

# National Alzheimer's Project Act (NAPA)

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The information that follows was included as an attachment to an email submitted by the public.

For more information about NAPA, visit the NAPA website at:

<http://aspe.hhs.gov/national-alzheimers-project-act>

## Aromatherapy in the Treatment of Alzheimer's Disease

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**I**n the eighteenth century, John Hill wrote in the *Family Herbal*: "Sage will retard the rapid progress of decay that treads upon our heels so fast in latter years of life, will preserve faculty and memory more valuable to the rational mind than life itself."

Hill's comment reveals two somewhat remarkable facts: though Alzheimer's disease wasn't "discovered" until the early twentieth century, knowledge of dementia has existed for a very long time and secondly through centuries of observations Europeans (and others) knew that aromatic plants were useful in treating dementia.

Now scientific knowl-

edge and historical observations have begun to merge, as we come to understand the chemical processes by which the essential oils used in aromatherapy help combat dementia. Specifically, essential oils prevent and partially reverse the damage done to memory by oxidants, most notably by peroxynitrites.

Peroxyntrites are the chief cause of memory impairment in Alzheimer's disease, as they prevent the formation of acetylcholine, the main compound involved in memory retrieval. The chemicals in essential oils convert peroxynitrites into nitrogen dioxide and water. They also add hydrogen back to choline transport systems, muscarinic receptors (involved in the uptake of choline), and choline acetyltransferases (the enzyme

that puts acetylcholine together), thus increasing the production of acetylcholine and thereby partially reversing memory deficits.

Case studies of improvement in language skills, awareness, alertness, and short-term memory in Alzheimer's patients using aromatherapy are now being bolstered by a series of small-scale clinical trials. To quote from one of these trials: "In conclusion, we found aromatherapy an efficacious non-pharmacological therapy for dementia. Aromatherapy may have some potential for improving cognitive function, especially in AD patients" (Effect of aromatherapy on patients with Alzheimer's disease). In this trial, the essential oils used were rosemary, lavender, orange, and lemon.

A review of clinical trials



involving sage and lemon balm similarly concluded: "These herbal treatments may well provide effective and well-tolerated treatments for dementia, either alone, in combination, or as an adjunct to conventional treatments" (The psychopharmacology of European herbs with cognition-enhancing properties).

Historical observations, case studies, and clinical trials indicate that the chemicals contained in essential oils are surprisingly effective in the treatment of Alzheimer's disease. Perhaps, modern medicine despite its emphasis on expensive synthetic drugs with harmful side effects will one day come to the same conclusion that John Hill did more than two hundred years ago.

### Ask the Doctor

attack or other acute conditions. Loss of pain sensation is a particularly serious problem for people with diabetes, contributing to the high rate of lower limb amputations among this population.

Autonomic nerve dysfunction can become life threatening and may require emergency medical care in cases when breathing becomes impaired or

when the heart begins beating irregularly. Common symptoms of autonomic nerve damage include an inability to sweat normally, which may lead to heat intolerance; a loss of bladder control, which may cause infection or incontinence; and an inability to control muscles that expand or contract blood vessels to maintain safe blood pressure levels. A loss of control over blood pressure can cause dizzi-

ness, lightheadedness, or even fainting when a person moves suddenly from a seated to a standing position.

Gastrointestinal symptoms frequently accompany autonomic neuropathy. Nerves controlling intestinal muscle contractions often malfunction, leading to diarrhea, constipation, or incontinence. Many people also have problems eating or swallowing if certain autonomic nerves are

affected.

Until recently there were very few medical treatments that could alleviate symptoms. New, pioneering nerve decompression medical treatments are now available to restore sensation in your hands and feet.

For more information, contact your primary care physician or University Health System, at the University of Nevada School of Medicine at [www.UHSNevada.org](http://www.UHSNevada.org).