MEDICATIONS TO TREAT ALZHEIMER’S AND VASCULAR DEMENTIAS

Approximately 75% of all cases of dementia are caused by Alzheimer’s Disease or vascular brain disease (small strokes), or by a combination of both disorders. New medications are now available that, while not a cure, have been effective in improving mental function and slowing disease progression in persons with Alzheimer’s Disease. Research studies have showed that these medications may also benefit those with vascular dementia, and with mixed Alzheimer’s and vascular dementia.

WHAT MEDICATIONS ARE CURRENTLY BEING PRESCRIBED?

There are two classes of medications currently being prescribed to treat Alzheimer’s Dementia: “Cholinesterase Inhibitors” such as Aricept (Donepezil), Exelon (Rivastigmine), and Reminyl (Galantamine); and an “NMDA Receptor Antagonist”, Namenda (Memantine).

HOW DO THESE MEDICATIONS WORK?

Cholinesterase Inhibitors: Acetylcholine is a substance manufactured by nerve cells in the brain. It helps transmit “messages” between cells, allowing a person to think and perform tasks. Alzheimer’s Disease and vascular brain disease both destroy some of the brain cells that make acetylcholine. Cholinesterase inhibitors temporarily boost the levels of acetylcholine in the brain, thereby preserving memory and cognitive function.

NMDA Receptor Antagonists regulate the activity of glutamate, another “messenger” chemical in the brain. Glutamate triggers NMDA receptors in the brain to allow a controlled amount of calcium to flow into nerve cells to help the brain process, store and retrieve information. Excess amounts of glutamate cause NMDA receptors to allow too much calcium into nerve cells, leading to disruption and death of cells. Namenda may protect cells against excess glutamate by partially blocking the NMDA receptors.

WHAT CAN I EXPECT THESE MEDICATIONS TO DO FOR MY LOVED ONE?

Cholinesterase Inhibitors: From 30%-50% of those taking cholinesterase inhibitors experience a mild but noticeable improvement in attention, concentration and in the ability to perform daily activities. The average improvement was comparable to “rolling back” the disease symptoms anywhere from 6-12 months. Cholinesterase Inhibitors appear to be most effective in the early to middle stages of dementia.

NMDA Receptor Antagonists: In US clinical studies, Mementine has proven modestly effective in improving functional performance in persons with moderate to late-stage dementia. It may be most effective when used along with a cholinesterase inhibitor.

While these medications do not completely stop the progression of dementia, they appear to slow down the rate of progression. The benefits from taking such medications include easing the burden of family caregivers and delaying placement of a loved one in a long term care facility.
WHAT SHOULD BE CONSIDERED WHEN USING THESE MEDICATIONS?

Dementia medications differ in two main areas: the number of daily doses required and the types of potential side effects. **Aricept** is taken once daily. **Exelon**, **Reminyl** and **Namenda** are taken twice daily.

The most common side effects of **Aricept**, **Exelon** and **Reminyl** are nausea, vomiting, loss of appetite and diarrhea. The most common side effects of **Namenda** are dizziness, headache and constipation. When they occur, these symptoms tend to be mild and transient in nature. Side effects may be prevented by starting out with the smallest possible dose of medication, then gradually increasing it to the highest dose. When side effects do appear, they may be able to be overcome by reducing the dose for a week or so, and then increasing it again. These medications may not be appropriate for persons with certain medical conditions. Your physician can determine whether a person has any medical conditions or potential risk factors that would preclude them using these medications.

As a rule of thumb, if a person is taking one of these medications - and is doing well - they should not switch to another. If they are not doing well on a particular medication (i.e. having side effects, or showing no benefit after 6 months of use), it would be reasonable to stop that drug and to then start another, either in the same or a different class. If a person cannot take, or does not benefit from, any of these currently prescribed medications, it would be reasonable to consider enrolling them in a clinical research trial for medications that are still being tested.

WHAT DO THESE MEDICATIONS COST?

The current cost for a one-month’s supply of **Aricept**, **Exelon**, **Reminyl** or **Namenda** is approximately $130. The cost may be partially covered by some Medicare supplement insurance policies. The pharmaceutical companies that produce these medications may also offer them free or at a discount to persons of limited means, and without insurance coverage for medications. Speak to your physician or pharmacist about these Patient Assistance Programs and discount cards, or go online to the following sites:

- **Benefits Checkup Rx**: www.benefitscheckup.org
- **Medicare.gov**: www.medicare.gov/Prescription/Home.asp
- **Helping Patients.org**: www.helpingpatients.org

HOW DO I OBTAIN A PRESCRIPTION FOR THESE MEDICATIONS?

Any medical doctor may prescribe them. However, it is essential that an accurate diagnosis for the cause of cognitive problems be made first. To do this, the physician must perform a thorough physical examination, blood tests and a brain scan. The physician should also administer basic cognitive tests, and should review all the medication the person currently takes to look for possible side effects. Finally, the physician should gather from the family a detailed history of the type of onset and progression of the cognitive and functional decline, and the type of symptoms being exhibited. Such a thorough evaluation will help the physician identify and treat other medical conditions that may be mistaken for Alzheimer’s or vascular brain disease.
PREPARATIONS THAT MAY HELP PRESERVE COGNITION

VITAMIN E:

All working cells in the body produce chemical byproducts that interact with other compounds in the cells. These byproducts (called “free radicals”) are toxic and can, over time, damage the cells. It is theorized that the damage done by free radicals may cause or contribute to the death of nerve cells in the brain which is what happens with Alzheimer’s Disease. While the body has an elaborate system to “mop up” these free radicals, antioxidants such as Vitamin E also aid in this clean up. One study indicated that persons suffering from Alzheimer’s Disease, who take a large dose of Vitamin E (1000 IU twice daily) showed a mild but measurable slowing of their disease progression. Because Vitamin E has a mild blood-thinning effect, it could interact with other medications used to thin the blood. Other potential side effects include nausea, fatigue, muscle weakness, headaches and blurred vision.

GINKGO BILOBA:

Ginkgo Biloba is a compound extracted from the ginkgo tree. It is an herbal remedy commonly prescribed in Europe to improve cognitive function. Like Vitamin E, Ginkgo Biloba is an antioxidant that helps the body clean up free radicals, the toxic byproducts produced by cells in the body. So far, the few studies that have been performed to test the effectiveness of Ginkgo Biloba in preventing the onset or slowing the course of cognitive decline have been small, and mostly sponsored by drug companies with a vested interest in selling it. Therefore, more scientific studies are needed before Ginkgo Biloba can be widely recommended. Ginkgo Biloba is believed to produce few side effects. Those most commonly reported are headaches, nausea, vomiting and diarrhea. Like Vitamin E, Ginkgo Biloba has a mild blood-thinning effect and could interact with other medications used to thin the blood. Because of this, it should not be taken by a person who regularly takes Vitamin E.

NON-STERoidal ANTI-INFLAMMATORY DRUGS (NSAIDS):

A major research study followed large numbers of people for many years to establish normal patterns of aging. The study found that individuals who had taken NSAIDS for more than two years had an approximately 60% reduction in the rate of developing Alzheimer’s Disease. Once Alzheimer’s Disease is present, however, studies show NSAIDS to have little if any effect. While Ibuprofen is the most widely used NSAID, most, if not all, NSAIDS are the same and generic or “store brands” are equally effective and less costly. Scientists have found evidence of inflammation in the brain of persons with Alzheimer’s Disease, and speculate that NSAIDS may reduce inflammation there as they do elsewhere in the body. Potential side effects of NSAIDS include irritation, bleeding and ulcers in the stomach, and impaired kidney function.
ASPIRIN:

While Aspirin has not been shown to reduce the rate of developing Alzheimer’s Disease, it is widely recognized as a protective agent against cardiovascular disease, the second most common cause of dementia, and the leading cause of heart attack and stroke. Aspirin works to thin the blood, reducing the likelihood of clots. It also retards the growth of fatty plaques on the inner walls of arteries. Tylenol (Acetaminophen) offers no benefit to reduce the onset of any form of dementia. Like NSAIDS, Aspirin may produce side effects such as gastric bleeding and ulcers, and kidney damage.

ESTROGEN:

The National Institutes of Health, through the Women’s Health Initiative, is studying 70,000 women age 50 and older to assess the long-term benefits of hormone replacement therapy to prevent memory loss, heart disease and osteoporosis. A possible increased risk of cancers of the breast and uterus is also being studied. Results are expected by the year 2007. So far, there is no evidence that estrogen prevents the development of Alzheimer’s Disease, but some studies have suggested that women who have taken estrogen over time are less likely to develop Alzheimer’s Disease than those who had not taken estrogen. However, there is now good evidence that once a woman develops Alzheimer’s Disease, estrogen does not help to either slow down or reverse the progression of the disease. Until scientific results are available, women considering hormone replacement therapy should learn as much as they can about the benefits and risks of estrogen, and consider their personal and family medical histories for such things as heart attack and stroke, osteoporosis, breast cancer and Alzheimer’s Disease. One potentially serious side effect of estrogen is its tendency to produce blood clots in women with a personal history or genetic predisposition for blood clots.

ALWAYS CONSULT YOUR PHYSICIAN BEFORE DECIDING WHETHER TO TAKE ANY DRUG, HERBAL REMEDY, OR OTHER PREPARATION.