



Healthy Brains, Healthy Minds: Minimizing Your Risk Factors

There are many ways patients and their families can help to avoid cognitive decline.

- Stay physically active
- Follow a healthy diet
- Take prescribed medications
- Using all assistive devices such as hearing aids, glasses, etc.
- Get enough sleep
- Have support from family members to lower anxiety and help with key reminders

Cognitive decline: decline in memory, thinking, learning and decision-making time.



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To learn more:

- ❖ Perioperative Brain Health Centre: www.perioperativebrainhealth.com
- ❖ The Globe and Mail: Silent strokes after elective surgeries in older adults double their risk of later cognitive decline. Health and Fitness, August 15th 2019.
- ❖ CBC News: Under the knife and unaware? What happens when we're under anesthesia. The Current, June 25th 2018.
- ❖ The Globe and Mail: I'm having memory problems after anesthetic and surgery. Is that common?" Life, March 12th 2018.
- ❖ CODEX trial, Perioperative Brain Health Centre, Sunnybrook Health Sciences Centre, Clinical Trial Registry: NCT03147937 <https://clinicaltrials.gov/>
- ❖ COGNIGRAM trial, Perioperative Brain Health Centre, Sunnybrook Health Sciences Centre, Clinical Trial Registry: NCT 03147937 <https://clinicaltrials.gov/>

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Cognitive Decline After Anesthesia

Information for Patients and Visitors



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when it matters
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Anesthesia and Surgery

- Anesthesia causes three effects that allow patients to tolerate surgery: unconsciousness, memory loss and prevents unwanted movements.
- Many patients may have cognitive issues for weeks to months after even a single anesthetic exposure.

Types of cognitive symptoms after surgery

- ✓ **Postoperative delirium (POD)** is a shift in consciousness soon after surgery.

Symptoms of POD are:

- Confusion
- Trouble paying attention
- Trouble with clear thinking
- Hallucinations during POD lasts 1-3 days.

- ✓ **Neurocognitive Disorder (NCD)** is a more long-term state in which a patient's memory and learning decline after surgery.
 - NCD lasts weeks to months.

Symptoms

- Poor memory going into a room and not remembering why you are there.
- Misplacing things.
- Inability to do routine tasks.
- Trouble with doing more than one thing at a time.
- Issues with mental tasks (solving crosswords, reading, etc.).
- Difficulties understanding spoken language.
- Symptoms vary among patients and can range from mild to severe. Each person will have a different experience.

Risk Factors

- Cognitive decline can affect anyone who has surgery.
- Commonly used anesthetics are linked with cognitive decline.
- General anesthetics have the most impact.
- NCD and POD share similar risk factors: age, fewer years of education and having two or more chronic diseases/conditions at the same time.
- Older adult patients (65+) and patients who will have heart surgery are at the highest risk

Diagnosis

- NCD is NOT dementia.
- NCD symptoms often do not present until long after surgery.
- NCD is diagnosed with neurocognitive tests.
- There are no medications to stop this.
- 1 out of 3 patients will have NCD after they leave the hospital.
- 1 to 6 patients out of 100 who have heart surgery will have cognitive decline.
- POD occurs in 15% to 53% of older patients after surgery.

Outlook

- Exact cause of NCD is unknown.
- Cognitive decline can last days to months, and in a few cases, persists for years.
- NCD often resolves itself as normal brain function returns within a few months following hospital discharge for most patients.
- *No treatment available*

