

“Psychology Works” Fact Sheet: Vascular Cognitive Impairment

What is Vascular Cognitive Impairment?

- Vascular cognitive impairment (VCI) is a condition that involves problems with thinking abilities caused by the effects of blood vessel disease (also called vascular disease) on brain function. Thinking abilities, or cognition, include abilities such as attention, memory, communication, planning, problem-solving, and reasoning.
- Changes in thinking and behaviour caused by vascular cognitive impairment can affect both the person diagnosed with VCI and their loved ones. The severity of these cognitive problems can range from mild difficulties, like forgetfulness, or progress to more challenging problems such as difficulties with taking care of finances and household responsibilities.
- The most severe form of vascular cognitive impairment is vascular dementia, which results in the progressive loss of you or your loved one’s ability to manage everyday activities on their own.

What Causes VCI?

- Abnormal changes in the blood vessels (vascular disease) of the brain that decrease brain health and function can cause VCI.
- The development of VCI depends on where and how widespread blood vessel disease is in the brain.
- Vascular disease leading to VCI can be associated with many medical conditions and events, such as a ruptured aneurysm, heart failure, coronary artery disease, and congenital heart disease.
- After a stroke, VCI is particularly common and can be chronic.
- Ongoing health conditions such as hypertension and diabetes also can lead to VCI.
- Vascular disease in the brain can add to thinking problems caused by other brain conditions such as Alzheimer’s disease.

How is VCI Diagnosed? When Should I Talk to My Health Care Provider?

- If you have any health condition that is related to blood vessel changes in the brain and you have persistent or growing problems with cognition, then you may want to talk with your health care provider. A diagnosis of VCI requires assessment of both your cognitive function and the vascular health of your brain.
- Health care providers will review your history of conditions associated with vascular disease and what cognitive changes you have experienced.
- You may be given tests to evaluate your thinking abilities, which could be a brief or a longer, in-depth assessment (neuropsychological assessment).
- You may also have a brain scan to look for signs of the effects of vascular disease on your brain.
- A diagnosis of VCI is considered when results show: 1 - cognitive problems beyond what are expected for your age and background; and 2 - signs of vascular disease.

What Are the Treatments for VCI?

- We can't yet reverse the damaging effects of vascular disease on the brain, but current treatments focus on reducing the risk of further damage by treating you or your loved one's underlying health conditions.
- Your health care provider will evaluate your vascular disease risk factors and may recommend treatment with medications and/or changes in lifestyle behaviours (e.g., physical exercise, nutritional changes, eliminating smoking, etc.).
- Cognitive problems can vary in VCI, and one or more interventions might be recommended to improve these problems.
- Interventions can include learning how to use strategies or supportive aids (e.g., for memory or communication) to help compensate for the impact of VCI on your everyday activities.
- Direct remediation for the problem may also be suggested, such as working with a therapist to practice tasks that may enhance your attention, communication, visual function, or speed of processing.
- Adapting your living environment(s) may be recommended to stay as independent as possible.

Is VCI Preventable?

- Adopting healthy living habits, such as stopping smoking, reducing alcohol intake, eating well, exercising regularly, a good sleep routine, and managing stress can help prevent VCI.
- Taking medications prescribed to treat chronic medical conditions that are a risk for VCI, such as hypertension, atrial fibrillation, and diabetes, can help lower the risk of developing VCI.
- Treating sleep disorders such as sleep apnea can help lower the risk of developing VCI.
- These lifestyle or medical approaches can lower the risk for developing VCI but may not prevent VCI for everyone.

Where Can I Go for More Information?

Heart and Stroke Foundation:

[Vascular Cognitive Impairment | Heart and Stroke Foundation](#)

Canadian Stroke Best Practices:

[Vascular Cognitive Impairment | Canadian Stroke Best Practices](#)

[Cognition and Vascular Cognitive Impairment | Canadian Stroke Best Practices](#)

Alzheimer Society of Canada:

[Vascular Dementia | Alzheimer Society of Canada](#)

You can consult with a registered psychologist to find out if psychological interventions might be of help to you. Provincial, territorial, and some municipal associations of psychology may make available a referral list of practicing psychologists that can be searched for appropriate services. For the names and coordinates of provincial and territorial associations of psychology, go to <https://cpa.ca/public/whatisapsychologist/PTassociations/>.

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Your opinion matters! Please contact us with any questions or comments about any of the *Psychology Works* Fact Sheets: factsheets@cpa.ca

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