

# CARING WITH CONFIDENCE - DELIRIUM

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File Hills Qu'Appelle Tribal Council  
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# Land Acknowledgment



# Acknowledgments

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Roslyn M. Compton, PhD, RN, GNC(C)  
Erin Yakiwchuk, BSP, ACPR, MSc, BCGP  
Sandi Whitford, DM  
BetterLTC Team  
File Hills Qu'Appelle Tribal Council





# A little about me...

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# Target Audience

Anyone caring with  
older adults

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Family

Friends

Health Care Team

Housekeepers

Neighbours



# Learning Outcomes

1

Recognize signs and symptoms of delirium for early intervention

2

Identify common causes of delirium in older adults

3

Explain strategies to apply when caring with older adults experiencing delirium

4

Apply delirium prevention strategies



# Introduction to Delirium

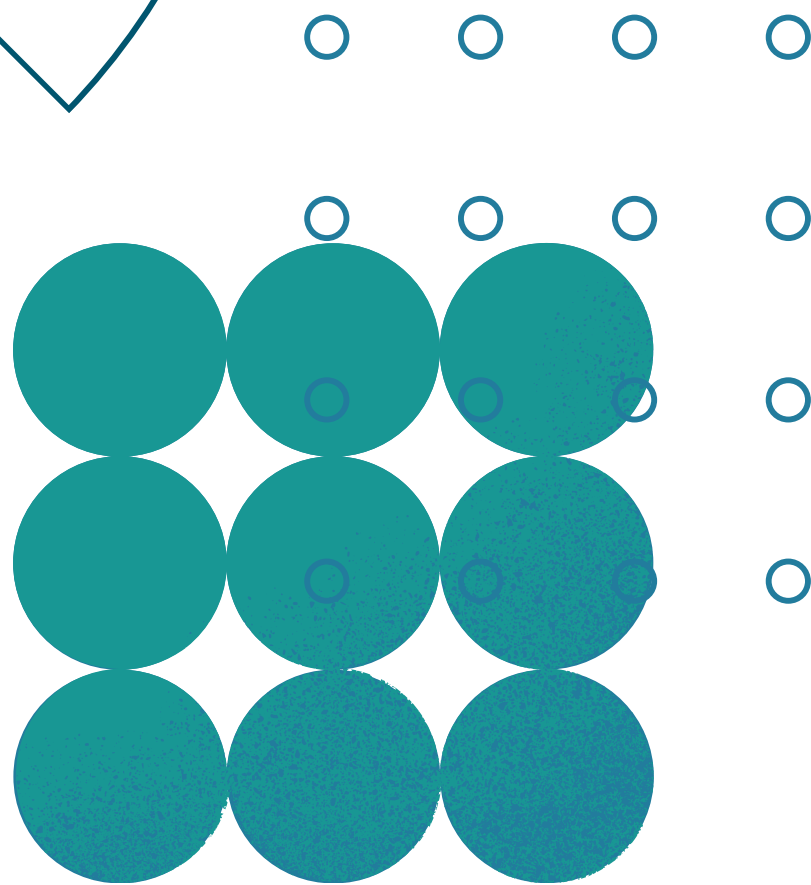
## Content

→ Key Definitions

→ Prevalence

→ Risk Factors

→ Common Causes







# Delirium is...

## **A MEDICAL EMERGENCY**

- A sudden onset of confusion characterized by disorientation and behavioural changes
- Most commonly affects older adults because of risk factors such as advanced age and hospitalization
- Commonly caused by infection, surgery, medication
- Underrecognized and often misdiagnosed in older adults

# Delirium

## Overview

- Symptoms develop and progress over hours to days
- Preventable
- Early detection and intervention are critical
- A shared care approach with older adults, caregivers, and care team is essential





# Raising Awareness

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The symptoms of delirium can mimic other health conditions, making it difficult to identify and diagnose

If undiagnosed, health outcomes are poor and can be fatal for older adults

Learning about delirium is essential for anyone caring with older adults





# Why Does Delirium Occur?

Often a reaction of the brain to a medical problem(s)



- Breakdown in brain network connectivity and efficiency
- Body mass (weight) changes
- Brain inflammation
- Blood sugar changes
- Hormonal imbalances
- Sleep pattern changes

# Key Definitions

COGNITIVE IMPAIRMENT	DISORIENTATION	HALLUCINATIONS	HYPOXIA	PSYCHOMOTOR DISTURBANCE
<ul style="list-style-type: none"><li>• Memory loss, difficulty thinking, concentrating, understanding, or finding words</li><li>• Can cause difficulty with physical mobility</li></ul>	<ul style="list-style-type: none"><li>• Confusion that usually involves difficulty with recognizing the time, place, or familiar people</li></ul>	<ul style="list-style-type: none"><li>• Seeing or hearing things that are not there</li></ul>	<ul style="list-style-type: none"><li>• A low level of oxygen in the blood</li><li>• A common cause of confusion in older adults</li></ul>	<ul style="list-style-type: none"><li>• Difficulty with physical movements because there is an issue with how the brain is functioning</li></ul>





# Prevalence

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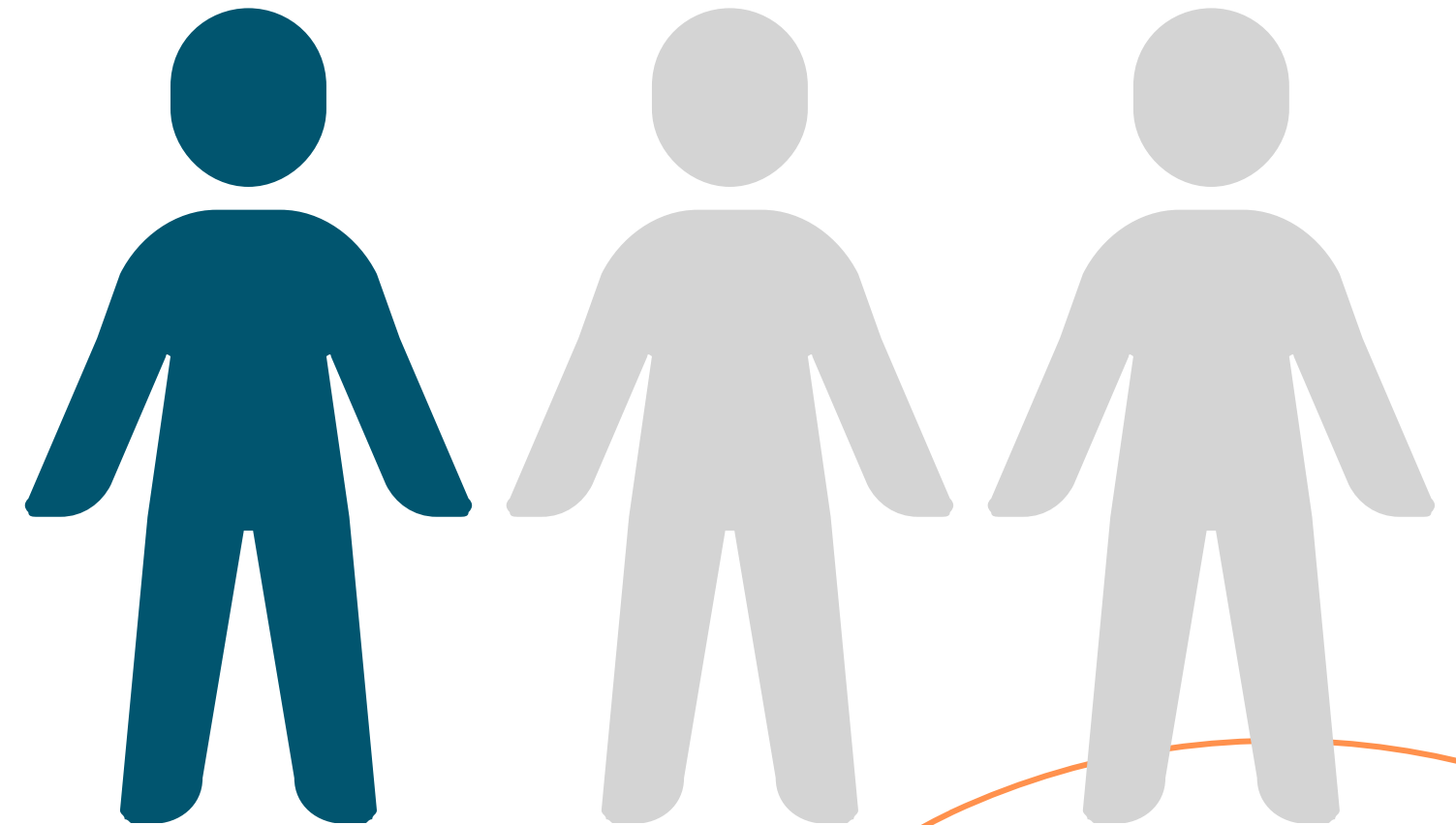
How often does delirium  
happen...

# Prevalence of Delirium

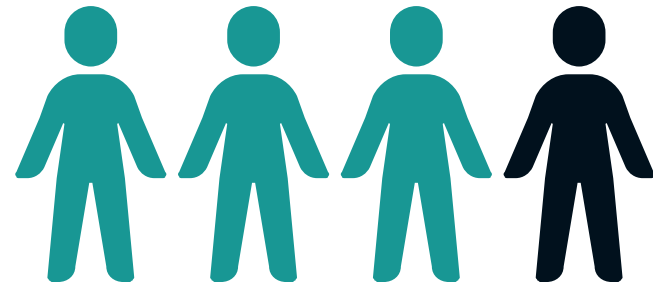
1 OUT OF 3



Older adults globally experience delirium when hospitalized



# Prevalence of Delirium



**3 OUT OF 4**

Older adults can experience delirium after surgery or serious illness



Occurs in **15-25%** of older adults after elective or planned low-risk surgery



Occurs in **50%** of older adults after high-risk, major surgery such as hip fracture repair or heart surgery

# Delirium Risk in Different Settings



**Home or Community Setting**  
1-3% of older adults may  
experience delirium



**Long-Term Care**  
From 1.4% up to 70% of residents  
experience delirium

# High-Risk Settings

**The emergency room (ER) and intensive care unit (ICU) are high-risk settings for older adults to develop delirium**

It is reported that 75% of delirium cases are overlooked in the ER

For older adults, a length of stay in the ER of greater than 10 hours is linked to more than a two-fold increase in the risk of developing delirium within the next 3 days

The risk is greater if the person is mechanically ventilated in the ICU

- Occurs in up to 80% of patients



# Risk Factors

- Advanced age - over 65 years
- Frailty
- Previous delirium, dementia or cognitive impairment
- Psychoactive and anticholinergic medications
- Surgery
- Mechanical ventilation





# Risk Factors

Continued...



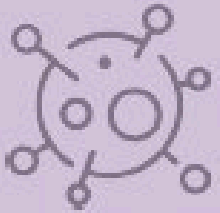
- Critical illness
- Acute Infection
- Hip fracture
- Depression
- Substance use
- Vision or hearing impairment
- Urinary catheterization
- Electrolyte imbalances



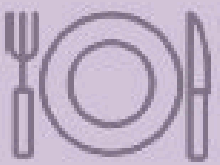
**PINCHME mnemonic**  
to help identify potential causes  
of delirium



**P**ain



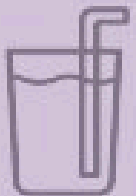
**I**nfection



**N**utrition



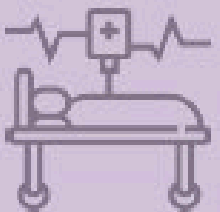
**C**onstipation



**H**ydration



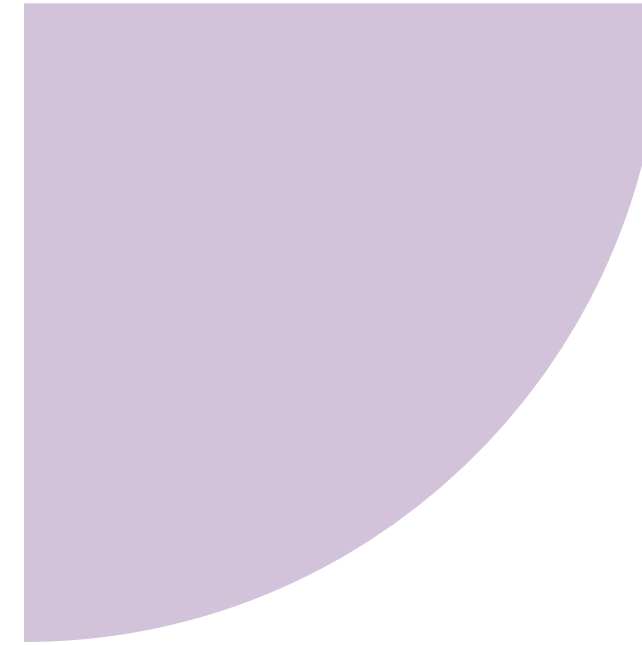
**M**edication



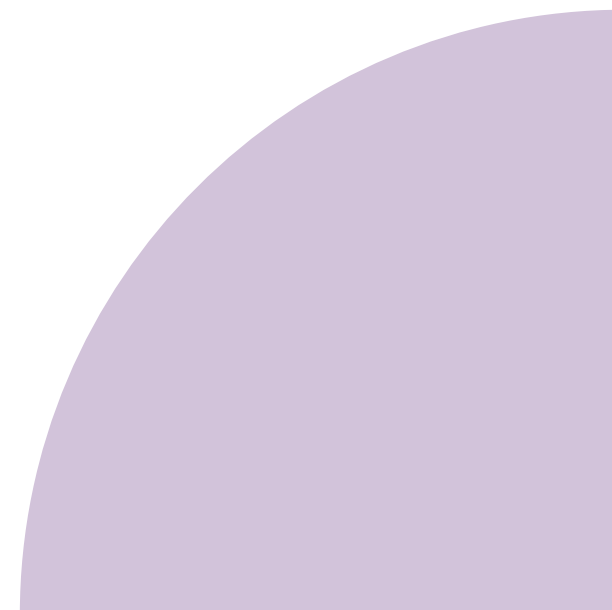
**E**nvironment

(British Geriatrics Society, 2020)

# Common Causes



- Pain
- Infection
- Acute illness
- Medications
- Hypoxia (low oxygen)
- Medical Procedures



- Hospital Admission
- Surgery
- Bone Fractures
- Malnutrition
- Constipation

(Bellelli et al., 2021; British Geriatrics Society, 2020; Harwood & Teale, 2018; Perez-Ros & Martinez-Arnau, 2019)

# Common Causes

Continued...

- Hearing or Vision Loss
  - Cognitive Impairment
  - Environmental Stressors
  - Social Isolation
- 
- End of life progression
  - Mechanical Ventilation
  - Physical Restraint
  - Dehydration
  - Low Blood Sugar



# SELF-ASSESSMENT

1 Delirium is characterized by a sudden onset of confusion. True or False

2 Delirium is preventable and in some cases reversible. True or False

Older adults are at greatest risk for developing delirium in which setting?

- 3
- a) Long-term care facility
  - b) Emergency department
  - c) Intensive Care Unit
  - d) Home or community

4 A person over the age of 65 undergoing open heart surgery is at risk for delirium. True or False

Common causes of delirium are: True or False

- 5
- a) Hip fracture
  - b) Urinary Tract Infection (UTI)
  - c) Pain



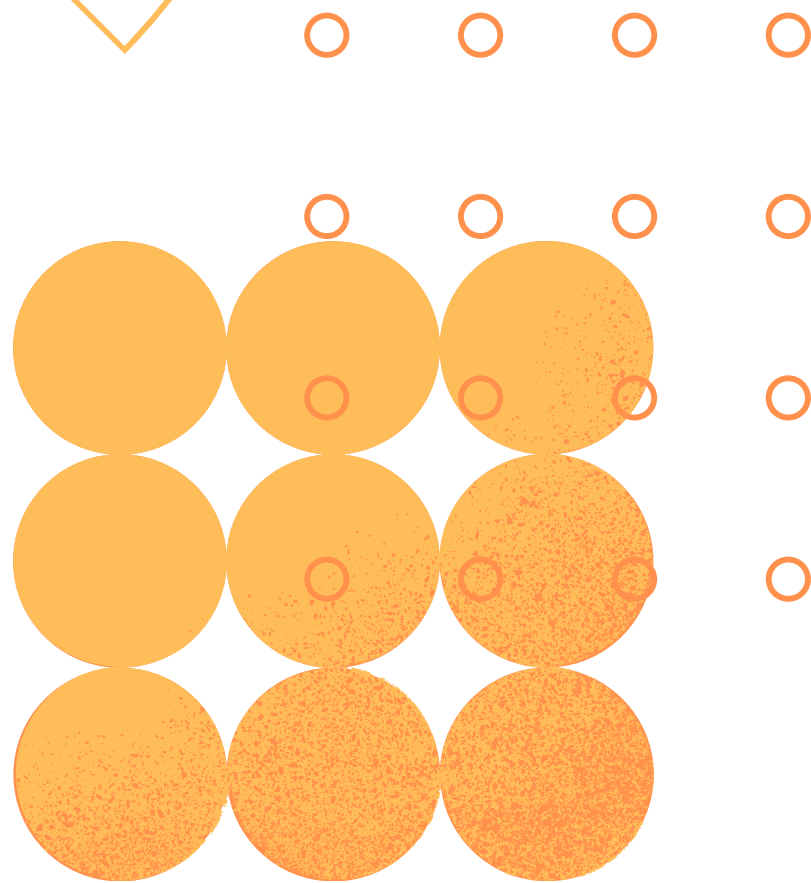
# Recognizing Delirium

## Content

→ Warning Signs & Symptoms

→ Delirium Subtypes

→ The "3 D's": Delirium, Dementia, Depression



# Signs & Symptoms



- Confusion
- Unusual behaviour
- Inattention
- Decreased awareness
- Incoherent speech
- Disorganized thoughts
- Impaired memory
- Altered levels of consciousness
- Hallucinations
- Delusions
- Altered sleep-wake patterns

# Delirium Subtypes & Clinical Features

Hypoactive

Lethargic  
Withdrawal from  
interaction  
Reduced  
psychomotor activity

Hyperactive

Agitated  
Restless  
Combative  
Incoherent speech or  
rambling

Mixed

Fluctuations between  
hypoactive and  
hyperactive state



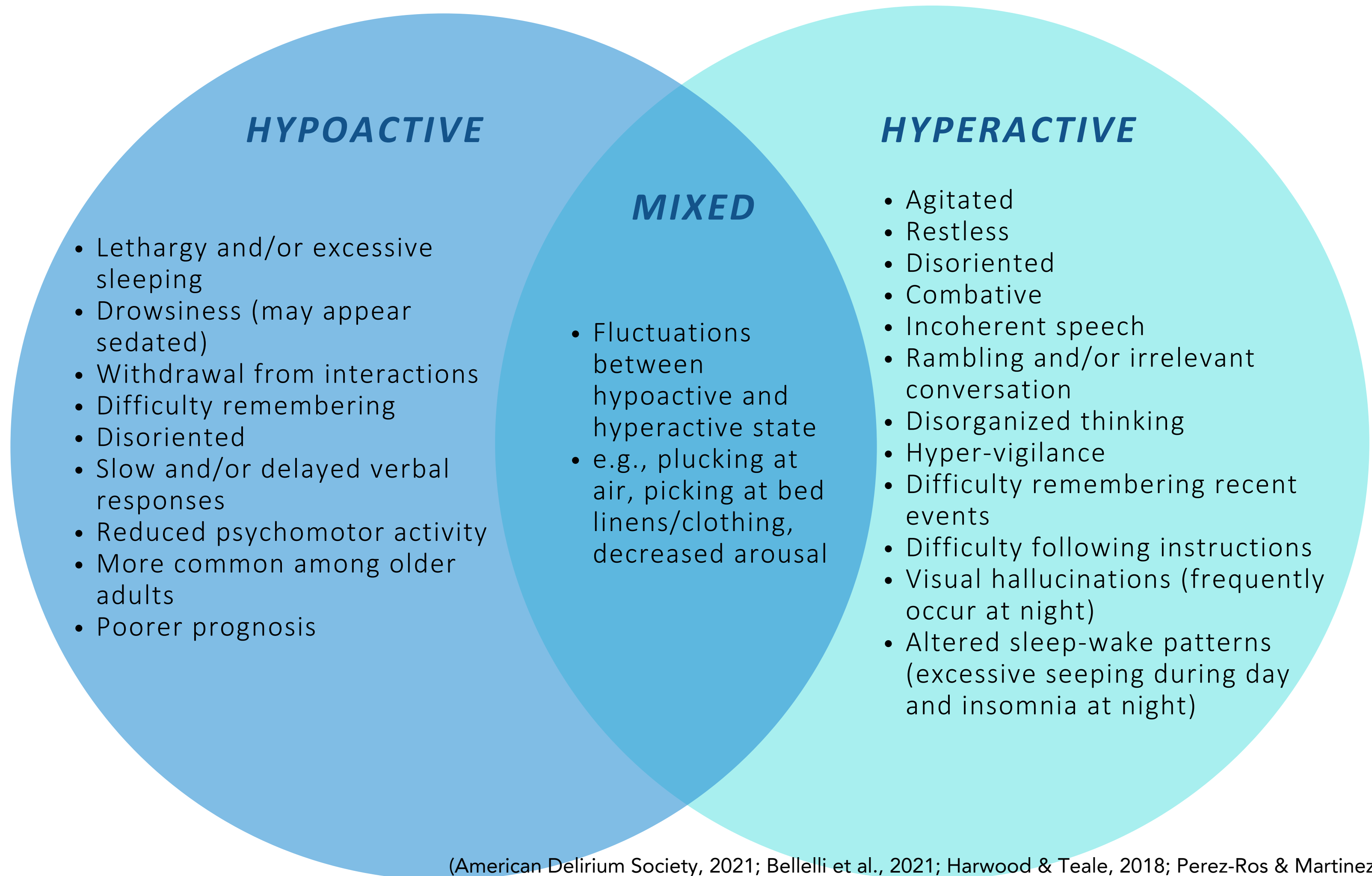


# Delirium Subtypes

Continued...

- Hypoactive delirium has a poorer prognosis compared to Hyperactive or Mixed delirium
- Hypoactive and Mixed delirium are more likely to occur with frailty and advanced age

# DELIRIUM SUBTYPES







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# The "3 D's": Delirium, Dementia, & Depression

Delirium signs and symptoms can mimic dementia and depression, often leading to misdiagnosis. Being able to differentiate between the 3 will assist you to identify delirium.



# The "3 D's"

1

## Delirium

- Sudden onset (within hours or days)
- Preventable
- Caused by several factors (e.g., infection, dehydration)
- Reversible if cause is treated
- Several screening tests exist
- Screening Tool: Confusion Assessment Method (CAM) to assess mental status, thought processes, attention, and level of consciousness

2

## Dementia

- Slow onset and progression (over months to years)
- Impacts function and independence
- Caused by changes to the brain
- Irreversible
- More likely to develop delirium
- Screening Tool: Quick Confusion Scale (QCS) to assess orientation, memory, and concentration

3

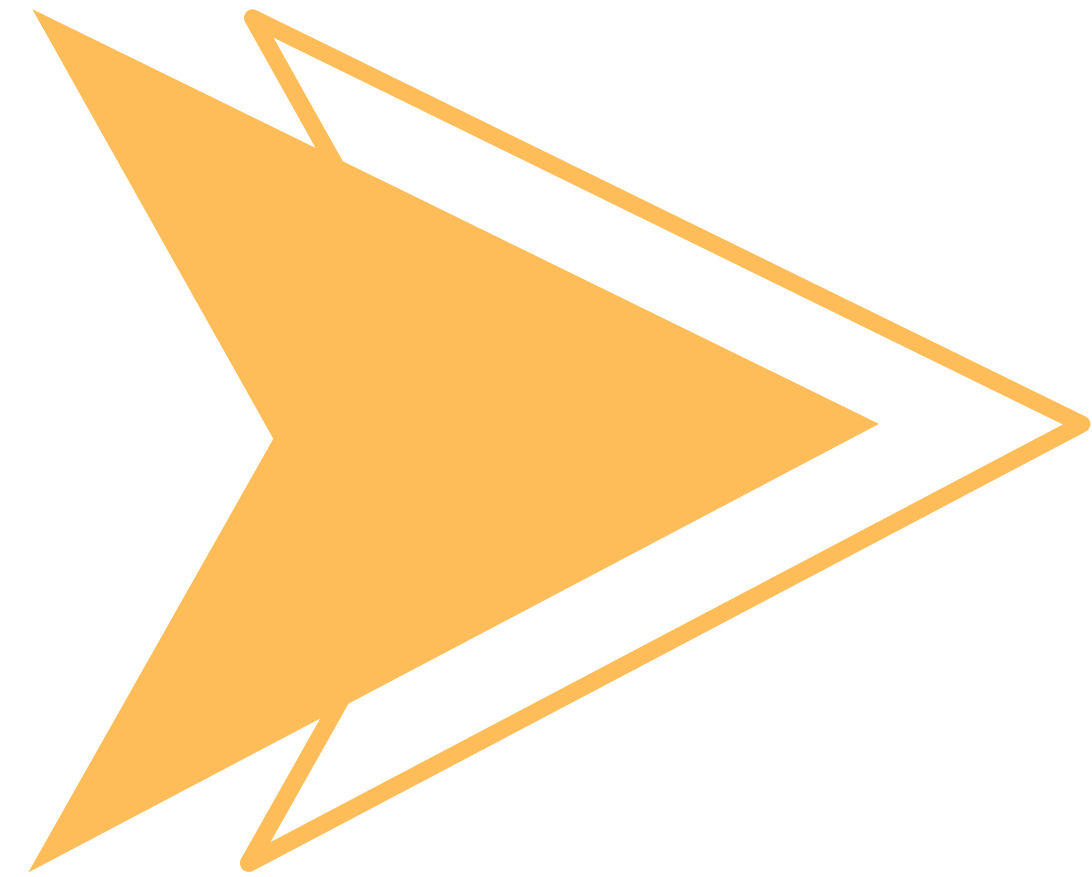
## Depression

- Common among older adults
- Often untreated
- Symptoms similar to hypoactive delirium
- More likely to develop dementia
- May coexist with dementia
- Increases risk for developing delirium
- Geriatric Depression Scale (GDS) is preferred

# SELF-ASSESSMENT

- ☒ Warning signs and symptoms of delirium include: (Choose all that apply)
  - a) Unusual behaviours
  - b) Inability to focus attention and complete a task
  - c) Difficulty falling asleep
  - d) Responding to questions with answers that are off topic and do not make sense
- ☒ Delirium is easy to recognize and diagnose because of unique signs and symptoms. True or False
- ☒ Delirium symptoms can fluctuate between agitation and withdrawal from any physical activity. This best describes the subtype:
  - a) Hypoactive
  - b) Hyperactive
  - c) Mixed
  - d) None of the above - delirium does not have subtypes
- ☐ The "3 D's" to be aware of and be able to differentiate between are:
  - a) Delirium
  - b) Depression
  - c) Dehydration
  - d) Dementia
  - e) A, B, & D

# For more information and resources...



## **Alberta Health Services**

Delirium Resources

<https://myhealth.alberta.ca/Alberta/Pages/Delirium.aspx>



## **Alberta Health Services**

Dementia Resources

<https://myhealth.alberta.ca/health/pages/conditions.aspx?Hwid=uf4984>



## **American Delirium Society**

What is Delirium?

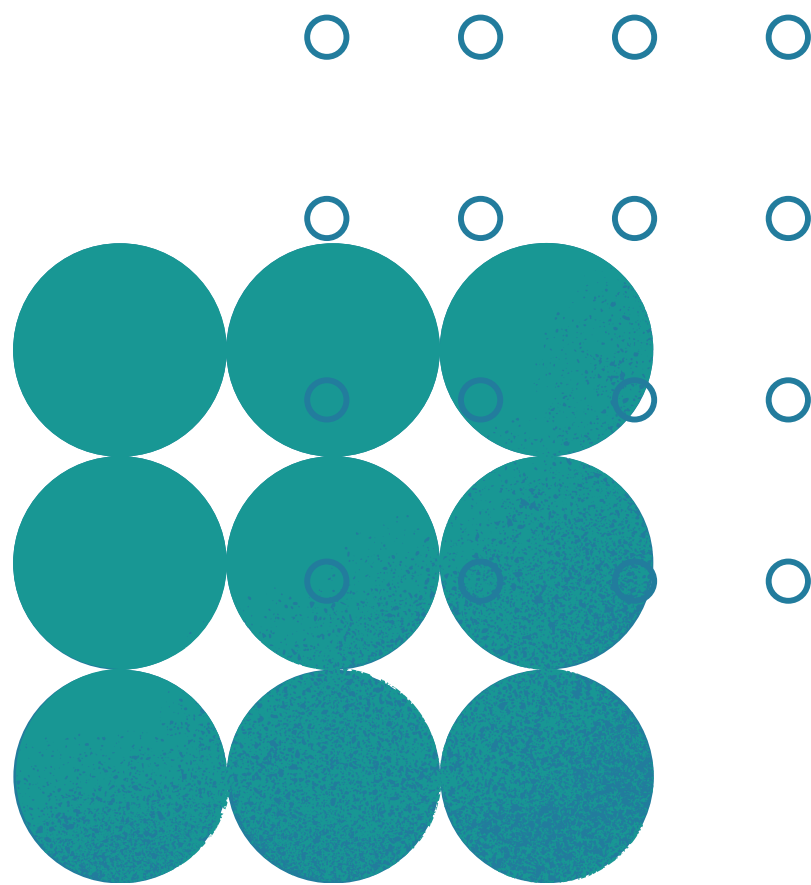
<https://americandeliriumsociety.org/patients-families/what-is-delirium/>



# Screening for Delirium

## Content

- Screening Tools
- The Confusion Assessment Method (CAM)
- Diagnosis
- Key Roles in Detection





# THE CONFUSION ASSESSMENT METHOD (CAM)

The Confusion Assessment Method (CAM) is the preferred screening tool

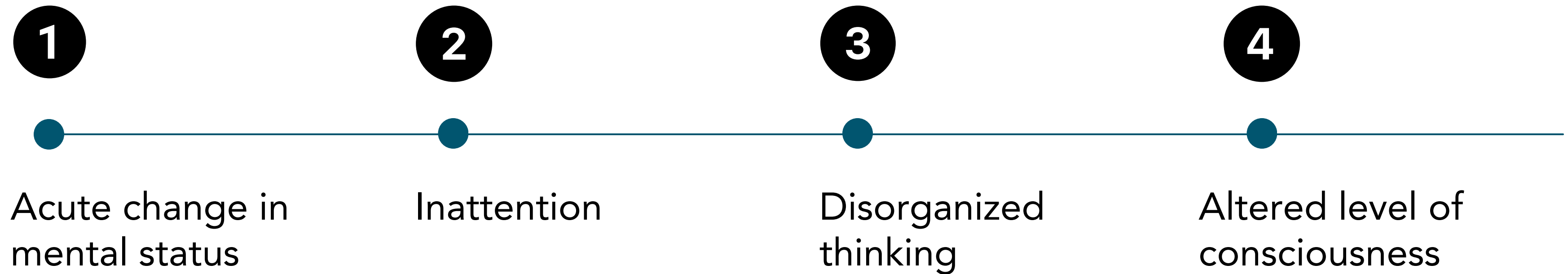
Most widely used and validated in studies for high levels of accuracy in detecting delirium

Consists of 4 core areas that are tested





# CONFUSION ASSESSMENT METHOD (CAM)



**Delirium is diagnosed if both 1 AND 2 are present WITH either 3 or 4**



# Screening Tools

## **Confusion Assessment Method (CAM) or 3D-CAM (3 Minute Diagnostic Interview)**

- 94-100% sensitivity
- 89-95% specificity
- Preferred screening method

## **Confusion Assessment Method (CAM-ICU)**

- 93-100% sensitivity
- 93-100% specificity
- Preferred screening method in ICU setting for non-verbal, mechanically ventilated patients

# Diagnosis

Studies report delirium cases go undiagnosed in up to 66% of older adults and up to 87.5% of cases if dementia is already present.

A thorough health history and investigation to identify underlying causes and predisposing factors is required.





**It is beneficial to include caregivers in the assessment process to obtain baseline and current medical history**

**Establishing partnerships support person-centred care**





# Key Roles in Detection

Anyone caring with older adults can have a key role to play and be active participants in delirium care

Including:

Family

Friends

Neighbours

Support staff

Housekeeping

Dietary staff

Healthcare Professionals



Want to  
learn more?



To access more information and resources for delirium screening visit these websites...



**Canadian Coalition for Seniors' Mental Health**

Delirium Assessment and Treatment of Older Adults  
Brochure

<https://ccsmh.ca/wp-content/uploads/2024/02/CCSMH-Delirium-Pocket-Card.pdf>



**Regional Geriatric Program of Toronto**

Delirium Screening, Prevention, and Care Tools

<https://www.rgptoronto.ca/?s=delirium>.



**Provincial Geriatrics Leadership Ontario**

Handbook on Delirium: Changes in Thinking and  
Behaviour

<https://rgpson.mydev.ca/wp-content/uploads/2019/10/RGPO-Handbook-Changes-in-Thinking-r2.pdf>

# For more information...



## **Network for Investigation of Delirium: Unifying Scientists (NIDUS)**

Adult delirium measurement info cards

<https://deliriumnetwork.org/measurement/adult-delirium-info-cards/>



## **National Institute for Health and Care Excellence (NICE)**

Recognizing and preventing delirium. A quick guide for care home managers

<https://www.nice.org.uk/Media/Default/About/NICE-Communities/Social-care/quick-guides/Delirium-quick-guide-1-1.pdf>



## **Health Education England (North East)**

Delirium Infographic

<https://madeinheene.hee.nhs.uk/Portals/0/Faculty%20of%20Patient%20Safety/Delirium/DelcolourKrish.pdf?ver=2020-07-27-141344-097>



# Progression of Delirium

## Content



Monitoring Signs & Symptoms



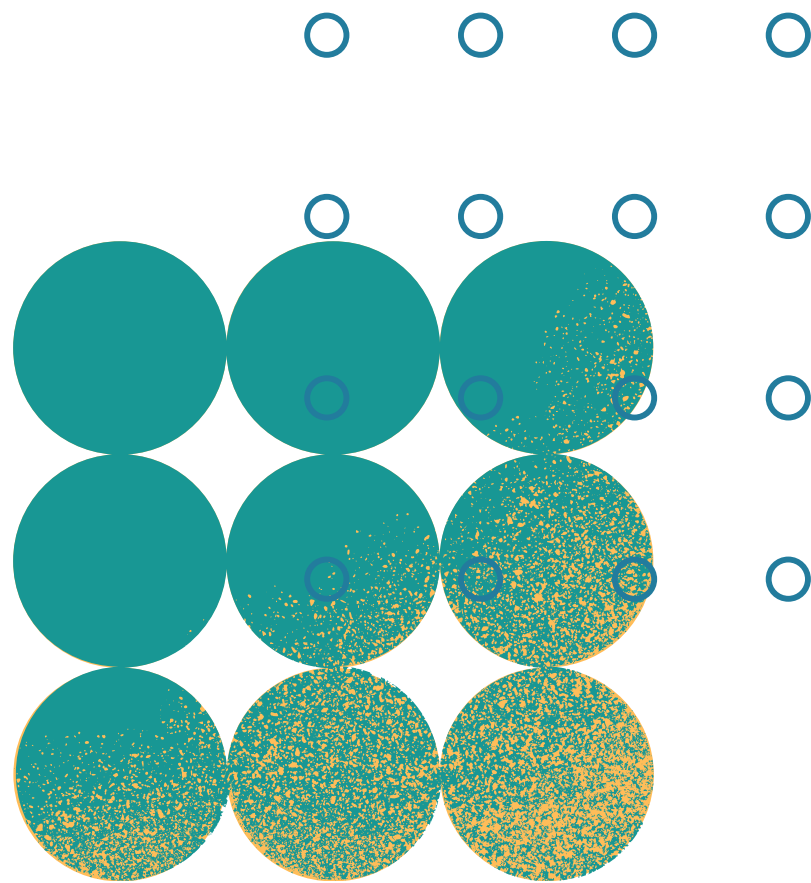
Non-pharmacological Interventions



Pharmacological Approaches



Outcomes





# If delirium is suspected or diagnosed...

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You will need to begin monitoring the signs and symptoms

Keeping a journal or documenting alterations in behaviours can be helpful to identify causes of delirium that can be reversible with the right interventions

# Things to watch for and monitor...

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- Cognitive function - look for changes to thinking patterns
- Nutrition - monitor oral intake at meal times
- Hydration - monitor oral fluid intake
- Swallowing - look for difficulty with swallowing
- Electrolytes - can be monitored in blood tests



# Things to watch for and monitor...

## Continued

- Elimination - monitor for difficulty with bowel movements or urinating
- Mobility - monitor activity and encourage movement
- Sleep-wake patterns - look for changes to sleep routine (e.g., sleeping more)
- Pain - monitor for discomfort
- Vital signs - monitor temperature and oxygen level (watch for fever or hypoxia)
- Skin integrity - look for redness or sores

# Activity

## Let's Talk

About how you can participate in monitoring delirium...

Think about how others on the care team can assist with monitoring delirium  
(e.g., volunteer, dietician, support worker, physiotherapist, housekeeper, nurse)

**Who could you share your observations, questions, or concerns with?**





# Non-Pharmacological Interventions

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- **Assess, monitor, and control pain**  
(pain contributes to distress and agitation)
- **Promote normal bowel and bladder function**  
(constipation or urinary retention contribute to distress and agitation)
- **Maintain nutritional intake**  
(malnutrition can lead to other health concerns including poor skin integrity)
- **Address visual or hearing impairments**  
(e.g., keep glasses clean and hearing aids accessible to promote use)



# Non-Pharmacological Interventions

## Continued...

- **Maintain acceptable electrolyte balance, blood sugar levels, and vital signs**

(e.g., infection and low oxygen levels can contribute to delirium - both can be detected by checking vital signs)

- **Encourage mobility and facilitate activities as tolerated**

(i.e., participation in self care)

- **Maintain a hazard-free environment to prevent falls**

(i.e., bed in lowest position and remove unnecessary equipment)





# Non-Pharmacological Interventions

## Continued...



- **Avoid restriction of free movement**  
(e.g., urinary catheters, intravenous (IV) lines, and use of restraints can increase the severity of delirium)
- **Promote normal sleep-wake patterns**  
(e.g., relaxation music, warm fluids, gentle massage, and an overall calm environment will support this)
- **Support re-orientation**  
(e.g., having a clock, calendar, familiar objects, or a window in the room can help with reorientation when confused)

# Remember A.C.E!

## ACTIVITY

- Frequent mobilization
- Cognitive stimulation (e.g., socializing, coloring, music therapy, or puzzles)

## COMFORT

- Glasses clean
- Hearing aids in and working
- Comfortable temperature in room
- Personal belongings (e.g., favorite blanket from home)
- Nutritional needs are met

## ENVIRONMENT

- Exposure to daylight during day
- Calm and quiet at night
- Family and caregiver presence
- Familiar personal objects from home (e.g., photos)



# Pharmacological Approaches

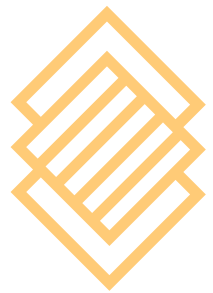
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**Recent studies suggest  
medications are not effective in  
the treatment of delirium and are  
potentially harmful**



# Antipsychotic Medications

Medications should always be avoided  
If necessary, remember to start low and go slow!



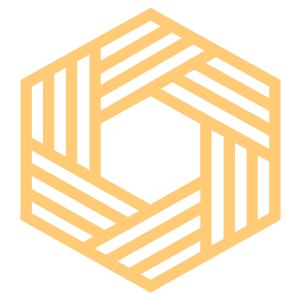
Haloperidol  
(Haldol)



Olanzapine  
(Zyprexa)



Risperidone  
(Risperdal)



Quetiapine  
(Seroquel)





# Medications

## The Cons...

- Antipsychotic medications can be linked to adverse cardiac outcomes
- Medications can have sedative effects and increase the risk for injury from falls
- Medications, including over-the-counter (OTC), can cause delirium (e.g., changes to dosages, sudden discontinuation resulting in withdrawal, interactions from many medications together)
- Risk for continuation of medications unnecessarily after discharge from hospital





# Medications

## The Pros...

- May alleviate symptoms if alcohol withdrawal is the cause of delirium (i.e., a benzodiazepine medication may be necessary)
- In some cases, if safety is at risk, medications may be considered
- Can alleviate pain or distress that may increase the severity of delirium but opioids such as hydromorphone should be avoided



# Outcomes



In older adults, delirium can result in...

- Increased risk of death
- Increased length of hospital stay
- Increased likelihood of developing dementia or cognitive impairment
- Increased likelihood of long-term care placement
- Functional decline
- Hospital-acquired pressure injuries
- Emotional distress
- Decreased quality of life



# Did you know...

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- When delirium is experienced during hospitalization, mortality risk doubles within the next 2 years
- Recent studies suggest delirium risk increases with COVID-19 infection and is linked to mortality
- Delirium can lead to long-term cognitive deterioration and functional impairment resulting in dependence on caregivers
- The risk of dementia increases within 48 months of a delirium episode



# Want to learn more?

Follow the link below to explore more about delirium non-pharmacological approaches and interventions!

**Canadian Coalition for Seniors' Mental Health**

Delirium Prevention and Care with Older Adults Brochure

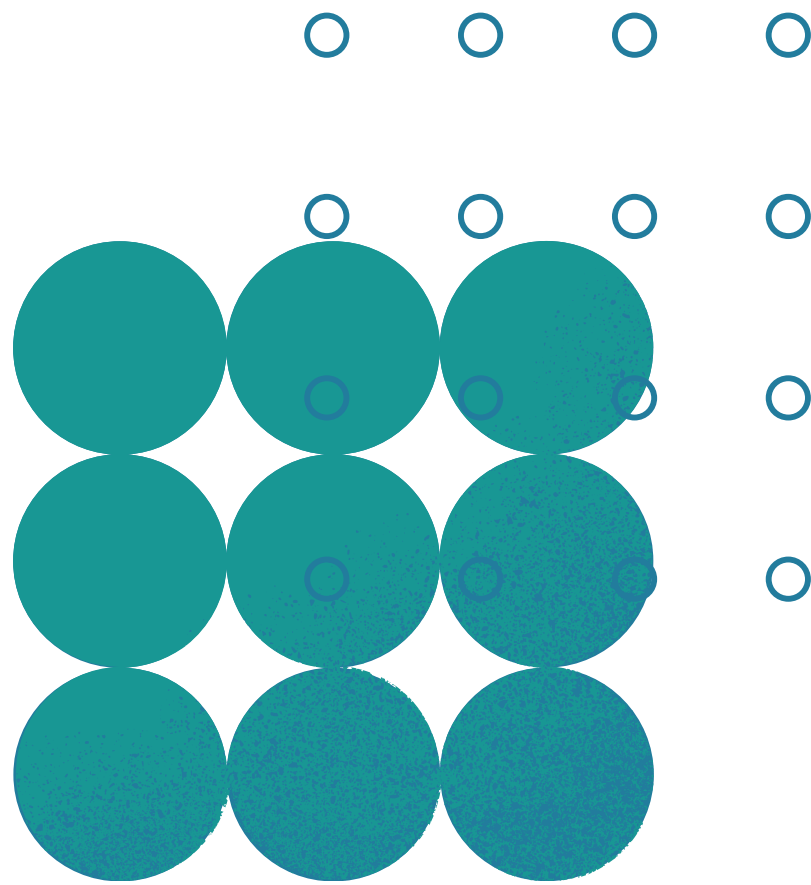
<https://ccsmh.ca/wp-content/uploads/2016/09/A-Delirium-ENG-R3-1-FINAL.pdf>



# Prevention

## Content

- Risk Factor-Specific Interventions
- Key Prevention Strategies
- Dos and Don'ts of Delirium







# Risk Factor-Specific Interventions

## Dementia

- Avoid unnecessary room changes
- Have a clock and a calendar visible in the room

## Sensory Impairment

- Ensure glasses are clean and worn if vision is impaired
- Ensure hearing aids are working and applied if hearing is impaired

## Constipation

- Ensure water jug is filled at bedside at all times
- Assist with oral hydration as needed
- Offer frequent snacks and assist with meals
- Assist with mobilizing frequently

## Pain

- Assess and monitor for pain
- Control pain as needed with medications (avoid opioids if possible)
- Use lowest dose of medication possible to treat pain



# Key Prevention Strategies

What you can do...

- Address hearing or visual impairments (wear glasses or hearing aids if needed)
- Get plenty of rest
- Stimulate your mind (e.g., puzzles or reading books)





# Prevention

Continued...



- Stay hydrated
- Eat nutritious meals
- Stay physically active (e.g., exercise, cultural practices, nature walks, dance)

Be delirium ready and remember knowledge is power!

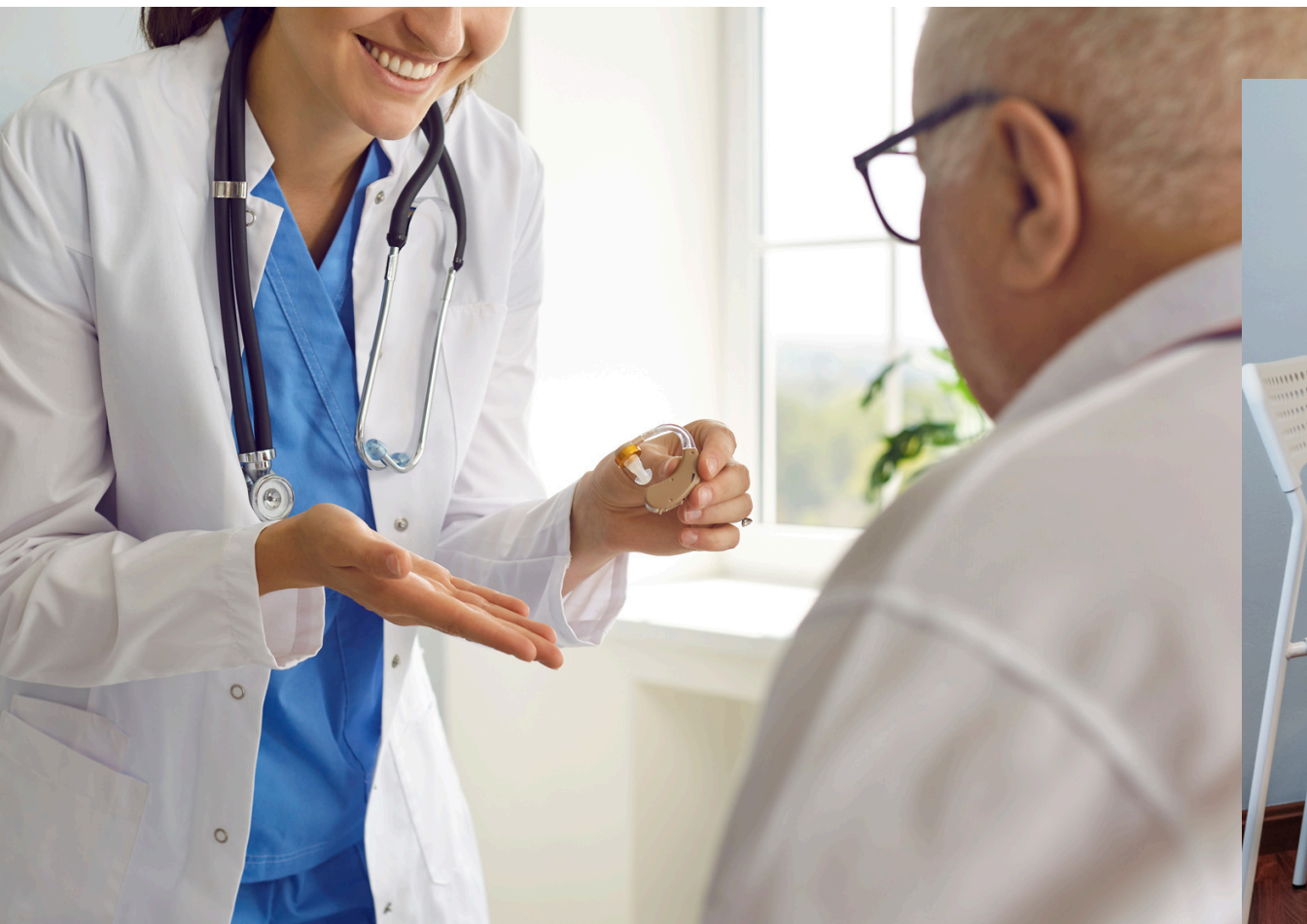




# Delirium Dos

There are many things that we can do when caring with a person experiencing delirium!

Ensure glasses are clean and hearing aids are working properly



Assist with getting out of bed and sitting upright for meals



Introduce self, and speak in a calm tone





# Delirium Dos

## Continued...



Maintain a schedule and routine



Eliminate all non-essential medications

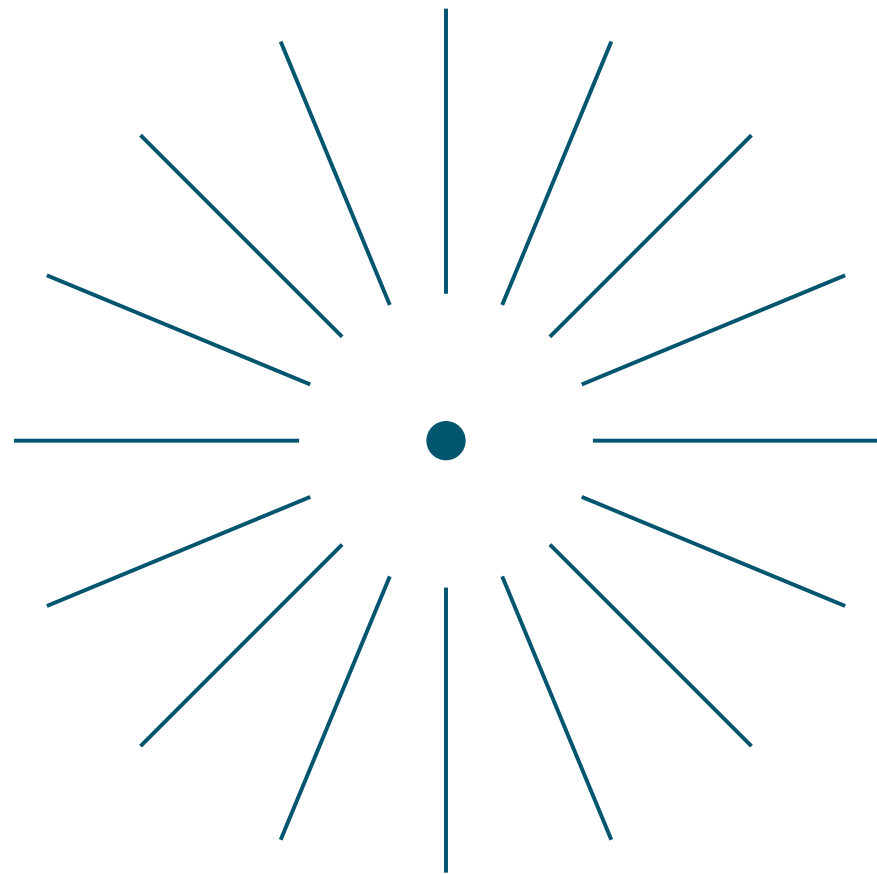


Offer activities such as cards, puzzles, and activity boxes



# Delirium Don'ts

Remember to avoid these at all times!

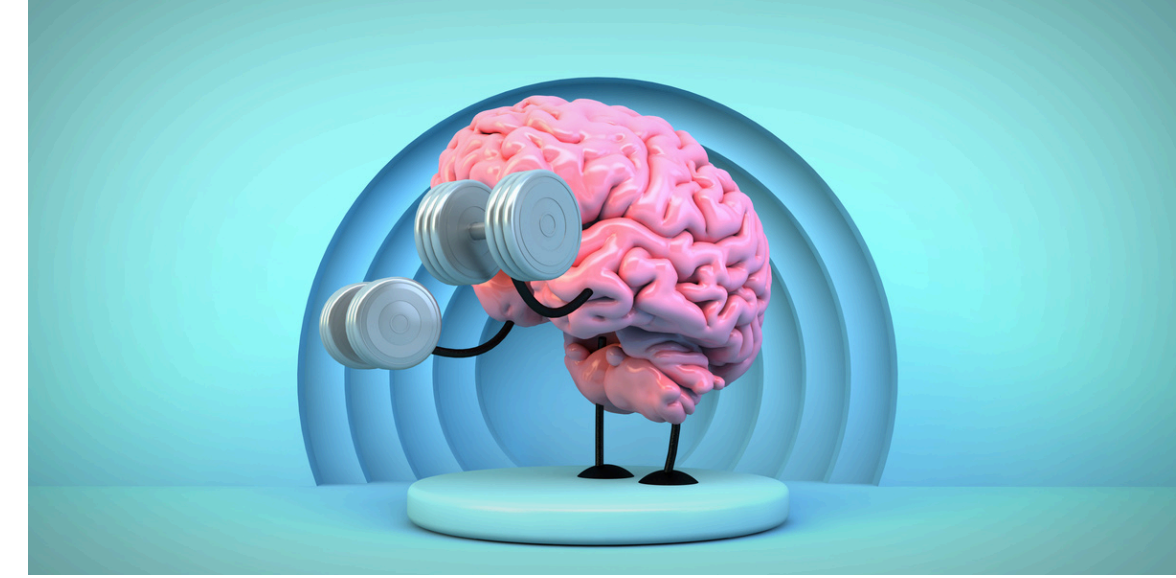


- ✗ Restraints
- ✗ Unnecessary IV lines, or invasive procedures (i.e., tubes or drains)
- ✗ Loud noises and sudden changes of environment (ie. bed transfers on a hospital unit)
- ✗ Dim lighting or environments without windows (i.e., when possible, avoid extended periods of time in the Emergency Room setting)

# Brain Power!

Activities are a great way to prevent delirium!

Try this coloring sheet to exercise your brain and learn about delirium!



**Health Education England (North East)**

Blank Activity Coloring Sheet

<https://madeinheene.hee.nhs.uk/Portals/0/Faculty%20of%20Patient%20Safety/Delirium/DelColourblank.pdf?ver=2020-07-27-141432-230>

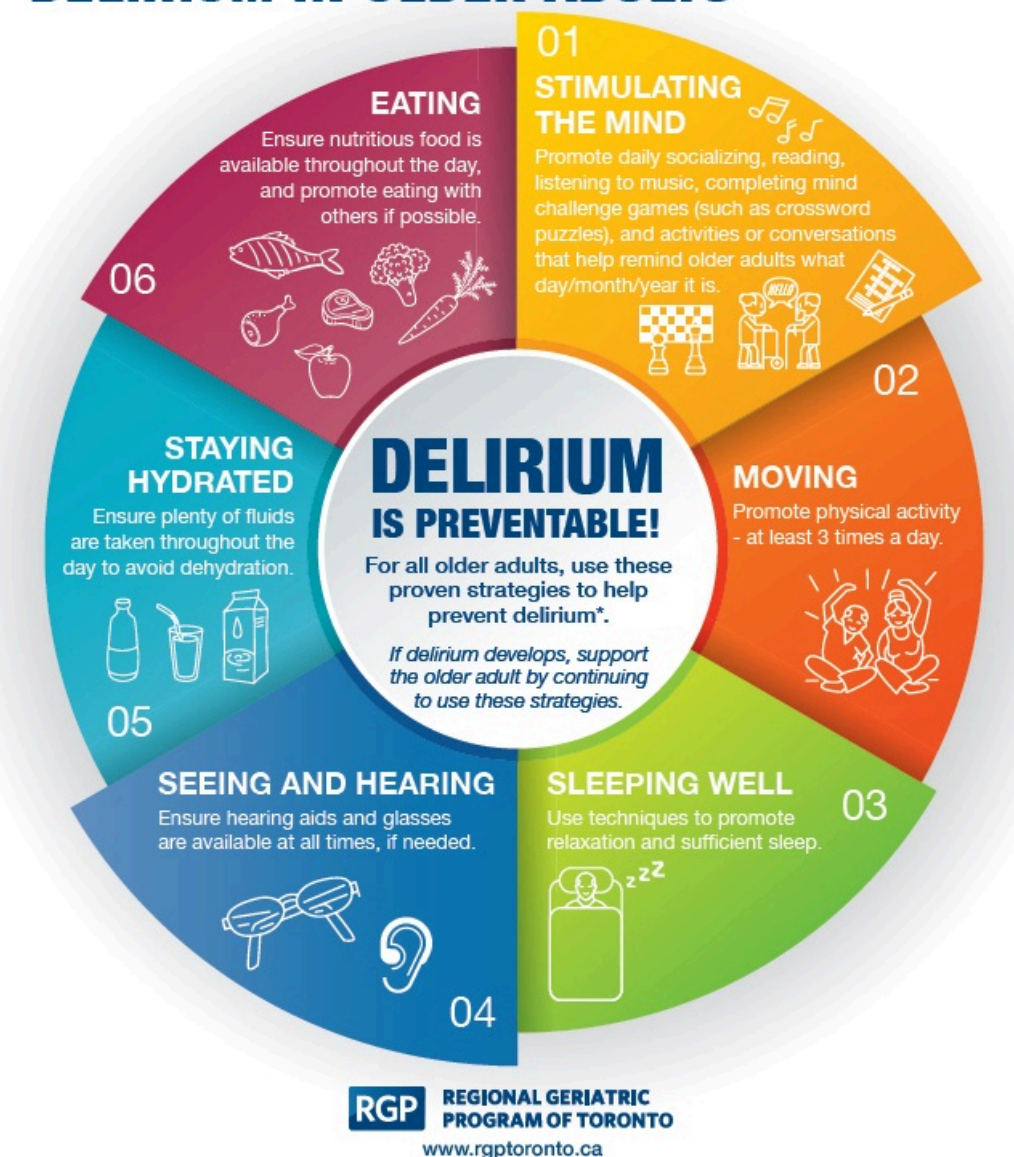


# Resources

## Regional Geriatric Program of Toronto

<https://rgptoronto.ca/resource/6-ways-to-prevent-delirium-poster-multi-language/>

### 6 PROVEN STRATEGIES TO PREVENT DELIRIUM IN OLDER ADULTS

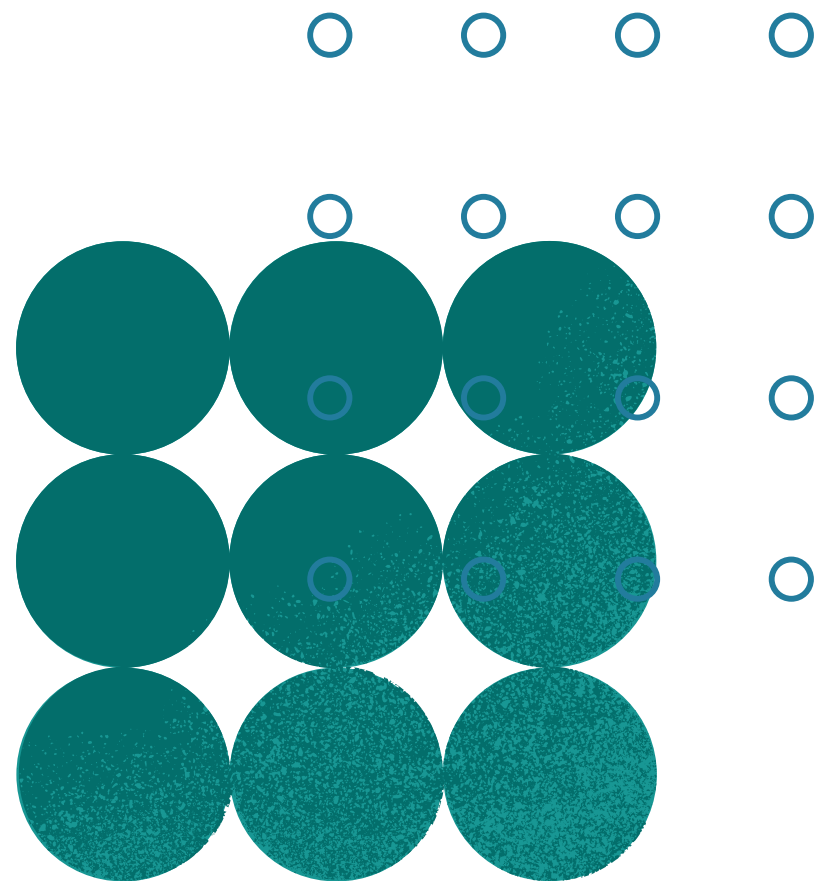


- 6 Proven Strategies to Prevent Delirium in Older Adults
  - Available to print and share in 15 languages!

Regional Geriatric Program of Toronto. (2024). *6 Proven strategies to prevent delirium in older adults*. <https://rgptoronto.ca/wp-content/uploads/2019/01/Delirium-prevention-PRINT.pdf>

# The Care Team

## Content



Key Roles



Communication



Building a Supportive Care Team



Improving Outcomes





# Key Roles

When it comes to delirium care you can make a difference in your health outcomes and the health of the person you are caring with by...

- Openly sharing important information (i.e., health history and sudden changes in behaviour)
- Alerting caregivers and healthcare providers when signs and symptoms are first noticed
- Accessing delirium education tools and resources
- Actively participating in care
- Asking questions and making informed decisions
- Accessing supports to cope with your delirium experience





# Communication



It is important to have good communication between everyone on the care team when caring with a person experiencing delirium

Ask about screening for delirium if you believe risk factors, signs, or symptoms are present

Remember, you are the expert in your own care!





# Important things to discuss and document...

- Any new or unusual behaviours
- Current medications (with a focus on new medications or changes to dosage)
- Health history (e.g., previous episodes of delirium, cognitive impairment, or dementia)
- The care plan (i.e., screening for delirium, tests, treatments, strategies to decrease the severity of delirium, and discharge planning)
- Questions or concerns



# Building a Supportive Care Team

**Anyone can participate on the care team and apply prevention strategies or interventions to decrease severity of delirium**

- Recent studies suggest a multidisciplinary approach across the healthcare system is essential to address interpersonal challenges
- Person-centred and family-centered care is best
- Caregiver involvement may reduce the risk of delirium, increase confidence to identify delirium, and establish partnerships with healthcare professionals





# Improving Outcomes

What we can do in the community

- Stay at the bedside as much as possible
- Help with mobility (take for walks)
- Bring personal items (photos)
- Share memories
- Talk and reassure of safety
- Visitors (family, friends, pets)
- Help with solutions to comfort and support sleep



# Want to learn more?

Click on the links to access more delirium information and resources

**Canadian Coalition for Senior's Mental Health**  
*Delirium*

<https://ccsmh.ca/areas-of-focus/delirium/>

**American Delirium Society**  
*Family guidance*

<https://americandeliriumsociety.org/patients-families/family-guidance/>

**Australian Commission on Safety and Quality Health Care**  
**Delirium Clinical Care Standard (revised 2021)**  
*Delirium Clinical Care Standard*

<https://www.safetyandquality.gov.au/publications-and-resources/resource-library/delirium-clinical-care-standard-revised-2021>





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