

Risk Factors

Alzheimer Society

Research

In this sheet you will find information about:

- Risk factors for dementia
- Strategies and lifestyle choices that can help you reduce your risk of developing dementia

What is dementia?

Dementia is an overall term for a set of symptoms that is caused by disorders that affect a person's brain. Symptoms may include memory loss and changes in mood and behaviour, as well as difficulties with thinking or language that are severe enough to reduce a person's ability to perform everyday tasks.

Dementia is progressive, meaning that its symptoms gradually get worse over time. There is currently no cure for dementia. However, there are treatment options and brain healthy lifestyle choices that may slow it down and can lead to an improved quality-of-life. Brain healthy lifestyle choices can also reduce your risk of developing dementia.

What are risk factors?

Risk factors are aspects of your lifestyle, environment and genetic background that increase the likelihood of getting a disease. **Risk factors on their own are not causes of a disease.** Rather, risk factors represent an increased chance, but not a certainty, that dementia will develop.

Similarly, having little or no exposure to risk factors does not necessarily protect a person from developing dementia.

Are there risk factors for dementia that I can control?

Some risk factors are modifiable, meaning that they can be changed. It has been estimated that around 40% of dementia cases may be the result of twelve key modifiable risk factors.

"Cardiovascular disease" refers to conditions that affect your heart and blood vessels. **Risk factors that appear for both cardiovascular disease and dementia, particularly Alzheimer's disease and vascular dementia, that you can control include:**

- High blood pressure (hypertension)
- Smoking
- Diabetes
- Lack of physical activity
- Obesity
- Poor Diet

Other risk factors you can control include:

- Alcohol consumption
- Low levels of cognitive engagement
- Depression

Did you know?



Research has shown that your heart health and brain health are connected. Your heart pumps blood through vessels to your entire body, including your brain. Healthy blood vessels make it easier for your heart to supply oxygen and other nutrients to your brain, nourishing your brain cells. Healthy lifestyle choices keep your blood vessels healthy, helping both your heart and your brain.

- Traumatic brain injury
- Hearing loss
- Social isolation
- Air pollution
- Diet

Here are 10 ways that you can reduce your risk of developing dementia:

1. Be physically active.
2. Avoid smoking and excessive alcohol consumption.
3. Track your numbers. Keep your blood pressure, cholesterol, blood sugar and weight within recommended ranges.
4. Stay socially connected.
5. Make healthy food choices. Eat a well-balanced and healthy diet that is rich in cereals, fish, legumes and vegetables.
6. Reduce stress.
7. Challenge your brain by trying something new, playing games, or learning a new language.
8. Take care of your hearing. Avoid being continuously exposed to loud sounds and wear a hearing aid if hearing does become a problem.
9. Lower your risk of falls. Consider installing handrails on all stairs and grab bars in bathrooms.
10. Reduce your exposure to air pollution, such as exhaust from heavy traffic.

Here's some good news: It's never too soon, or too late, to make changes that will maintain or improve your brain health. Recent research shows that rates of dementia are going down. We may be doing a better job managing some of these risk factors!



For more information about brain health, visit alzheimer.ca/brainhealth.

Are there risk factors for dementia that I cannot control?

There are risk factors for dementia that are non-modifiable, meaning they cannot be changed. These include:

- Age
- Sex
- Genetics



Age

Dementia is not a normal part of aging, but age is the strongest known risk factor for dementia.

The older you become, the higher the risk. For example, one in 20 Canadians over the age of 65 has Alzheimer's disease, the most common form of dementia. After the age of 65, the risk of developing Alzheimer's disease doubles approximately every five years, with one in four Canadians over 85 having Alzheimer's disease.

Dementia can also affect people under 65. Some people in their 40s or 50s develop dementia, which is known as young onset dementia. While rare, there are an estimated 16,000 Canadians under the age of 65 who are living with young onset dementia.

To learn more about young onset dementia, visit alzheimer.ca/youngonset.



Gender

Women generally are at a higher risk of developing Alzheimer's disease than men. While the reasons for this are still unclear, some of the potential contributors include:

- Women generally living longer (on average) than men;
- Changes in estrogen levels over many women's lifetimes; and
- Presence of frailty syndrome and other health conditions (which tend to be higher among women).

Men and women have the same risk of developing other types of dementia, like frontotemporal dementia. There is not much data yet available on non-binary people and dementia, though some research is in progress.



Genetics

The role of genes in the development of dementia is not yet fully understood. Scientists have found over 70 genes that may increase the risk of developing Alzheimer's disease.

Three of these genes directly cause Alzheimer's disease: PS1, PS2, and APP:

- If a person has an alteration in any of these genes, they will almost certainly develop familial Alzheimer's disease, often well before the age of 65. However, familial Alzheimer's disease is very rare.
- If a parent has any of these changed genes, their children have a 50% chance of inheriting the disease.

The other genes associated with Alzheimer's disease are called "risk factor" genes, meaning that these genes increase the risk, but do not guarantee that the person will develop Alzheimer's disease. Some other forms of dementia also have familial forms, such as some forms of frontotemporal dementia.

For more information on the genetics of Alzheimer's disease, the most common form of dementia, please visit alzheimer.ca/understandinggenetics.

Other risk factors

Other medical conditions that can increase your chances of developing dementia include Parkinson's disease, multiple sclerosis, chronic kidney disease, and HIV. Down syndrome and some other developmental disabilities may also increase your risk of developing dementia.

For information on other forms of dementia, visit alzheimer.ca/otherdementias.

Learn more about the risk factors you can control and use these tips to help you reduce your risk of dementia:

What's the risk?	What can you do to reduce the risk?
<p> High blood pressure People who have consistent high blood pressure (hypertension) in mid-life (ages 45 to 65) are more likely to develop dementia compared to those with normal blood pressure. High blood pressure can increase the risk of developing dementia, particularly vascular dementia, because of its effect on the heart, the arteries, and blood circulation.</p>	<ul style="list-style-type: none">• Be physically active.• Eat a healthy diet that is low in fat.• Reduce your sodium and salt intake.• Monitor your blood pressure regularly.• Find healthy ways to manage your stress.• If your doctor has suggested taking medication for hypertension or high cholesterol, take it as directed.

What's the risk?	What can you do to reduce the risk?
<p> Smoking The evidence is strong and consistent that smokers are at a higher risk of developing dementia vs. non-smokers or ex-smokers. It's never too late to quit! Smokers who quit can reduce their risk of developing dementia.</p>	<p>To help you quit smoking, consider:</p> <ul style="list-style-type: none"> Speaking to a healthcare professional. They will be able to provide you with advice on nicotine replacement therapies, medication to help you stop smoking, and can direct you to resources in your community. Setting a quit date and creating an action plan to help you quit smoking. Learning about how to prepare for possible withdrawal symptoms, such as restlessness and feeling angry. Asking for help. Call the Government of Canada toll-free quit-line number 1-866-366-3667 to talk to someone and to receive support.
<p> Diabetes People with type 2 diabetes in mid-life (ages 45 to 65) are at an increased risk of developing dementia, particularly Alzheimer's disease and vascular dementia.</p>	<ul style="list-style-type: none"> Maintain a weight that's healthy for you. Consider speaking with a registered dietitian to learn about healthy eating. If possible, cook and eat most of your meals at home. This will allow you to manage the amount and type of food that you eat. Talk to your doctor about your target glucose level. Monitor your blood glucose levels regularly.
<p> Lack of physical activity Lack of physical activity also increases the risk of developing other risk factors such as diabetes and high blood pressure.</p>	<p>Exercise regularly:</p> <ul style="list-style-type: none"> The most recommended type of exercise for reducing the risk of dementia is aerobic or cardio that increases the heart rate temporarily, like swimming, jogging, cycling, or using a stationary bicycle. Try to add muscle and bone strengthening activities at least two days per week, like climbing stairs and digging in the garden. If you have reduced mobility, try to engage in activities that will help you maintain your balance and prevent falls, like attending a gentle yoga or tai chi class.
<p> Poor diet An unhealthy diet, high in saturated fat, sugar, and salt, can increase the risk of developing many illnesses, including dementia and cardiovascular disease.</p>	<p>The Mediterranean and the MIND diets have been shown to reduce the risk of developing dementia:</p> <ul style="list-style-type: none"> Mediterranean diets are high in fruits, vegetables, legumes, and cereals, with moderate consumption of oily fish and dairy. The MIND diet combines the Mediterranean and the DASH (Dietary Approaches to Stop Hypertension) diets. It is high in leafy greens, vegetables, nuts, legumes, fish, and olive oil. Both diets recommend a low intake of meat, sweets, and dairy, and a high intake of fruit, vegetables, legumes, whole grains, nuts, olive oil, and fish.

What's the risk?	What can you do to reduce the risk?
 Excessive alcohol consumption <p>Drinking excessively (more than 12 standard drinks per week), can increase your risk of developing dementia.</p>	<p>A "standard drink" means:</p> <ul style="list-style-type: none"> • 341 ml/ 12oz (one bottle) of beer (5% alcohol) • 142ml/5 oz wine (12% alcohol) • 43 ml/1½ oz spirit (40% alcohol) <p>Drinking may interact with medications that you are taking or with other health-related issues. Talk with your doctor about any concerns you may have.</p>
 Low levels of cognitive engagement <p>Cognitive engagement is thought to support the development of a "cognitive reserve". This is the idea that people who actively use their brains throughout their lives may be more protected against brain cell damage caused by dementia.</p>	<p>Be a lifelong learner! Challenge your brain by:</p> <ul style="list-style-type: none"> • Trying something new or doing a familiar task in a new way. • Taking up new hobbies. • Learning a new language. • Learning how to play a musical instrument or joining a choir. • Playing games such as word puzzles, jigsaw puzzles, and memory games.
 Depression <p>People who experience depression in mid- or later life have a higher risk of developing dementia. However, the relationship between depression and dementia is still unclear. Many researchers believe that depression is a risk factor for dementia, whereas others believe it may be an early symptom of the disease, or both.</p>	<p>If you are feeling sad, tired, hopeless, lonely, or irritable on a regular basis, you may be experiencing feelings of depression. If you're feeling this way, make an appointment to speak with your doctor or a mental health professional. In addition to professional treatment, consider:</p> <ul style="list-style-type: none"> • Learning about depression. • Maintaining an active lifestyle, such as going on daily walks. • Writing your feelings, thoughts, and experiences in a journal. • Talking to your friends and family about your feelings. • Sticking to your treatment plan. If you're taking medications, talk to your doctor if you notice any changes in mood or behaviour.
 Traumatic brain injury <p>People who experience severe or repeated head injuries are at increased risk of developing dementia.</p> <p>Brain injuries may trigger a process that might eventually lead to dementia. This particularly affects athletes in boxing, soccer, hockey, and football, which often have repeated head injuries.</p> <p>Falls are the leading cause of traumatic brain injury. Falling is especially dangerous for older adults.</p>	<ul style="list-style-type: none"> • Remain aware of your surroundings and avoid risky activities. When you must engage in an activity of this type, such as construction work, cycling or skating, wear an approved helmet. • Drive safely and always wear a seat belt. <p>To help reduce the risk of falls, consider:</p> <ul style="list-style-type: none"> • Installing handrails on all stairs and grab bars in bathrooms. • Reviewing your medications routinely to avoid medications or combinations that may affect your balance. • Removing tripping hazards, like loose rugs, from your home. • Having good lighting in all bedrooms. • Being cautious of icy sidewalks in the winter. Wear proper footwear for the weather.



Hearing loss

Mild levels of hearing loss increase the risk of cognitive decline and dementia.

Though it is still unclear how exactly it affects cognitive decline, hearing loss can lead to social isolation, loss of independence, and problems with everyday activities.

- Have annual hearing evaluations.
- Avoid listening to music too loudly.
- Avoid being continually exposed to loud sounds.
- Ask your doctor to check for earwax buildup. If you have buildup, your doctor will be able to help you remove it.
- Make sure you use hearing aids if hearing becomes a problem.
- Check batteries and fit of hearing aids regularly.



Social isolation

Social isolation can increase the risk of hypertension, coronary heart disease, depression, and dementia.

Staying socially active may reduce the risk of dementia. Social interaction may also help slow down the progression of the disease.

Stay connected. Consider:

- Joining a service club, volunteering, or meeting new people who share a common interest.
- Visiting old friends.
- Making regular phone calls to stay connected with friends and family.
- Using email or Facebook to stay connected with friends and family. If you have difficulty using the computer, challenge your brain by learning how to create a Facebook and email account.



Air pollution

The relationship between air pollution and dementia is still unclear. However, it's estimated that those living close to busy roads have a higher risk of dementia because they may be exposed to higher levels of air pollution from vehicle emissions.

Reduce your exposure to air pollution:

- Clean indoor air with air filters.
- Pay attention to your local air quality advisories.
- Limit your exposure to areas with heavy traffic. Consider avoiding busy roads on your exercise route or your commute.



Obesity

Obesity in midlife is associated with a higher risk of developing dementia.

- Obesity is a chronic, progressive and relapsing disease. It is characterized by abnormal or excess body fat that impairs health and well-being. Talk to your doctor about evidence-based ways of managing this chronic condition.

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Alzheimer Society

Alzheimer Society of Canada

20 Eglinton Avenue West, 16th Floor Toronto, Ontario M4R 1K8
National Office: 1-800-616-8816 Information and Referrals: 1-855-705-4636 (INFO)

 info@alzheimer.ca  alzheimer.ca
 @AlzheimerCanada  @AlzCanada  @AlzheimerCanada

