DNAJC6 Gene Information

Key Points

- You have one or two variant(s) in the *DNAJC6* gene (please refer to your test report for details).
- *DNAJC6* variants have been associated with juvenile and early-onset forms of Parkinson's disease and other neurological symptoms.
- You should talk about this result with your neurologist to understand what this means for you.

DNAJC6

What is *DNAJC6*?

- *DNAJC6* is a gene that all people have. A gene is an instruction for our body. When there are two variants in the *DNAJC6* (one from each parent), it doesn't work well, causing a juvenile or early-onset form of Parkinson's disease.
- Juvenile Parkinson's disease: Symptoms appear before the age of 21. People may also have multiple missed milestones (developmental delays), seizures, uncontrollable muscle contractions (dystonia), walking difficulties, and difficulties in speech and swallowing. This form of the condition advances faster, and people usually lose their ability to walk in their teenage years.
- Early-onset Parkinson's disease: Symptoms appear before the age of 50, and it is slower in progression than the juvenile form.

What does this mean for me?

Depending on your results:

- **If you have one variant**, you usually will not have the juvenile or early-onset form of Parkinson's disease, but you are a carrier. (Rarely a second variant may be missed through testing). Researchers are studying whether having one *DNAJC6* variant could increase the risk for Parkinson's disease later in life. Additional genetic and/or environmental factors likely contribute to causing the condition.
- **If you have two variants** (one from each parent), you typically will have juvenile or early-onset Parkinson's disease, and this finding could be an explanation for your symptoms.
- You should talk to your neurologist or a movement disorder specialist to understand how this result relates to you and your symptoms.

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What does this result mean for my family?

- *DNAJC6* variants are inherited, meaning they are passed down in families. Juvenile or early-onset Parkinson's disease happens when a person has two variants in the *DNAJC6* gene, one from each parent. This is called recessive inheritance.
- **If you have one variant**, this means each of your close family members (like your children, siblings and parents) has a 50% chance (1 in 2) of having the same *DNAJC6* variant and being a carrier. If your partner also has a *DNAJC6* variant, your children have a chance to have this form of juvenile or early-onset Parkinson's disease.
- **If you have two variants** (one from each parent), each of your children will have one variant and will at least be carriers.
- Close family members (like your children, siblings, and parents) may benefit from meeting with a genetic counselor to learn about their risks and genetic testing options.

What should I do next?

- **Tell your neurologist about these results.**
- Talk to your neurologist, movement disorder specialist, or a neurology genetic counselor if you have more questions or concerns.
- Consider sharing these results with your family members.
- Consider participating in additional studies to help researchers better understand the potential link between *DNAJC6* variants and Parkinson's disease or its symptoms.

For additional information about Parkinson's disease genetics and research visit PDNexus.org

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