THE COMPLETE GUIDE TO

ALZHEIMER'S DISEASE

By The American Institute of Health Care Professionals, Inc.

Causes, Symptoms, Risk Factors, Screenings, Diagnosis, Treatment Options And Support For Sufferers And Caretakers

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What Is Alzheimer's Disease?

Alzheimer's disease is a kind of dementia that affects an individual's memory, behavior, and thinking. The onset of the disease is usually rather slow, with worsening of the disease over time so that the individual has difficulty with activities of daily living.

Alzheimer's dementia is the most common type of dementia. Dementia can be defined as a loss of memory and the loss of intellectual abilities that become so severe that the individual cannot participate in activities of daily living. About 60-80 percent of dementia cases are due to Alzheimer's dementia.

Some important facts about Alzheimer's disease include the following:

- **Alzheimer's disease isn't a normal part of the aging process.** While the most common known risk factor for the disease is increasing age, the majority of people with the disease are 65 years of age or older. It is not just a disease of old age, however, as about 5 percent of individuals suffering from Alzheimer's disease begin to develop their symptoms as early as aged 40-50 years of age. This is called younger-onset or early-onset Alzheimer's disease.

- **Alzheimer's disease generally gets worse over time.** Alzheimer's disease is considered progressive, meaning that the symptoms gradually worsen over time. In the case of Alzheimer's disease, the symptoms gradually become worse over several years. Memory loss is one of the first symptoms of the disease, while, in the later stages, the individual cannot respond to events surrounding them and lose the ability to speak or maintain a normal

conversation, even with loved ones. Alzheimer's disease is the 6th most common cause of death in the US. People with Alzheimer's disease generally live about 8 years after they begin to have noticeable symptoms; however, some people can survive from 4-20 years, depending on whether or not they have any coexisting health problems.

- **There is no cure for Alzheimer's disease.** While no cure exists, there are medical treatments available that can treat the symptoms of the disease. Research for a cure is ongoing. While the available treatments for Alzheimer's disease can't stop the progression of the disease, they can slow the symptoms of dementia, at least temporarily. The available treatments have been found to enhance the quality of life for those who suffer from the disease and to help caregivers better care for the Alzheimer's patient. There is an effort throughout the world to do research to find better ways to manage the disease or to prevent the disease from developing in the first place.

Early-Onset Alzheimer's Disease

As mentioned, Alzheimer's disease is not just a problem for the aged population. Early-onset Alzheimer's disease is defined as having the disease younger than 65 years of age. Of the five million individuals with the disease, about five percent will suffer from the early-onset of the disease.

Early-onset Alzheimer's dementia usually affects people in their 40s or 50s. They may be caregivers themselves, be in the work force, and may have younger children when the disease begins to be noticeable. In the US, about 20,000 individuals suffer from early-onset disease.

It is difficult to diagnose early-onset Alzheimer's disease.

Many doctors and other healthcare providers don't anticipate their younger patients having the disease and therefore do not screen for it. Getting an accurate diagnosis for Alzheimer's disease at an early age can be a long and difficult process. The symptoms are often mistaken for stress or other psychological conditions.

It often takes visits to several healthcare providers before a diagnosis can be made. People with early onset Alzheimer's disease can progress through all the stages, including early stage Alzheimer's disease, middle stage Alzheimer's disease or late stage Alzheimer's disease. Each individual with the disease will follow his or her own unique course, making diagnosis difficult.

Doctors and researchers have no idea why some people develop early onset Alzheimer's disease.

They have uncovered, however, cases among several hundred families throughout the world, in which genetic factors appear to play into getting the disease. If these rare genes are inherited, the individual may begin to have symptoms between 30 to 50 years of age. If Alzheimer's disease is found to be genetic, researchers call this "familial Alzheimer's disease." When this occurs, several family members are affected and the affect spans multiple generations.

If you have early onset Alzheimer's disease, there are many ways you can remain involved and active in your life. There are several things you can do so you don't feel alone:

- Call the 24/7 helpline for the disease through the Alzheimer's Association, which is 1-800-272-3900.
- Make use of a support group for people coping with Alzheimer's disease. Many hospitals and HMOs offer support groups for the disease, including support groups specifically for those who suffer from the early onset form of Alzheimer's disease.
- Take part in AlzConnected through https://www.alzconnected.org, which offers you access to an online community and message boards so you can get some of your questions answered.
- Make use of the online tool called Alzheimer's Navigator by clicking on https://www.alzheimersnavigator.org/, which will help you find customized ways and a step-by-step guide that include many aspects of the disease.

Causes Of Alzheimer's Disease

According to available research, most people develop Alzheimer's disease because of an interrelatedness to lifestyle, environmental, and genetic influences that affect the brain over many years. The disease is believed to be genetically related less than five percent of the time. Those who get the affected genes will inevitably come down with the disease.

No one knows the exact causes of Alzheimer's disease, yet it is clear the effect it has on the brain.

As the disease progresses, the brain becomes damaged and brain cells are killed. Those who have Alzheimer's disease have fewer nerve cells and fewer intercellular connections among the remaining cells when compared to those with a normal brain.

As the brain cells die off, there is significant shrinkage of the brain itself. If the brain tissue is examined under the microscope (usually after death), the following things are seen that are considered definite signs of Alzheimer's disease:

- Plaques on the brain. These are found to be clumps of beta-amyloid, which is a protein that destroys brain cells by interfering with the intercellular communication. While no one knows exactly why brain cells die in Alzheimer's disease, it is suspected that beta-amyloid plaques may be the cause.

- Neurofibrillary Tangles. The nerve cells of the brain are dependent upon an internal transport system and supporting cells that provide nutrients to all parts of the brain. This system relies on the normal function and structure of "tau," which is a protein found in the brain.

  When a person has Alzheimer's disease, the protein twists itself into tangles inside the brain's nerve cells. This leads to a failure of the normal transport system. It is believed that these neurofibrillary tangles are related to the decline of nerve cells and ultimate brain cell death.

Symptoms Of Alzheimer's Disease

According to the Mayo Clinic, the earliest symptoms of Alzheimer's disease may be mild confusion or occasional forgetfulness. You may forget where you put your keys, the route to a familiar location, or the name of an acquaintance. Over several months to years, more and more of the memory is lost, particularly the formation of recent memories.

If you are suffering from early Alzheimer's disease, you may begin to notice the difficulty in memory and may have difficulty in the organization of your thoughts. Some people notice nothing at all, even when the symptoms are evident to those around them:

The main symptoms of Alzheimer's disease are related to the progressive loss of brain cells. You may notice the following:

- Memory changes. Everyone has problems with memory and it isn't uncommon for healthy people to forget the name of an acquaintance or forget where they put an object. The main difference in Alzheimer's disease is that the symptoms tend to worsen over time so that activities of daily living are often strongly affected.
- Repetition of questions. People with Alzheimer's disease often say the same things over and over again, not recognizing that they have already said them.
- Forgetting conversations or appointments. They may forget a lunch date or a doctor's appointment or may forget the event after it has happened.

- **Misplace possessions.** The individual may lose common objects and may instead place them in unusual locations.
- **Become lost in familiar situations.** This may especially happen when the individual is driving. They may forget how to get home after they have gone to the supermarket or doctor's appointment.
- **Forget family members' names.** They may only remember the names of the closest family or of very familiar objects, having word-finding difficulties for more complex objects or the names of people they don't see often.
- **Have difficulty-identifying object.** They may say a word that is similar to the desired object, which rhymes with the object, or may just be able to give a description of the object.
- **Problems concentrating.** They may have difficulty understanding abstract concepts, such as numbers. Thinking may become muddled.
- **Difficulty multitasking.** They may have problems in managing money, paying bills at the right time, or balancing their checkbook. This can become so severe that even the recognition of numbers becomes difficult.
- **Difficulty making decisions and poor judgment.** The Alzheimer's patient may not be able to handle complex tasks and may have poor judgement in tasks such as driving. They may burn the food in the stove or oven because they have forgotten they were cooking.
- **Difficulty performing familiar activities.** Things that require step-by-step instructions, such as meal planning or a recipe become difficult to track and follow. Eventually this leads to difficulty in the most basic of everyday tasks, such as bathing and dressing.

- **Personality and Behavioral Changes.** The brain of the Alzheimer's patient may become so damaged that the personality changes as well as the mood. Things like depression, social withdrawal, apathy, distrust, social withdrawal, sleeping habit changes, wandering behaviors, aggression, loss of inhibitions, irritability, and delusions are often a part of middle to late stage Alzheimer's disease.

Fortunately, the most common (and most important) skills are retained until the latest stage of the disease. They often retain the ability to engage in hobbies and crafts, enjoy music, sing, dance, read, reminisce, and tell stories until the disease is far advanced.

Because the habits, skills, and information learned while the individual was young, these are the items that are the last to be lost. This can help maintain a high quality of life, at least until the disease is moderate to severe.

Who Gets Alzheimer's Disease?

There are several risk factors for Alzheimer's disease, including the following:

- **Age.** The most common risk factor for Alzheimer's disease is being of an advanced age. While the disease is not a typical part of the normal aging process, the risk goes up dramatically after the age of 65 years. The incidence of dementia doubles during each decade after the age of 60 years.

- **Genetics and Family History.** As mentioned, early onset Alzheimer's disease can occur in some people with a genetic predisposition to the disease. If you have a parent or sibling (any first-degree relative) with Alzheimer's disease, you have an increased risk of developing the disease yourself. There are three known genetic mutations that guarantee your chances of coming down with the disease but this accounts for only five percent of cases.

  Most of the genetic changes seen in familial Alzheimer's disease have not been well studied and are there unexplainable. One gene, the apolipoprotein e4 (APoE4) gene, has been found to be highly linked to getting Alzheimer's disease, although it is possible to have this genetic mutation and not develop Alzheimer's.

- **Down syndrome.** Quite a few people suffering from Down syndrome will later develop symptoms of Alzheimer's disease. The symptoms appear sooner than in the average person, about 10 to 20 years earlier than in those who do not have Down syndrome. There is a genetic mutation inside the extra chromosome 21 in those with Down syndrome that greatly increases the chances of having Alzheimer's disease.

- **Gender.** Alzheimer's disease appears to be more common among women, although this is probably because women tend to live longer than men do.

- **Mild Cognitive Impairment.** Those who have symptoms of decline in cognitive functioning or ongoing memory problems at a younger age will have an increased risk for Alzheimer's disease. This is not, however, a certainty. Those who maintain a healthy lifestyle and partake in activities that compensate for mild memory loss in the early stages of mild cognitive impairment may delay coming down with Alzheimer-related dementia.

- **Previous Head Injury.** Those who have sustained a severe head injury in the past appear to be at a greater risk of later developing Alzheimer's disease.

- **Heart Health and Lifestyle Factors.** There are no specific changes in lifestyle you can partake in that will lessen your risk of developing Alzheimer's disease. It does appear, however, that the risk factors that increase the chances of having heart disease are the same ones that increase your risk of Alzheimer's disease. These include obesity, lack of exercise, high blood pressure, smoking, exposure to secondhand smoke, type 2 diabetes, poor diet, and high cholesterol levels.

  Most of these risk factors are related to getting vascular dementia, which is a kind of dementia caused by blockages in the arteries leading to the brain. If you make attempts to reduce your risk of heart disease through these modifiable risk factors, you may also decrease your chances of getting vascular dementia or Alzheimer's dementia.

- **Social Engagement and Learning.** Research has uncovered a link between lifelong learning activities and being social and developing Alzheimer's disease. Those who did not progress in school very far have been found to increase the risk of developing Alzheimer's disease.

Screenings And Early Intervention

There is no one test available that provides proof that an individual has Alzheimer's disease. Instead, the diagnosis is made by undergoing a complete history, physical examination, mental examination, and possibly diagnostic imaging studies.

Your healthcare provider will want to take a thorough medical history. This includes an evaluation of any illness you currently have as well as any illnesses you have had in the past. They will ask you about what medicines you are taking along with a family history of Alzheimer's disease. They may ask you if you have had a head injury in your past.

The medical workup may include the following:

- Your nutritional and dietary habits
- Your smoking and alcohol history
- A review of all of your medicines, including supplements and over the counter medicines
- A check of your vital signs, including your temperature, pulse and blood pressure
- A check of your heart and lungs
- A check of your overall physical health
- Blood for evaluation

These things are done to see if you have any current health problems that can be linked to symptoms of dementia.

There are other diseases that can mimic Alzheimer's disease including:

- Liver disease
- Kidney disease
- Infections
- Thyroid problems
- Anemia
- Depression
- Heart problems
- Diabetes
- Lung problems
- Problems with the blood vessels
- Vitamin deficiencies

If these things are ruled out, the diagnosis of dementia (vascular or Alzheimer's disease) may be made.

Genetic Testing For Alzheimer's Disease

Certain genes have been linked to the diagnosis of Alzheimer's disease, particularly the early onset form of the disease. There are some that are known through research but do not have any commercial tests for them and are not routinely tested for.

A blood test for the APOE-e4 gene is available but is currently not used clinically, except in cases of clinical research to find those at the greatest risk for developing Alzheimer's disease. If you have this mutation in your genetic makeup, it does not definitely mean that you are suffering from the disease but only that you have an increased risk for the disease.

There are also genetic screening tests for autosomal dominant Alzheimer's disease, also known as familial Alzheimer's dementia. This is fortunately very rare and accounts for fewer than five percent of all Alzheimer's disease cases. While the test is available, many people don't want to be tested because they don't want to be labeled early in life as having Alzheimer's disease.

Neurological Examination

The healthcare provider will evaluate you for problems indicating you might have a neurological problem unrelated to Alzheimer's disease. This includes Parkinson's disease, strokes within the brain tissue, tumors on the brain, or extra fluid around the brain.

As part of the testing, the healthcare provider will check the following:

- Eye movements
- Reflexes
- Coordination
- Muscle strength
- Sensory abilities
- Speech

Mental Status Testing

There are mental status tests that check the individual's ability to solve problems, thinking, and memory. These can identify whether or not the individual knows the date, time, and physical location, is aware of any Alzheimer's symptoms, can follow instructions, can do mathematical calculations, and can remember a small list of words.

Two commonly used tests include the Mini-cog test and the Mini-mental status examination.

- **Mini-cog test.** In this test, the individual is asked to memorize a list of three common words and should remember them for a few minutes before reciting them again. They will also be asked to draw a clock face, including the numbers and a set time.
- **Mini-mental status examination (MMSE).** During this test, the person is asked a series of questions that identify their ability to think and memorize things. The maximum score on the MMSE is 30 points. The person with severe dementia will score less than 12 points on this examination.

Assessment Of Mood

The healthcare provider may assess the individual's mood. This can include screening tests, such as the Beck Depression Inventory (BDI). Mood disorders can be part of having dementia or can mimic dementia in a person who has a severe mood disorder.

Brain Imaging Studies

An MRI or CT scan is a standard part of the medical workup for dementia, including Alzheimer's disease. These tests may show brain shrinkage or may show another condition that is mimicking dementia.

These types of imaging studies can show evidence of brain damage after head trauma, brain tumors, strokes, or an excess of fluid around the brain.

Subdural hematomas can also be present after a fall that can mimic dementia. In some cases, imaging can show the presence of plaques on the brain.

Can Alzheimer's Be Prevented?

No one knows for sure if Alzheimer's disease can be prevented. There are some lifestyle changes you may wish to take part in that may prevent or delay the onset of the disease.

These include the following:

- **Getting enough exercise.** Regular exercise can lessen the risk of Alzheimer's disease by about half, according to the Alzheimer's Research and Prevention Foundation. Exercise can also slow the progression of the disease in people who already have the disease. Try engaging in 150 minutes of moderate exercise per week.

  This should include strength training aerobic exercise. Good exercises to do include swimming, brisk walking, tennis, golf, and gardening. Weight training will tone the muscles and help you maintain a normal weight. Things like tai chi, yoga, and qi gong will help with balance.

- **Eat a healthy diet.** Things like insulin resistance (as is seen in type 2 diabetes) and inflammation can contribute to getting Alzheimer's disease. In order to combat this, you should consider eating a Mediterranean diet, which is high in vegetables, whole grains, fish, olive oil, and beans. Ginger tea, fatty fish, soy, dark berries, and green tea will help protect the brain's glial cells.

  You should stay away from saturated fats and trans fats, instead consuming omega 3 fatty acids (found in salmon, trout, tuna, sardines, and mackerel). Eat plenty of fruits and vegetables, and try to eat several smaller meals per day so you don't increase your blood sugar levels. Green tea may help improve memory.

- **Engage in mental stimulation.** People who continue the learning process throughout their lives have a decreased risk of developing Alzheimer's disease. By using your brain on a regular basis, you will stimulate brain cells to communicate with each other.

  Things you can do include learning a foreign language, reading, memorization exercises, puzzles, strategy games, and brain teasers. Crossword puzzles, board games, and Sudoku are good activities as well. Do what you can in order to strengthen the pathways inside your brain and make new ones.

- **Get enough sleep.** People who suffer from Alzheimer's disease are notorious for also having insomnia. It may also be true that poor sleep habits are a risk factor for the disease. Studies have shown that poor sleep habits are related to getting Alzheimer's disease and to increase the numbers of plaques in the brain.

You need at least 7-9 hours of sleep per night. If you do not, there are things you can do:

- Have a screening test for sleep apnea
- Develop a regular sleep pattern
- Try not to nap too much during the day (less than half an hour per day)
- Practice good sleep habits
- Develop a relaxing ritual around sleeping
- Decrease the stress in your life or practice meditation before sleep

- **Decrease your stress levels.** Severe stress can damage brain cells (particularly in the hippocampus) and can decrease the growth of nerve cells, thus increasing your chances of developing dementia. Try these techniques in order to reduce stress.
  - Practice breathing techniques along with meditation. Focus on abdominal breathing and rid your brain of negative thoughts and impulses.
  - Schedule times for relaxation. It takes a regular commitment to stress reduction in order to fight off stress. You can do it through music, a long bath, meditation, or a soothing walk.
  - Enhance your level of inner peace. As your mind is strongly connected to your body, things you can do to soothe the mind, such as prayer, reflection, mediation, and spiritual practices can help you feel less stress.
  - Have as much fun as you can. Your stress levels will decrease if you incorporate fun activities into your life on a regular basis.
  - Maintain a sense of humor. Humor and laughter can lower the levels of the stress hormone, cortisol, in your system.

- **Engage in Social Activities**. In general, people do poorly when isolated from other people. The more connected you are to other people, the better you will perform on memory and cognitive testing. Social engagement might even be protective against Alzheimer's disease. Practice having quality social activities with others in order to stimulate your brain. Some things you can do to enhance your social engagement include the following:

- Keep your sense of humor. This includes the ability to laugh at yourself. The act of laughing helps your body fight stress in a number of ways.

    - Join a social group or club
    - Volunteer somewhere
    - Take classes at a local community college or through community education
    - Go to the local senior center to meet people
    - Connect with others through the telephone or through email
    - Go out to lunch with friends on a weekly basis
    - Stay connected through internet-related social networks
    - Go out on activities
    - Find out who your neighbors are.

    The more you can connect with your loved ones and acquaintances doing something you enjoy, the less stress you will be under and the more you will strengthen your brain.

As the brain and body are closely connected, things you do to make your body healthy will also strengthen the functioning of your brain. Some things you can do include the following:

- Quit smoking. Stopping smoking is a preventable risk factor for dementia. Smokers aged 65 or older have an 80 percent greater risk of developing Alzheimer's disease when compared to people who don't smoke.
- Maintain a normal cholesterol level and blood pressure. Abnormalities in cholesterol and blood pressure can be linked to both vascular dementia and Alzheimer's disease. They are also linked with heart disease so lowering these values is a good thing all around.

- **Use alcohol in moderation.** Those that engage in even moderately heavy alcohol consumption can increase the aging effects on the brain and can contribute to a greater risk of Alzheimer's disease.
- **Maintain a healthy weight.** Having too much weight on your body has been found to increase the risk of Alzheimer's disease. A large study indicated that those who were obese in midlife were three times as likely to later develop Alzheimer's disease.

Current Alzheimer's Treatment Options

There are no medications or treatments out there that will cure Alzheimer's disease. There are, however, a number of medications and other treatments that seem to have an effect on the disease progression.

Drug Therapy

There are two currently accepted drug classes recognized by the US FDA.

These include cholinesterase inhibitors, such as Exelon, Aricept, and Razadyne, as well as memantine (Namenda).

All of these have been known to help manage the cognitive symptoms of Alzheimer's disease, including confusion, memory loss, and thought difficulties.

Currently, the approved drugs for Alzheimer's disease are used to treat early to moderate stages of the disease. For example, cholinesterase inhibitors prevent the breakdown of acetylcholine a neurotransmitter that regulates memory and learning.

When acetylcholine levels are high, communication between nerve cells is maintained. These drugs have been found to delay the worsening of Alzheimer's symptoms by about 6-12 months.

Namenda (memantine) has been approved for the management of moderate to severe Alzheimer's disease. It has been shown to enhance reasoning, attention, memory, the ability to engage in simple tasks, and language.

It is used alone or along with other treatments for Alzheimer's disease. It acts by regulating the neurotransmitter glutamate, which is involved in memory and learning.

Vitamin E has been used by some doctors in order to manage the symptoms of Alzheimer's disease. This is an antioxidant that is believed to be protective of brain cells.

There was a study, called the Alzheimer's Disease Cooperative Study (ADCS), which showed that high dose vitamin E may have a slight effect on Alzheimer's symptoms but that it increased the risk of death from all causes.

Treatments For Behavioral Changes

Behavioral changes because of Alzheimer's disease are often the most challenging to treat. Changes in behavior are due to a progressive decline in the number of brain cells. Sometimes medical conditions, behavioral changes, and the environment can make behavior worse. Early behavioral changes include increases in depressive symptoms, anxiety, and irritability.

Later behavior changes include the following:

- Increased agitation
- Aggressive behavior
- Increased anger
- Emotional distress
- Sleep difficulties
- Delusions
- Hallucinations
- Restlessness
- Verbal or physical outbursts

There can be situations or events in the individual's environment that may trigger changes in behavior. Change is stressful for everyone and can be particularly problematic for those suffering from Alzheimer's disease.

Things that can affect the individual's behavior might include the following:

- Changes in caregivers
- Moving to a nursing facility
- Perceived threats
- Changing clothing or bathing
- Entering the hospital

Sometimes all it takes is identifying the trigger and calming the individual to decrease the negative behaviors seen in Alzheimer's disease.

Medical factors can contribute to behavioral changes in Alzheimer's disease.

These can include having an infection or other medical discomfort, the side effects of medications, and difficulties with vision or hearing. These can be corrected, thereby improving the individual's behavior.

If non-drug methods do not work to change the behavioral symptoms of the Alzheimer's patient, medications can be used to help control some of the behaviors. While not specifically for Alzheimer's disease, anti-anxiety medications can be used for restlessness and anxiety, antidepressants can be used for mood difficulties, and antipsychotic medications can be used for delusions and hallucinations.

Managing Sleep Disorders

Changes in sleep patterns are common among those suffering from Alzheimer's disease. No one knows exactly why this occurs but it is believed to be related to the impact of the disease on the brain's ability to function regarding sleep.

Sleep difficulties in Alzheimer's disease include the following:

- Problems sleeping—they often wake up frequently during the night and have difficulty getting back to sleep. Some may have wandering behaviors as a result of being unable to sleep.
- Shifts in the sleep-wake cycle—they may have problems feeling tired during the day while being unable to get to sleep at night. Sun downing can occur, which is a worsening of their symptoms at night.

The individual with sleep disturbances needs to be thoroughly examined medically to see if there are any medical conditions that are contributing to sleeplessness at night. These can include restless legs syndrome, depression, sleep apnea, and anxiety.

According to experts at the National Institutes of Health (NIH), non-drug therapy should be tried in order to help the individual sleep rather than resorting to medication, which may have side effects.

Non-drug therapies are used to maintain a normal sleep routine and to keep the environment conducive to good sleeping habits. Daytime napping should be discouraged and the individual should have regular times for sleep and getting up in the morning. Caffeine, alcohol, and nicotine should be avoided and there should be regular daily activity (as long as it isn't close to bedtime).

Cholinesterase inhibitors shouldn't be given before bedtime and, if the patient is in pain, this should be treated. There should be night lights in the individual's bedroom and a cool temperature maintained in the bedroom.

The patient should not watch television in the bedroom and should be encouraged to get out of bed whenever they awaken.

If non-drug therapy does not work to decrease the person's sleep behaviors, small amounts of medication can be used to help the individual sleep.

Non-addictive medications should be tried first, such as Vistaril and trazodone. Low doses of sleeping medications, such as benzodiazepines or Ambien can be tried if nothing else helps.

The Future Of Alzheimer's Therapy

Research is being done throughout the world in order to identify new treatments to prevent, delay, or stop Alzheimer's disease. It takes many years to develop a new drug and many clinical trials need to be undertaken in order to see whether or not the drug works on large numbers of people. New treatment strategies are being developed all the time.

There are currently only five drugs approved by the US FDA for the management of Alzheimer's disease symptoms.

They are all temporary measures and help in the difficulties in thinking and memory in about 50% of those who try them. They do not treat the underlying mechanisms behind the disease.

Newer drugs are being developed that are trying to modify the underlying causes of the disease itself.

Researchers believe it will not be just one medication that improves the symptoms of Alzheimer's disease but that it will be a combination of medications working together to halt the progression of the symptoms.

New drug therapy is aimed at decreasing the amount of beta-amyloid plaques, which is one of the main features of Alzheimer's disease. Researchers are looking into medications that block the processing of beta-amyloid.

One new drug, called solanezumab, is a monoclonal antibody that has been found to decrease the amounts of beta-amyloid in the brain. This drug is still being studied and is not available to the average person.

Other research is directed at beta-secretase, which is one of the enzymes contributing to plaque formation. Drugs are being invented that specifically target the activity of beta-secretase. Drugs are also being developed that are directed at the tau protein, which is the protein that causes neurofibrillary tangles often seen in Alzheimer's disease.

How To Prepare After A Diagnosis Is Made

After the diagnosis of Alzheimer's disease has been made, it can be a shock to the family and the patient, who must look toward the struggle of upcoming cognitive decline.

There are some things that can be done following the diagnosis of Alzheimer's disease:

- Identify a family member who can act as healthcare power of attorney. This is a person close to the patient who can help make healthcare decisions when the person can no longer make those decisions on their own.
- Make out a living will. This helps instruct the healthcare providers and the family as to what the person's wishes are when they can't make their wishes known as the disease progresses.
- Plan for caregivers to care for the individual. As he disease progresses, decisions will have to be made as to whether or not to keep the individual at home or refer them to a nursing home facility. Exactly when these changes will be made and where the person will live can be decided long before the change has to be made.
- Make decisions about driving. At some point, it will be unsafe for the individual with Alzheimer's disease to drive. The individual may have to take a driver's test to see if he or she can still drive safely and restrictions need to be made as to where the individual can drive.

- The home must be made safe. This may include things like shutting off the stove, having locks on exterior doors, and decluttering the home so the individual is safe while still living in the home.

What Family And Care Takers Can Expect

The person with Alzheimer's disease will have mild symptoms in the beginning. They may misplace things; have word-finding difficulties, and changes in mood and behavior.

The disease will progress over the next several years. While the person may be able to live at home and may be able to live independently for a while, this will definitely change.

Eventually, either the person will need supervision, by a family member or by a skilled caregiver, the family hires.

As the disease progresses…

- The individual will have difficulty recognizing family members and will lose the ability to care for themselves.
- Bathing and dressing will need to be supervised or done for the person.
- The person may have outbursts of anger or wandering behavior that make it impossible to care for the patient at home.
- A nursing care facility may need to be the only safe place for the individual to live.
- Someone else in the family needs to begin to manage the Alzheimer's patient's finances and pay their bills.
- The individual will need to be supervised in many aspects of daily living until they can no longer be managed at home.
- The disease process lasts for several years and there will be a slow progression of symptoms that will ultimately lead to the individual's death.

Improving Quality Of Life With Alzheimer's Disease

The person with Alzheimer's disease can still have a good quality of life, even after the diagnosis. Hopefully, they can remain at home for as long as possible and will be able to interact with family and friends for several more years.

- ✓ Their quality of life can be enhanced by maintaining social encounters with friends and by stimulating their mind as much as possible.
- ✓ As long as the person can read and engage in activities of daily living, they should be encouraged to participate in these activities for as long as they can.
- ✓ Safety in the home is important. The house should be decluttered and there should be side rails near the toilet and tub/shower to prevent falls. Throw rugs should be taken up to prevent tripping injuries and gates used to keep the individual from wandering into places in the home that are not safe.
- ✓ In order to slow the progression of the disease, medications can be used that have been found to delay many of the symptoms of the disease. These can be discussed with the doctor in order to make use of these medications in the early to middle stages of the disease. There is at least one medication that has been found to control symptoms in the later stage of the disease.