Alzheimer’s Disease: Treatments

Currently, there is no cure for Alzheimer’s disease. However, there are medications that can help control its symptoms and manage agitation, depression, or psychotic symptoms (hallucinations or delusions) that may occur as the disease progresses. Consult a physician before taking any medications. Commonly prescribed treatments include the following:

Cholinesterase Inhibitors

There are four drugs approved by the U.S. Food and Drug Administration (FDA), called cholinesterase inhibitors, that are designed to regulate and manage Alzheimer’s disease symptoms. People suffering from the disease have low levels of acetylcholine, an important brain chemical involved in nerve cell communication. Cholinesterase inhibitors slow the metabolic breakdown of acetylcholine and make more of this chemical available for communication between cells. This helps slow the progression of cognitive impairment and can be effective for some patients in the early to middle stages of the disease.

The four FDA-approved cholinesterase inhibitors are Razadyne® (galantamine), Exelon® (rivastigmine), Aricept® (donepezil), and Cognex® (tacrine). All four treatments are approved for mild to moderate symptoms of Alzheimer's disease. In 2006, one of the treatments, Aricept, was approved by the FDA for the management of severe Alzheimer’s symptoms.

Aricept

Generic name: donepezil
Year approved by the FDA: 1996
Effective for: Early, moderate, and severe Alzheimer’s disease
How it works: Aricept prevents the breakdown of acetylcholine in the brain.
Most-common side effects: Diarrhea, dizziness, loss of appetite, muscle cramps, nausea, tiredness, trouble sleeping, vomiting, weight loss
Miscellaneous: Aricept may also have a limited slowing effect on the progression from mild cognitive impairment (MCI) to Alzheimer’s Disease. Study results published in April 2005 by the New England Journal of Medicine indicated that over the first year of a three-year trial, those with MCI treated with Aricept had a reduced risk of progressing to Alzheimer’s Disease compared to participants who took vitamin E or a...
placebo (an inactive pill). However, by the end of the study, there were no differences among the three groups except for those with the ApoE4 gene. Aricept’s effect lasted up to three years for these participants. Previous studies have indicated those with the ApoE4 gene have a higher chance of developing Alzheimer’s Disease than the general population.

**Cognex**
Generic name: tacrine  
Year approved by the FDA: 1993 (Cognex is still available but no longer actively marketed by the manufacturer, due to the severe side effects.)  
Effective for: Early to moderate Alzheimer’s disease  
How it works: Cognex prevents the breakdown of acetylcholine in the brain.  
Most-common side effects: Constipation, diarrhea, gas, loss of appetite, muscle aches or pain, nausea, stomach upset, stuffy nose, vomiting, weight loss, with possible liver damage

**Exelon**
Generic name: rivastigmine  
Year approved by the FDA: 2000  
Effective for: Early to moderate Alzheimer’s disease  
How it works: Exelon prevents the breakdown of acetylcholine and butyrylcholine (a chemical similar to acetylcholine) in the brain.

**Razadyne**
Generic name: galantamine  
Year approved by the FDA: 2001  
Effective for: Early to moderate Alzheimer’s disease  
How it works: Razadyne prevents the breakdown of acetylcholine and stimulates nicotinic receptors to release more acetylcholine in the brain.  
Most-common side effects: Nausea, vomiting, diarrhea, weight loss, dizziness, headache, tiredness  
Miscellaneous: This medication was formerly known as Reminyl®.

**Namenda**
Namenda® (memantine) was the first drug approved by the FDA to treat the symptoms of moderate to severe Alzheimer’s disease. It appears to protect the brain’s nerve cells against excess amounts of glutamate, a messenger chemical released in large amounts by cells damaged by Alzheimer's (and some other
neurological disorders). When glutamate attaches to cell surface "docking sites" called N-methyl-D-aspartate (NMDA) receptors, calcium can flow freely into the cell, which may lead to cell degeneration. Namenda may prevent this destructive sequence by adjusting the activity of glutamate. For many years, Namenda was available in some European countries to treat moderate to severe Alzheimer's disease, and it has been available in the U.S. since October 2003. Namenda is generally well tolerated; the most common side effects are back pain, constipation, diarrhea, dizziness, drowsiness, headache, pain, and weight gain.

In July of 2010, Namenda XR (a 28-milligram, once-daily, extended-release form of the medication) was approved by the FDA. The most common side effects of Namenda XR are headaches, diarrhea, dizziness, high blood pressure (hypertension), and the flu.

**Treatment for Anxiety, Depression, and Psychosis**

Often, as Alzheimer's disease progresses, people experience depression, agitation, and psychotic symptoms (paranoid thoughts, delusions, or hallucinations). These behaviors may be manifested verbally (screaming, repetitive questions, etc.) or physically (hoarding, pacing, etc.), and they can sometimes lead to aggression, hyperactivity, or combativeness. The symptoms may have an underlying medical origin such as a drug interaction or physical pain. If this is suspected, a physician should be consulted. Agitation or psychotic behavior may also be triggered by something that has altered in the person's environment. Often, a change in routine, caregivers, or surroundings can cause fear, anxiety, or fatigue and lead to agitation. The individual may be unable to communicate, be frustrated by his or her limitations, misunderstand what is happening, or simply forget how to respond appropriately. In these cases, non-medical intervention is recommended to determine the source of the problem, modify the environment, and change the behavior. If non-medical intervention does not work or the person becomes a danger to himself or others, a physician should be consulted to evaluate the need for medical treatments for depression, psychosis, or anxiety.

**Potential Future Treatments**

Many potential treatments for Alzheimer's disease are being investigated in laboratories and tested in human clinical trials. For snapshots of current investigations, please visit www.clinicaltrials.gov and enter "Alzheimer" in the search field. Clinicaltrials.gov is a database maintained by the National Institutes
of Health that lists government- and privately-sponsored clinical trials conducted in the United States and around the world. The National Institute on Aging’s ADEAR Center clinical trials database is at www.alzheimers.org/clinicaltrials/search.asp and 1-800-438-4380.

Another source of trial information is the Alzheimer Research Forum, a nonprofit organization that manages a resource called Drugs in Clinical Trials. Visit their listing at www.alzforum.org/drg/drc.

ResearchMatch is a free and secure registry that brings together people who are trying to find research studies and researchers who are looking for people to participate in their studies, at www.researchmatch.org.

Disclaimer: The information provided is a public service of BrightFocus Foundation and is not intended to constitute medical advice. Please consult your physician for personalized medical advice; all medications and supplements should only be taken under medical supervision. BrightFocus Foundation does not endorse any medical product or therapy.

For more information, contact: BrightFocus Foundation 22512 Gateway Center Drive Clarksburg, MD 20871 1-800-437-2423 info@brightfocus.org

Visit us online at: brightfocus.org Visitanos en linea: brightfocus.org/PubsEspanol Connect and share: brightfocus.org/Connect

© BrightFocus Foundation, 2013