

## HELPLINE HOT TOPIC for NOVEMBER 2018

### Worried About Alzheimer's? Try Gardening!

by Cynthia Zimmerman

Intuitively, I think we all recognize that gardening is an activity that is good for us even if we don't know the finer points of why. Recently, I had the opportunity to listen to twelve interviews with physicians, psychiatrists, neurosurgeons, neurologists, neurobiologists and researchers who are breaking new ground in the area of researching, diagnosing, treating, reversing, and preventing Alzheimer's dementia. Repeatedly they spoke about the greatest factors in preventing and/or reversing the disease:

- **Work** (doing something challenging and meaningful, education);
- **Physical Health** (exercise, hormones, inflammation, infection, toxins, nutrition, sleep);
- **Human Relationships** (family, socialization and interaction);
- **Spirituality** (prayer, meditation, destressing).

As I listened I realized that we gardeners are a very fortunate lot because we involve ourselves in a pursuit that translates into far more than lovely gardens, pristine lawns, squash and tomatoes to share with the neighbors, bouquets, bees, and butterflies. We get exercise, sunshine, fresh air, challenges mentally and physically, satisfaction from our labor, and a sense of oneness with our environment and the universe. As Master Gardeners we also find collegiality in educating ourselves and others, philanthropic purpose, and many opportunities for social interaction.

As reported by CNN Health July 8, 2011 gardening may reduce your risk of developing dementia. *"Two separate studies that followed people in their 60s and 70s for up to 16 years found, respectively, that those who gardened regularly had a 36% and 47% lower risk of dementia than non-gardeners, even when a range of other health factors were taken into account."*

If you think about it, this makes a lot of sense because gardening checks off all the boxes of the factors preventing and/or reversing Alzheimer's. It certainly provides opportunities for education as well as challenging and meaningful work. Some studies have shown that mental clarity can be linked to gardening. Learning and sensory awareness are also promoted. The work of gardening can stimulate your brain as you plan what to plant, when to schedule what needs to be done, and make decisions about whether or not to use herbicides, pesticides, etc. Your brain is strengthened by the problem solving elements of gardening and challenged by learning new techniques, plants, and approaches to gardening.

Undeniably physical health can be improved through gardening. One group of experts researching the prevention of Alzheimer's found that regular exercise can protect the brain and that those who are physically active cut their risk of dementia by 50 per cent. In the *Centers for Disease Control's 2008 Physical Activity Guidelines for Americans*, gardening is classified as a moderate-to-vigorous activity. According to the CDC 2.5 hours of moderate-intensity activity such as gardening each week can reduce obesity, high blood pressure, type 2 diabetes, heart disease, stroke, and depression, all of which can contribute to the onset of Alzheimer's. Additionally, one study reported in *Neurology* found that seniors who have low vitamin D levels may double their risk of dementia as compared with normal levels. Every time you step out in your garden and the sun is shining, your body and brain benefit from an extra dose of vitamin D.

As part of physical health, sleep, 7-8 hours per night, is crucial for a healthy brain. Dr. Gregg Jacob, a Behavioral Sleep Medicine Specialist of Harvard University, maintains that exercise, in this case gardening, helps create deeper sleep patterns and helps with falling asleep faster. With the right amount of sleep the brain can organize, store, regroup, and operate optimally.

In recent years, it has been scientifically proven that gardening is a stress reliever. An experiment conducted in the Netherlands compared gardening to reading as a stress-relieving activity. *“Gardening and reading each led to decreases in cortisol during the recovery period, but decreases were significantly stronger in the gardening group. Positive mood was fully restored after gardening, but further deteriorated during reading”- Journal of Health Psychology.* High levels of cortisol increase the risk for depression, mental illness, and lower life expectancy. Cortisol also affects blood sugar, the hormone insulin and insulin receptors in the brain; too much of which can interfere with learning and memory, major factors in maintaining a healthy brain as we age.

Walking barefoot in the garden and sticking your hands in the dirt can be beneficial to your brain health in a way we might not have realized. Depression can be relieved by gardening because of antidepressant microbes in the soil. *Mycobacterium vaccae*, bacteria commonly in soil, has been found to trigger the release of serotonin, which elevates mood and decreases anxiety. It has also been found to improve cognitive function and possibly even treat cancer and other diseases. So go ahead and get dirty.

According to the Alzheimer’s Research and Prevention Foundation there are as many as 5.4 million Americans currently living with Alzheimer’s dementia. By the year 2050 it is projected that the number of Americans with this disease could triple to 16 million. Those of us who are actively gardening are being proactive in protecting ourselves from joining those numbers. As Master Gardeners we are assisting and encouraging those around us to join our ranks, one garden at a time, towards building healthy bodies, brains, and brighter futures less dominated by Alzheimer’s.

Why Gardening is Good for your Health

<http://www.cnn.com/2011/HEALTH/07/08/why.gardening.good/index.html>

Vitamin D and the Risk of Dementia and Alzheimer’s

<http://n.neurology.org/content/early/2014/08/06/WNL.0000000000000755>

Gardening Promotes Neuroendocrine and Affective Restoration from Stress

<http://hpq.sagepub.com/content/16/1/3.short>

It’s in the Dirt! Bacteria in Soil May Make Us Happier, Smarter

<http://www.healinglandscapes.org/blog/2011/01/its-in-the-dirt-bacteria-in-soil-makes-us-happier-smarter/>

Is Gardening the Key to Preventing Alzheimer's?

<https://www.dailymail.co.uk/health/article-3487834/Is-GARDENING-key-preventing-Alzheimer-s-Regular-exercise-slashes-risk-dementia-half.html>