VCP Gene Information

Key Points

- You have a variant in the *VCP* gene.
- *VCP* variants may cause neurologic, muscle, and bone diseases with different symptoms, including movement problems like those seen in Parkinson's disease.
- You should talk about this result with your neurologist to understand what this means for you.

VCP

What is *VCP*?

VCP is a gene that all people have. A gene is an instruction for our body. When there is a variant in the VCP gene, it doesn't work well, causing problems that include a range of conditions called multisystem proteinopathy (MSP). People with VCP variants can have symptoms affecting the muscles, brain, or bones.

Some people with VCP variants also have movement problems like those seen in Parkinson's disease. However, people with variants in the VCP gene can have other symptoms and conditions such as:

- Inclusion body myopathy – muscle weakness, mostly in the legs
- Amyotrophic lateral sclerosis (ALS) also called Lou Gehrig's disease – muscles get weaker over time, causing an inability to move
- Paget disease of bone – large, weak bones that may break easily or cause pain
- Frontotemporal dementia (FTD) – problems with behavior, language, and thinking

What does this mean for me?

- Conditions caused by *VCP* variants can look like Parkinson's disease or other conditions.
- You should talk to your neurologist or a movement disorder specialist to understand how this result relates to you and your symptoms.
- Please refer to Cure *VCP* for more information: https://www.curevcp.org/

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What does this result mean for my family?

- *VCP* variants are inherited, meaning they are passed down in families. *VCP* conditions happen when a person has one variant in the *VCP* gene, from one parent. This is called dominant inheritance.
- Your close family members (like your children, siblings, and parents) have a 50% (1 in 2) chance of having the same *VCP* variant. However, not everyone with a *VCP* variant will get symptoms. Sometimes it can remain "silent", meaning it does not cause any problems. Researchers are studying what other things influence whether the gene variant affects people, or why some people with a *VCP* variant get a different condition than others.
- 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 *VCP* 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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