Introduction

Health professionals often divide the symptoms of Alzheimer's disease into "cognitive" and "behavioral and psychiatric" categories.

- Cognitive symptoms affect memory, language, judgment, planning, ability to pay attention and other thought processes.
- Behavioral and psychiatric symptoms affect the way we feel and act.

Treatments for cognitive symptoms

The U.S. Food and Drug Administration (FDA) has approved two types of medications to treat cognitive symptoms of Alzheimer's disease. These drugs affect the activity of two different chemicals involved in carrying messages between the brain's nerve cells.

1. **Cholinesterase (KOH-luh-NES-ter-ays) inhibitors** prevent the breakdown of acetylcholine (a-SEA-til-KOH-lean), a chemical messenger important for learning and memory.

These drugs:

- Support communication among nerve cells by keeping acetylcholine levels high.
- On average, delay worsening of symptoms for 6 to 12 months for about half the people who take them. Some experts believe a small percentage of people may benefit more dramatically.

Three cholinesterase inhibitors are commonly prescribed:

- Donepezil (Aricept), approved to treat all stages of Alzheimer's disease.
- Rivastigmine (Exelon), approved to treat mild to moderate Alzheimer's.
- Galantamine (Razadyne), approved to treat mild to moderate Alzheimer's.

2. **Memantine (Namenda)** works by regulating the activity of glutamate, a different messenger chemical involved in learning and memory.

Memantine:

- Is currently the only drug of its type approved to treat Alzheimer's.
- Temporarily delays worsening of symptoms for some people. Many experts consider its degree of benefit is similar to the cholinesterase inhibitors.

Treatments-at-a-glance

<table>
<thead>
<tr>
<th>Generic</th>
<th>Brand</th>
<th>Approved For</th>
<th>Side Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>donepezil</td>
<td>Aricept</td>
<td>All stages</td>
<td>Nausea, vomiting, loss of appetite and increased frequency of bowel</td>
</tr>
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</table>
### Treatments for behavioral and psychiatric symptoms

For many individuals, Alzheimer’s disease affects the way they feel and act in addition to its impact on memory and other thought processes. As with cognitive symptoms, the chief underlying cause is progressive destruction of brain cells. In different stages of Alzheimer's, people may experience:

- Physical or verbal outbursts
- General emotional distress
- Restlessness, pacing, shredding paper or tissues and yelling
- Hallucinations (seeing, hearing or feeling things that are not really there)
- Delusions (firmly held belief in things that are not real)

Many diagnosed individuals and their families find these symptoms the most challenging and distressing effects of the disease. For more information about behaviors in Alzheimer's disease, please see the [Behaviors section](http://www.alz.org/alzheimers_disease_standard_prescriptions.asp).

There are two approaches to managing behavioral symptoms: using medications specifically to control the symptoms or non-drug strategies. Non-drug approaches should always be tried first.

### Non-drug approaches

Steps to developing successful non-drug treatments include:

- Recognizing that the person is not just "acting mean or ornery," but is having further symptoms of the disease
- Understanding the cause and how the symptom may relate to the experience of the person with Alzheimer's
- Changing the person's environment to resolve challenges and obstacles to comfort, security and ease of mind

Everyone who develops behavioral symptoms should receive a thorough medical exam, especially if symptoms appear suddenly. Even though the chief cause of behavioral symptoms is the effect of Alzheimer's disease on the brain, an exam may reveal treatable conditions that are contributing to the behavior.

### Treatable conditions may include:

- **Drug side effects.** Many people with Alzheimer's take prescription medications for other health problems. Drug side effects or interactions between drugs can sometimes affect behavior.
- **Physical discomfort.** As the disease gets worse, those with Alzheimer's have more and more difficulty communicating about their experience. As a result, symptoms of common illnesses may sometimes go undetected. Pain from infections of the urinary tract, ear or sinuses may lead to restlessness or agitation. Discomfort from a full bladder, constipation, or feeling too hot or too cold may also be expressed through behavior.

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<table>
<thead>
<tr>
<th>Treatment</th>
<th>Brand Name</th>
<th>Severity</th>
<th>Side Effects</th>
</tr>
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<tbody>
<tr>
<td>galantamine</td>
<td>Razadyne</td>
<td>Mild to moderate</td>
<td>Nausea, vomiting, loss of appetite and increased frequency of bowel movements.</td>
</tr>
<tr>
<td>memantine</td>
<td>Namenda</td>
<td>Moderate to severe</td>
<td>Headache, constipation, confusion and dizziness.</td>
</tr>
<tr>
<td>rivastigimine</td>
<td>Exelon</td>
<td>Mild to moderate</td>
<td>Nausea, vomiting, loss of appetite and increased frequency of bowel movements.</td>
</tr>
<tr>
<td>tacrine</td>
<td>Cognex</td>
<td>Mild to moderate</td>
<td>Possible liver damage, nausea, and vomiting.</td>
</tr>
</tbody>
</table>
- **Uncorrected problems with hearing or vision.** These can contribute to confusion and frustration and foster a sense of isolation.

Factors in the environment may also trigger behaviors. Events or changes in a person's surroundings may contribute to a sense of uneasiness, or increase fear or confusion.

**Situations affecting behavior may include:**
- Moving to a new residence or nursing home
- Changes in the environment or caregiver arrangements
- Misperceived threats
- Admission to a hospital
- Being asked to bathe or change clothes
- Fear and fatigue resulting from trying to make sense out of an increasingly confusing world

**Potential solutions**
- Monitor personal comfort. Check for pain, hunger, thirst, constipation, full bladder, fatigue, infections and skin irritation. Maintain a comfortable room temperature.
- Avoid being confrontational or arguing about facts; instead, respond to the feeling behind what is being expressed. For example, if a person expresses a wish to go visit a parent who died years ago, don't point out that the parent is dead. Instead, say, "Your mother is a wonderful person. I would like to see her too."
- Redirect the person's attention. Try to remain flexible, patient and supportive.
- Create a calm environment. Avoid noise, glare, insecure space, and too much background distraction, including television.
- Simplify the environment, tasks and solutions.
- Allow adequate rest between stimulating events.
- Provide a security object or privacy.
- Equip doors and gates with safety locks.
- Remove guns.

**Medications for behavioral symptoms**

If non-drug approaches fail after they have been applied consistently, introducing medications may be appropriate when individuals have severe symptoms or have the potential to harm themselves or others. Medications can be effective in some situations, but they must be used carefully and are most effective when combined with non-drug approaches.

Medications should target specific symptoms so their effects can be monitored. In general, it is best to start with a low dose of a single drug. Effective treatment of one core symptom may sometimes help relieve other symptoms. For example, some antidepressants may also help people sleep better. Individuals taking medications for behavioral symptoms must be closely monitored. People with dementia are susceptible to serious side effects, including stroke and an increased risk of death from antipsychotic medications. Sometimes medications can cause an increase in the symptom being treated. Without careful evaluation, some medical providers will increase rather than decrease the dose, putting the person at greater risk. Risk and potential benefits of a drug should be carefully analyzed for any individual.

When considering use of medications, it is important to understand that no drugs are specifically approved by the U.S. Food and Drug Administration (FDA) to treat behavioral and psychiatric dementia symptoms. Some of the examples discussed here represent "off label" use, a medical practice in which a physician may prescribe a drug for a different purpose than the ones for which it is approved.

The decision to use an antipsychotic drug needs to be considered with extreme caution. A recent analysis shows that atypical antipsychotics are associated with an increased risk of stroke and death in older adults with dementia. The FDA has asked manufacturers to include a "black box" warning about the risks and a
reminder that they are not approved to treat dementia symptoms. The warning states: “Elderly patients with dementia-related psychosis treated with atypical antipsychotic drugs are at an increased risk of death compared to placebo.”

The analysis states that while risperidone and olanzapine are useful in reducing aggression and riperidone reduces psychosis, both drugs are associated with severe side effects. Despite some efficacy, these drugs should not be used routinely with dementia patients, unless the person is in severe distress or there is a marked risk of harm.

Risks and potential benefits of a drug should be carefully analyzed for any individual. Examples of medications commonly used to treat behavioral and psychiatric symptoms of Alzheimer's disease, listed in alphabetical order, include the following:

Antidepressant medications for low mood and irritability:
- citalopram (Celexa)
- fluoxetine (Prozac)
- paroxetine (Paxil)
- sertraline (Zoloft)
- trazodone (Desyrel)

Anxiolytics for anxiety, restlessness, verbally disruptive behavior and resistance:
- lorazepam (Ativan)
- oxazepam (Serax)

Antipsychotic medications for hallucinations, delusions, aggression, agitation, hostility and uncooperativeness:
- aripiprazole (Abilify)
- clozapine (Clozaril)
- haloperidol (Haldol)
- olanzapine (Zyprexa)
- quetiapine (Seroquel)
- risperidone (Risperdal)
- ziprasidone (Geodon)

Research evidence as well as governmental warnings and guidance regarding the use of antipsychotics indicate that individuals with dementia should only use these medications when:

1) their behavioral symptoms are due to mania or psychosis
2) the symptoms present a danger to the resident or others
3) the resident is experiencing inconsolable or persistent distress, a significant decline in function or substantial difficulty receiving needed care

Antipsychotic medications should not be used to sedate or restrain persons with dementia. The minimum dosage should be used for the minimum amount of time possible. Adverse side effects require careful monitoring.

Although antipsychotics are the most frequently used medications for agitation, some physicians may prescribe a seizure medication/mood stabilizer, such as:
- carbamazepine (Tegretol)
- divalproex (Depakote)

**Talking with the doctor**

Talk to your doctor about what treatment may be right for you or the person in your care. A medication's effectiveness, and the side effects it may cause, can vary from one person to the next. For one individual, one drug may be more effective but have greater side effects. For another person, the same drug may be less effective but have no side effects.
Ask the doctor the following questions when you discuss any treatments. They will not address all treatment needs, but the answers to these questions will help you understand the options and make informed decisions.

- What kind of assessment will you use to determine if the drug is effective?
- How much time will pass before you will be able to assess the drug's effectiveness?
- How will you monitor for possible side effects?
- What effects should we watch for at home?
- When should we call you?
- Is one treatment option more likely than another to interfere with medications for other conditions?
- What are the concerns with stopping one drug treatment and beginning another?
- At what stage of the disease would you consider it appropriate to stop using the drug?

More information

- FDA-Approved Treatments for Alzheimer's (3 pages)
- Prescription Drugs Assistance Programs
- Medicare Prescription Drug Coverage