

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 target the underlying biology, and change the disease progression, benefitting cognition and function. Other medicines may help lessen the symptoms associated with memory or confusion, without slowing or stopping the underlying disease progression, 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 (infusion, pill, patch, liquid or other). When considering any treatment, it is important to have a conversation with a health care professional to determine whether a specific treatment is appropriate in your circumstance. 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. They slow the decline of memory and thinking, as well as function, in people living with Alzheimer's disease.

The treatment landscape is rapidly changing. For the most up-to-date information on FDA-approved treatments for Alzheimer's disease, visit [alz.org/medications](https://www.alz.org/medications).

Amyloid-targeting approaches

Anti-amyloid treatments work by removing beta-amyloid, a protein that accumulates into plaques, from the brain. Each works differently and targets beta-amyloid at a different stage of plaque formation.

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 ϵ 4 gene carriers) that may cause an increased risk for ARIA. The FDA encourages that testing for ApoE ϵ 4 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.

Learn more about ARIA at

<https://training.alz.org/products/1018/living-with-alzheimers-for-people-with-alzheimers>

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.

Donanemab (Kisunla™)

Donanemab (Kisunla) is an anti-amyloid antibody intravenous (IV) infusion therapy delivered every four 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.

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

Visit alz.org/donanemab for more information.

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.

Visit alz.org/lecanemab for more information.

| Name (Generic/Brand) | Indicated for | Common side effects |
|-------------------------|---|----------------------------------|
| Donanemab Kisunla™ | Alzheimer's disease (MCI or mild dementia) | ARIA, headache |
| Lecanemab Leqembi® | Alzheimer's disease (MCI or mild dementia) | ARIA, infusion-related reactions |

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.

| Name (Generic/Brand) | Indicated for | Common side effects |
|------------------------------------|---|--|
| Donepezil Aricept® | Mild to severe dementia due to Alzheimer's | Nausea, vomiting, loss of appetite, muscle cramps and increased frequency of bowel movements. |
| Galantamine Razadyne® | Mild to moderate dementia due to Alzheimer's | Nausea, vomiting, loss of appetite and increased frequency of bowel movements. |
| Memantine + Donepezil Namzaric® | Moderate to severe dementia due to Alzheimer's | Nausea, vomiting, loss of appetite, increased frequency of bowel movements, headache, constipation, confusion and dizziness. |
| Memantine Namenda® | Moderate to severe dementia due to Alzheimer's | Headache, constipation, confusion and dizziness. |
| Rivastigmine Exelon® | Mild to moderate dementia due to Alzheimer's or Parkinson's | Nausea, vomiting, loss of appetite and increased frequency of bowel movements. |

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 disturbances, agitation, hallucinations and delusions. Some medications focus on treating these non-cognitive symptoms for a time, though it is important to try non-drug strategies to manage behaviors before adding medications.

The FDA has approved one drug to address symptoms of insomnia that has been tested in people living with dementia and one that treats 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.

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.

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 and 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. Brexpiprazole (Rexulti®) is currently the only FDA-approved atypical antipsychotic for treatment of agitation associated with dementia due to Alzheimer's.

| Name (Generic/Brand) | Indicated for | Common side effects |
|---|--|---|
| <p style="text-align: center;">Brexpiprazole Rexulti®</p> | <p style="text-align: center;">Agitation associated with dementia due to Alzheimer's disease</p> | <p style="text-align: center;">Weight gain, sleepiness, dizziness, common cold symptoms, and restlessness or feeling like you need to move.</p> <p style="text-align: center;">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.</p> |
| <p style="text-align: center;">Suvorexant Belsomra®</p> | <p style="text-align: center;">Insomnia, has been shown to be effective in people living with mild to moderate Alzheimer's disease</p> | <p style="text-align: center;">Impaired alertness and motor coordination, worsening of depression or suicidal thinking, complex sleep behaviors, sleep paralysis, compromised respiratory function.</p> |

Before beginning a new medication, make sure your physician, pharmacist and care team are aware of all medications, alternative remedies and dietary supplements currently being taken (including over-the-counter). 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 and dementia research, the Alzheimer's Association has played a vital role in every significant development in dementia science.

The Part the Cloud program provides strategic funding to advance high-risk, high-reward investigational Alzheimer's therapies into clinical trials with the goal of funding Alzheimer's research with the highest probability of slowing, stopping or ultimately curing Alzheimer's disease. Visit alz.org/partthecloud to learn more.

Participate in clinical trials

Individuals living with dementia, caregivers and healthy volunteers without dementia are urgently needed to participate in hundreds of actively enrolling clinical trials focused on Alzheimer's and other dementia. Recruiting and retaining trial participants is now the greatest obstacle, other than funding, to developing the next generation of Alzheimer's treatments.

By participating in clinical research, you can help to accelerate progress and provide valuable insight into potential treatments and methods of prevention. Get started with **Alzheimer's Association TrialMatch®** (alz.org/trialmatch), a free, easy-to-use clinical studies matching service that generates customized lists of studies based on user-provided information.

By participating in clinical research, you can:

- Provide hope for people living with Alzheimer's, their families and future generations.
- Play a more active role in your own health care.
- Increase representation of all races, genders and backgrounds in research.
- Get access to potential treatments before they are widely available.
- Obtain expert medical care at leading health care facilities — often free of cost — while participating in important medical research.

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