

Dementia is a term used to describe different brain disorders that affect memory, thinking, behavior, and emotion. If you have a relative who has been diagnosed with dementia, you may have questions about your own risk.

Basic Facts About Dementia

- **Many people have relatives with dementia.** Around 1 in 4 people over age 55 have a close blood relative with dementia.
- **Age is the biggest risk factor.** More than 1 in 9 people over age 65 have dementia. After age 85, about 1 in 3 people have dementia.
- **Dementia is not a natural part of aging.** It is a set of symptoms that develop when the brain is damaged by disease.
- **Alzheimer disease is the most common cause of dementia.** Other causes include vascular disease, dementia with Lewy bodies, and frontotemporal dementia.

What causes dementia?

As a person gets older, the chance of developing dementia increases a lot. But aging alone does not cause dementia. Dementia is caused by conditions that slowly damage the brain. Conditions like Alzheimer disease and vascular disease are due to a combination of factors, including genetics, lifestyle, and environment, rather than a single cause. The conditions that cause dementia take many years to damage the brain enough to cause symptoms. This means that the longer a person lives, the more time there is for dementia to develop.

Can dementia “run in the family”?

Dementia can affect more than one person in a family, but this is rarely due to a change in just one inherited gene. Both genetic (shared genes) and non-genetic factors (like shared habits and lifestyle) play a part in families that have more than one person with dementia.

Can genetic testing diagnose dementia?

No. Genetic testing does not show whether a person has dementia or has early signs of dementia. Dementia is a clinical diagnosis. That means the diagnosis is made by a doctor based on a person’s symptoms.

Who should have genetic testing for dementia?

Testing may be offered to a person who develops dementia at a young age or to someone diagnosed with a rare form of dementia. In these rare cases, genetic testing may explain why someone has early dementia or show if their relatives have a high risk for dementia. Genetic counseling is usually recommended before testing since the result could impact other family members. For most people there is no genetic test that can determine if they will or will not get dementia. Testing a person without dementia is rarely helpful.

How do genes affect the chance for dementia?

There are different genes that affect the chance for dementia: 'risk' genes and 'familial' genes.

- **Risk genes (common):** Many people have inherited risk genes for dementia. Risk genes increase a person's chance of developing dementia, but these genes do not determine who will (or won't) develop the condition. More than 20 risk genes have been found so far and most of them only slightly affect a person's chance for dementia. There are likely many other risk genes that are still not known. Testing is not recommended for risk genes because they do not determine who will develop dementia and the results do not change a person's medical care.
- **Familial genes (rare):** Familial genes cause early dementia in a person who has a mutation (harmful change) in the gene. A mutation can be passed down from a parent to a child. If one parent has a familial gene mutation, each child has a 1 in 2 chance of inheriting it. Almost all people who inherit a mutation in a familial gene eventually develop dementia, often when they are in their 50s or even younger. **Familial gene mutations are very rare for most types of dementia.** However, these genes may cause around 1 in 3 cases of frontotemporal dementia, which is a less common type of dementia.

APOE is a dementia risk gene.

The most common risk gene for dementia is called apolipoprotein E (*APOE*). One version (variant) of the *APOE* gene, *APOE4*, can make a person up to four times more likely to develop Alzheimer disease than people who don't have *APOE4*. However, even a higher-risk version of *APOE* doesn't always lead to dementia. Most people with higher-risk versions of the *APOE* gene never get dementia. The American College of Medical Genetics and Genomics (ACMG) and the National Society of Genetic Counselors (NSGC) recommend against *APOE* testing.

Is there a way to predict my risk?

There is currently no way to accurately predict a person's risk for dementia, except in rare families with a familial gene mutation. You may have a higher risk if your parent or a sibling has dementia, but that doesn't mean for sure that you'll develop it. No single risk factor, including family history, can predict who will get dementia.

How can I lower my risk for dementia?

Some risk factors, like age and genetics, can't be changed. However, even people with genetic risk factors might be able to lower their risk by doing things that promote a healthy brain.

- Keep your mind active.
- Be physically and socially active.
- Quit smoking.
- Treat high blood pressure, high cholesterol, and diabetes.
- Maintain a healthy weight.
- Eat a healthy diet.
- Treat hearing problems.
- Get enough sleep.

Talk to your doctor about any barrier you may have to achieving these goals.