait to develop AD to take resveratrol?

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Michael Smith PhD MDSc, advanced studies in biochemistry, physiology and medicine. Dr. Smith has co-authored more than 30 scientific and medical articles in journals and lectured extensively. He has designed many new diagnostic tests for clinical use. Dr. Smith became interested in nutritional supplements after reading Linus Pauling and while doing research on oxygen and carbon monoxide toxicities.

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