

Down Syndrome and Alzheimer's Disease

Risk Factors

What is Down syndrome?

Down syndrome is one of the most common birth defects. Usually, children born with the condition have some degree of mental retardation, as well as characteristic physical features. Many of these children also have other health problems.

Each year in the U.S., approximately one in every 800 to 1,000 newborns has Down syndrome. This results in approximately 5,000 children born with Down syndrome each year. In the U.S. today, Down syndrome affects approximately 350,000 people. As many as 80% of adults with this condition reach age 55, and many live longer.¹

What is Alzheimer's disease?

What is Dementia?

- Dementia is not a disease itself. It's a group of symptoms that are caused by various diseases or conditions.

What Is Alzheimer's?

- The most common form of dementia among older people is Alzheimer's disease. About 4.5 million Americans suffer from this condition, which usually begins after age 60.

Down syndrome increases the risk of Alzheimer's disease.

People with Down syndrome may experience health problems as they age that are similar to those experienced by older people in the general population.

The presence of extra genetic material found among persons with Down syndrome may lead to abnormalities in the immune system and a higher susceptibility to certain illnesses, such as Alzheimer's, leukemia, seizures, cataracts, breathing problems, and heart conditions.

People with Down syndrome also experience premature aging. That is, they show physical changes related to aging about 20 to 30 years ahead of people of the same age in the general population.

As a result, Alzheimer's disease is far more common in people with Down syndrome than in the general population.

Adults with Down syndrome often are in their mid to late 40s or early 50s when Alzheimer's symptoms first appear.

People in the general population don't usually experience symptoms until they are in their late 60s.

The symptoms of Alzheimer's disease may be expressed differently among adults with Down syndrome.

For example, in the early stages of the disease, memory loss is not always noted. In addition, not all symptoms ordinarily associated with Alzheimer's disease will occur.

Generally, changes in activities of daily living skills are noted, and the person with Down syndrome may begin to have seizures when he or she never had them before.

Changes in mental processes - such as thinking, reasoning, and judgment - also may be present, but they often are not commonly noticeable because of limitation of the individual's functioning in general.

How common is Alzheimer's disease in people with Down syndrome?

Estimates suggest that 25% or more of individuals with Down syndrome over age 35 show the signs and symptoms of Alzheimer's-type dementia.¹ The percentage increases with age.

The incidence of Alzheimer's disease in people with Down syndrome is estimated to be three to five times greater than that of the general population.¹

Why do people with Down syndrome get Alzheimer's disease?

Current research shows that the extra "gene dosage" caused by the abnormal third chromosome of Down syndrome may be a factor in the development of Alzheimer's disease. The early aging of the Down syndrome brain may also be a factor.

Additional Resources

- Disability-related resources and technical information are available at the University of Illinois at Chicago's web site at www.uic.edu
- General information on Alzheimer's disease is available at www.alz.org

References

¹ Statistics were retrieved from <http://www.ndss.org/Down-Syndrome/Down-Syndrome-Facts/>

***Send your comments or questions to
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