



# Is Alzheimer's Disease Genetic?

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## Is Alzheimer's Genetic?

Many people who have seen parents or grandparents develop Alzheimer's disease worry that it may be genetic and that it will be passed down through the generations. It may comfort you to know that this is not common. However, research shows that there is a very slightly increased risk of getting the disease when Alzheimer's has been present in the family.

### Who's at Risk?

The most significant risk factor for Alzheimer's disease is age.

Therefore, if you have a parent or grandparent with Alzheimer's disease and they are in their 70s or 80s, your risk factor does not change compared to the rest of the population. This is because the disease is so common in people of that age.

Alzheimer's disease can be inherited, but only in a tiny number of families. The discovery of the Alzheimer's gene occurred more than 100 years ago, but the gene currently accounts for less than one percent of all reported cases of Alzheimer's disease.

For the families that do carry the gene, it can be challenging to come to terms with. Individuals from these families usually find that the onset of the disease is much earlier than usual. Some people are affected as early on as their 30s.

Three genes have been identified as causing this early-onset inherited form of Alzheimer's disease: APP, PS1 and PS2.

### What Are the Symptoms of Early-Onset Alzheimer's Disease?

The symptoms of early-onset Alzheimer's disease are much the same as when the disease develops in later life.

Early signs of Alzheimer's disease include unexpected memory loss, especially when recalling recent events and the names of familiar people and things.

As the illness progresses, patients develop more severe problems, such as becoming subject to mood swings and being unable to perform complex tasks, like driving.

In the latter stages of Alzheimer's, they may forget how to do simple things like brushing their hair. It is likely that they will require full-time care towards the end of the illness.

### Can Genetic Alzheimer's Disease Be Predicted?

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People who suspect their family may carry one of these genes can now choose to have testing done to find out. This allows you to know if you are going to develop the disease so you can be prepared.

Early-onset Alzheimer's disease can have devastating effects on the careers, caretakers and family members of people who develop the disease.

Many individuals who develop genetic Alzheimer's disease early on in life are still raising children. Children who are not entirely grown are affected physically and emotionally as their parents lose the ability to care for them.

Knowing their likelihood of developing the disease gives people the opportunity to make choices and put plans in place regarding their children's care while they are still able to do so.

Those who are working may lose their ability to perform their jobs competently and may find it necessary to take early retirement. When this can be predicted, employees have the opportunity to discuss their future with their employers and the loss of skills that they expect to face.

Other people may choose to retire if they are financially able so that they can enjoy their time while they are still fully able.

While there are certain benefits to be had from predictive testing, it is also possible the knowledge you are likely to develop such a disease could have serious implications for your mental health.

For this reason, people who want to undergo predictive testing should first have genetic counseling to ensure it is the right decision for them.

### **Are Genetic Forms of Alzheimer's Disease Still Being Researched?**

Research into genetic forms of Alzheimer's disease and other inherited dementias is still very active in many places around the world.

Many people from Alzheimer's affected families have generously volunteered to take part in research studies, and this has given us great insight into the causes of different dementias.

In 2008, an international consortium named Dominantly Inherited Alzheimer Network or DIAN was set up to study genetic Alzheimer's disease to try and understand more about its causes and the earliest signs.