Treatments and Research

The more you know about Alzheimer's medications, the better prepared you will be to discuss them with your physician and make informed choices about your treatment plan. Although current medications cannot cure Alzheimer’s, some drugs change disease progression, with benefits to cognition and function. Other medicines may help lessen symptoms, such as memory loss and confusion, for a limited time.

FDA-approved drugs for Alzheimer's
The U.S. Food and Drug Administration (FDA) has approved medications that fall into two categories: drugs that change disease progression in people living with Alzheimer’s, and drugs that may temporarily mitigate some symptoms of the disease.

Treatments may be available in different forms (pill, patch or other). When considering any treatment, it is important to have a conversation with a health care professional to determine whether it is appropriate. A physician who is experienced in using these types of medications should monitor people who are taking them and ensure that the recommended guidelines are strictly observed.

Drugs that change disease progression
Drugs in this category slow disease progression by going after the underlying biology of the disease process. They aim to slow the decline of memory and thinking, as well as function, in people living with Alzheimer's disease.

These treatments change the course of the disease in a meaningful way for people in the early stages, giving them more time to participate in daily life and live independently. Clinical trial participants who received anti-amyloid treatments experienced reduction in cognitive decline observed through measures of cognition and function.

Examples of cognition measures include:
- Memory.
- Orientation.

Examples of functional measures include:
- Conducting personal finances.
- Performing household chores such as cleaning.
Anti-amyloid treatments do have side effects. These treatments can cause serious allergic reactions. Side effects can also include amyloid-related imaging abnormalities (ARIA), infusion-related reactions, headaches and falls.

ARIA is a common side effect that does not usually cause symptoms but can be serious. It is typically a temporary swelling in areas of the brain that usually resolves over time. Some people may also have small spots of bleeding in or on the surface of the brain with the swelling, although most people with swelling in areas of the brain do not have symptoms. Some may have symptoms of ARIA such as headache, dizziness, nausea, confusion and vision changes.

Some people have a genetic risk factor (ApoE ε4 gene carriers) that may cause an increased risk for ARIA. The FDA encourages that testing for ApoE ε4 status should be performed prior to initiation of treatment to inform the risk of developing ARIA. Prior to testing, doctors should discuss with patients the risk of ARIA and the implications of genetic testing results.

These are not all the possible side effects, and individuals should talk with their doctors to develop a treatment plan that is right for them, including weighing the benefits and risks of all approved therapies.

**Aducanumab (Aduhelm®)**
Aducanumab (Aduhelm®) is an anti-amyloid antibody intravenous (IV) infusion therapy that is delivered every month. It has received accelerated approval from the FDA to treat early Alzheimer’s disease, including people living with mild cognitive impairment (MCI) or mild dementia due to Alzheimer’s disease who have confirmation of elevated beta-amyloid in the brain.

Aducanumab was the first therapy to demonstrate that removing beta-amyloid from the brain reduces cognitive and functional decline in people living with early Alzheimer’s.

**Lecanemab (Leqembi®)**
Lecanemab (Leqembi®) is an anti-amyloid antibody intravenous (IV) infusion therapy that is delivered every two weeks. It has received traditional approval from the FDA to treat early Alzheimer’s disease, including people living with mild cognitive impairment (MCI) or mild dementia due to Alzheimer’s disease who have confirmation of elevated beta-amyloid in the brain. There is no safety or effectiveness data on initiating treatment at earlier or later stages of the disease than were studied.
Lecanemab was the second therapy to demonstrate that removing beta-amyloid from the brain reduces cognitive and functional decline in people living with early Alzheimer's.

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<tr>
<th>Name (Generic/Brand)</th>
<th>Approved for</th>
<th>Side effects</th>
</tr>
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<tbody>
<tr>
<td>Aducanumab Aduhelm®</td>
<td>Alzheimer's disease (MCI or mild dementia)</td>
<td>ARIA, headache and fall</td>
</tr>
<tr>
<td>Lecanemab Leqembi®</td>
<td>Alzheimer's disease (MCI or mild dementia)</td>
<td>Infusion-related reactions, ARIA and headache</td>
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**Drugs that treat symptoms**

**Cognitive (memory and thinking) symptoms**

These medications are prescribed to treat symptoms related to memory and thinking. While these drugs cannot stop the damage Alzheimer’s causes to brain cells, they may help lessen or stabilize symptoms for a limited time by affecting certain chemicals involved in carrying messages between the brain’s nerve cells.

The drugs currently approved to treat cognitive symptoms are cholinesterase inhibitors and glutamate regulators.

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<th>Name (Generic/Brand)</th>
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<tr>
<td>Donepezil Aricept®</td>
<td>Mild to severe dementia due to Alzheimer’s</td>
<td>Nausea, vomiting, loss of appetite, muscle cramps and increased frequency of bowel movements.</td>
</tr>
<tr>
<td>Galantamine Razadyne®</td>
<td>Mild to moderate dementia due to Alzheimer’s</td>
<td>Nausea, vomiting, loss of appetite and increased frequency of bowel movements.</td>
</tr>
<tr>
<td>Rivastigmine Exelon®</td>
<td>Mild to moderate dementia due to</td>
<td>Nausea, vomiting, loss of appetite and increased</td>
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</table>
Non-cognitive (behavioral and psychological) symptoms
Alzheimer’s affects more than just memory and thinking. A person’s quality of life may be impacted by a variety of behavioral and psychological symptoms that accompany dementia, such as sleep changes or agitation.

Sleep changes may include difficulty sleeping, taking daytime naps and/or experiencing other shifts in sleep pattern. Learn more about sleep changes and available drug and non-drug treatments to address symptoms below.

Suvorexant (Belsomra®), approved for treatment of insomnia, has been shown to be effective for that purpose in people living with Alzheimer’s (mild to moderate). It works by blocking the activity of a chemical messenger involved in the sleep-wake cycle.

A person with Alzheimer's may feel anxious or agitated. They may become restless, causing a need to move around or pace, or become upset in certain places or when focused on specific details. Learn more about agitation and drug and non-drug treatments to address symptoms.

Atypical antipsychotics are a group of antipsychotic drugs that target the serotonin and dopamine chemical pathways in the brain. These drugs are largely used to treat schizophrenia, bipolar disorder and as add-on therapies for major depressive disorder. The FDA requires that all atypical antipsychotics carry a safety warning that the medication has been associated with an increased risk of death in older patients with dementia-related psychosis.

Many atypical antipsychotic medications are used "off-label" to treat dementia-related behaviors, and there is currently only one FDA-approved atypical antipsychotic,

<table>
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<tr>
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<th>Alzheimer’s or Parkinson’s</th>
<th>frequency of bowel movements.</th>
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<tr>
<td>Memantine Namenda®</td>
<td>Moderate to severe dementia due to Alzheimer’s</td>
<td>Headache, constipation, confusion and dizziness.</td>
</tr>
<tr>
<td>Memantine + Donepezil Namzaric®</td>
<td>Moderate to severe dementia due to Alzheimer’s</td>
<td>Nausea, vomiting, loss of appetite, increased frequency of bowel movements, headache, constipation, confusion and dizziness.</td>
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Brexpiprazole (Rexulti®), to treat agitation associated with dementia due to Alzheimer’s.

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<tr>
<td>Suvorexant Belsomra®</td>
<td>Insomnia, has been shown to be effective in people living with mild to moderate Alzheimer’s disease</td>
<td>Impaired alertness and motor coordination, worsening of depression or suicidal thinking, complex sleep behaviors, sleep paralysis, compromised respiratory function.</td>
</tr>
<tr>
<td>Brexpiprazole Rexulti®</td>
<td>Agitation associated with dementia due to Alzheimer’s disease.</td>
<td>Weight gain, sleepiness, dizziness, common cold symptoms, and restlessness or feeling like you have to move.</td>
</tr>
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Warning for serious side effects: increased risk of death in older adults with dementia-related psychosis. Rexulti is not approved for the treatment of people with dementia-related psychosis without agitation that may happen with dementia due to Alzheimer’s disease.

Before beginning a new medication, make sure your physician, pharmacist and care team are aware of any and all medications, alternative remedies, products and dietary supplements currently being taken (including over-the-counter and alternative preparations). This is important to ensure that medications will not interact with one
another, causing side effects. Be sure to discuss all medications you take with your doctor to understand why they were prescribed and how to take them.

To learn more, visit alz.org/medications

**Alternative treatments and supplements**
Research suggests that lifestyle habits, such as eating a healthy diet, may reduce a person’s risk for cognitive decline and dementia. However, there isn’t a single food, ingredient or supplement that has been shown to prevent, treat or cure Alzheimer’s or other dementias.

There are remedies, supplements and “medical foods” that are often referred to as alternative treatments. Alternative treatments are not regulated and do not need to adhere to the same standards as FDA-approved treatments. Claims about their safety and effectiveness are based largely on testimonials, tradition or a small body of scientific research.

If you are considering taking an alternative treatment or dietary supplement, it’s important to talk to your physician. He or she can provide you with the best possible advice for your situation and make you aware of any risks. Even if advertised as “natural,” alternative treatments can involve potentially powerful substances that have not met FDA standards for effectiveness or safety, and some alternative medicines can cause unintended reactions when taken with prescription medications.

Here is a list of questions to ask when considering an alternative treatment or supplement:

- **Has the FDA approved this product for the treatment of Alzheimer’s or dementia symptoms?**
  The FDA may have reviewed the data on a product, but found it to be ineffective for the intended purpose. In this instance, the company may still release the product as a medical food, either with or without changes. In the United States, a product can only be considered a medical food if it is designed to treat a condition that has a “distinctive nutritional requirement.” According to the FDA, Alzheimer’s, as currently understood, does not have distinctive nutritional requirements, and therefore, in the United States, no product can legitimately be described as a medical food for Alzheimer’s.

- **Is there independent research to support the safety and effectiveness of this product for treating Alzheimer’s or other dementia?**
If the testing entity has a vested interest in the outcome (e.g., testing done by the company developing the product), the results may not be reliable.

To best serve individuals living with Alzheimer’s and their families, the Alzheimer’s Association strongly encourages makers of products that claim to be beneficial for those with Alzheimer’s or other dementia to conduct definitive clinical trials.

**Does the developer of the product or the person recommending it to you have a potential financial gain from the use of the medication?**
If so, use extreme caution. Check with your care team to see if they have any questions or concerns with your plan to use it.

**Does the FDA oversee how dietary supplements are manufactured?**
No. It is up to each manufacturer and distributor of dietary supplements to meet all safety and labeling requirements of the Dietary Supplement Health and Education Act of 1994 (DSHEA) and the FDA. Most in the industry act responsibly, but some adulterated or misbranded products have made it to market. Therefore, people with Alzheimer’s and their families have no absolute guarantee that supplements contain the ingredients listed on the label in the specified amounts.

**Is the product compatible with the other medications you are taking or with your diagnoses?**
Be sure to check with your doctor or pharmacist to find out whether the product could cause negative outcomes given your diagnoses and any FDA-approved medications you are taking.

The lack of rigorous research for these products means little (or nothing) is known about the effects, both when taken alone or in combination with approved drugs. We often don’t know whether the products will interact with, and possibly decrease, the effectiveness of approved drugs taken for Alzheimer’s and other dementia.

**Research into future treatments**
Researchers are conducting studies to find new interventions and treatments for Alzheimer’s. Because the disease is complex and not fully understood — with a
multitude of factors that may contribute to risk — today’s research focuses on several areas of study.

Many drugs and medical devices in development aim to interrupt the disease process by impacting one or more of the brain changes associated with Alzheimer’s. These changes offer potential "targets" for new drugs or devices to slow or stop the progress of the disease. These promising targets include the buildup of beta-amyloid and tau protein (hallmarks of Alzheimer's), neuroinflammation, immune response, metabolic changes and more.

Researchers believe that future treatments will involve a combination of medications or devices aimed at several targets, along with risk reduction strategies similar to current treatments for many cancers and AIDS.

As the leading nonprofit funder of Alzheimer’s research, the Alzheimer’s Association has played a vital role in every significant development in dementia science.

**Participate in clinical trials**

Recruiting and retaining clinical trial participants is now the greatest obstacle, other than funding, to developing the next generation of Alzheimer's treatments. Individuals with dementia, caregivers and healthy volunteers are all needed to participate in clinical studies focused on Alzheimer's and all other dementia.

If you are interested in participating in a current clinical study, Alzheimer's Association TrialMatch® is a free, easy-to-use clinical studies matching service that generates customized lists of studies based on user-provided information.

The TrialMatch database includes:

- Trials for new drugs or non-drug-based dementia treatments.
- Studies on new tests or procedures for diagnosis.
- Trials that investigate ways to prevent the onset of diseases.
- Studies exploring ways to improve quality of life for individuals living with a chronic illness, their caregivers and family members.
- Online studies.