FALL PREVENTION TOOLKIT

FOR HEALTHCARE PROFESSIONALS

All adults 65 years and older should be screened at least once a year to help identify and manage their fall risk factors. While family physicians and nurse practitioners play an essential role in ensuring that screenings and interventions occurs based on best available evidence for clinical practice, it's important to remember that a collaborative approach can facilitate the delivery of comprehensive individualized care – especially for older patients with complex needs.

For more fall-related information not covered in this Toolkit, visit www.findingbalancenb.ca. You are also encouraged to visit www.fallsloop.com to connect with over 1000 Community of Practice members who are your peers and experts in fall prevention from across Canada.

For information on government programs and services available to older adults in New Brunswick, visit socialsupportsnb.ca, call Social Development at 1-833-733-7835 or call 2-1-1.

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IDENTIFYING
FALL RISK FACTORS

Trauma NB

Did you know?

- Each year, 1 in 3 adults aged 65 and older are likely to fall at least once.
- Approximately 8 hospital admissions occur each day in New Brunswick due to fall-related injuries in older adults.
- For older adults, the average length of stay in hospital due to a fall is 23 days.

All adults 65 years and older should be screened at least once a year to help identify and manage their personal fall risk factors. This is important since falls are a serious threat to their health, well-being, and ability to maintain their independence.

The more fall risk factors a person has, the greater their chances of falling. Healthcare providers can help lower an older adult's risk of injury by addressing the risk factors that have been identified during the medical examination.

Risk factors known to be associated with falls include:

Biological ⟷ Behavioral ⟷ Social & Economic ⟷ Environmental

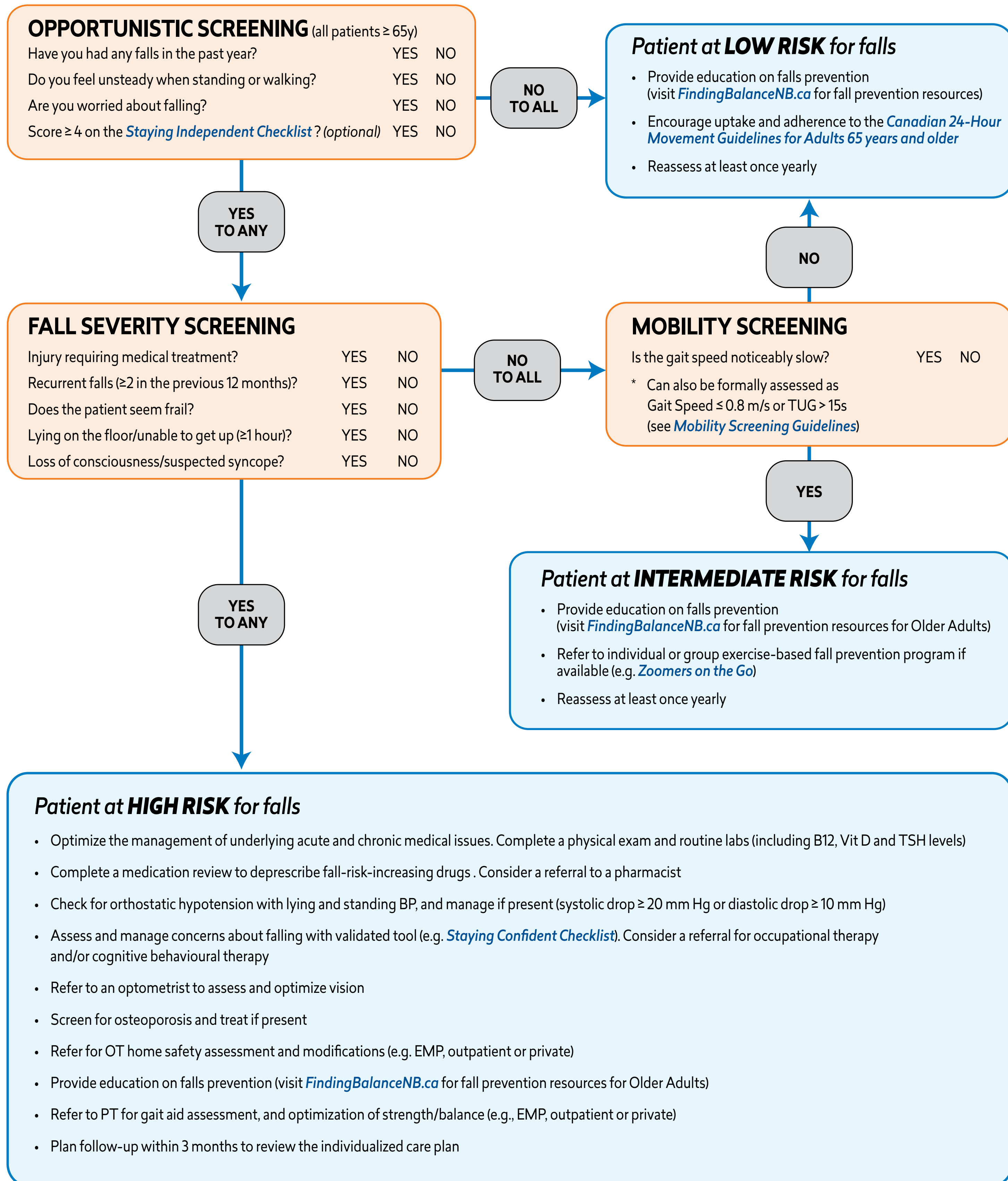
Biological	Behavioral	Social & Economic	Environmental
• Impaired mobility • Balance deficit • Gait deficit • Muscle weakness • Advanced age • Chronic illness / disability: - Cognitive impairment - Stroke - Parkinson's disease - Diabetes - Arthritis - Heart disease - Incontinence - Foot disorders • Visual impairment • Acute illness	• History of falls • Fear of falling • Multiple medications • Use of: - Anti psychotics - Sedative/hypnotics - Antidepressants • Excessive alcohol • Risk-taking behaviours • Lack of exercise • Inappropriate footwear/clothing • Inappropriate assistive devices use • Poor nutrition or hydration • Lack of sleep	• Low income • Lower level of education • Illiteracy / language barriers • Poor living conditions • Living alone • Lack of support networks • Lack of social interactions • Lack of transportation	• Poor building design and/or maintenance • Inadequate building codes • Stairs • Home hazards • Lack of: - Handrails - Curb ramps - Rest areas - Grab bars • Poor lighting or sharp contrasts • Slippery or uneven surfaces • Obstacles and other tripping hazards

Table adapted from: Scott V., Dukeshire S., Gallagher E., Scanian A. (2001). A Best Practice Guide for Prevention of Falls Among Seniors Living in the Community.

We encourage you to adopt a collaborative approach to implementing recommended clinical practice for fall prevention in older adults who live in a community setting. The **Algorithm for Fall Risk Screening and Intervention** (see reverse side), outlines the recommended process to address fall risk factors of concern with an older patient. This tool will be updated on an ongoing basis as new research, recommended practice and resources are available.

Keep in mind that your clinical judgement should also consider the older adult's ability or readiness to address their risk factors, their preferences, and the availability of family support during the development of an individualized care plan.

ALGORITHM FOR
FALL RISK SCREENING AND INTERVENTION



Based on the World guidelines for falls prevention and management for older adults: a global initiative, Age and Ageing, 2022 Sep 2;51(9):afac205 and the Summary of the updated American Geriatrics Society/British Geriatrics Society clinical practice guideline for prevention of falls in older persons. J Am Geriatr Soc. 2011; 59 (1): 148-157.

FALLS RISK SCREENING AND INTERVENTIONS CHECKLIST

Trauma NB

PATIENT ______________________ DATE ______________ TIME ______________

OPPORTUNISTIC SCREENING (completed at least once a year for all patients aged 65 and older)

Question	Answer	Notes
Have you had any falls in the past year?	☐ Yes ☐ No	
Do you feel unsteady when standing or walking?	☐ Yes ☐ No	
Are you worried about falling?	☐ Yes ☐ No	
Patient scored ≥ 4 on the ***Staying Independent Checklist*** *(optional)*?	☐ Yes ☐ No	

☐ The patient answered **NO** to all key questions. Therefore, I will proceed with ensuring the delivery of interventions for a person at **LOW RISK** for falls *(see reverse side)*

☐ The patient answered **YES** to any of the key questions. Therefore, I will proceed with screening for the following fall severity characteristics they might have had over the past year.

FALL SEVERITY SCREENING

Question	Answer	Notes
Injury requiring medical treatment?	☐ Yes ☐ No	
Recurrent falls (≥2 in the previous 12 months)?	☐ Yes ☐ No	
Does the patient seem frail?	☐ Yes ☐ No	
Lying on the floor/unable to get up (≥1 hour)?	☐ Yes ☐ No	
Loss of consciousness/suspected syncope?	☐ Yes ☐ No	

☐ **One or more** fall severity characteristics were present. Therefore, I will proceed with ensuring the delivery of interventions for a person at HIGH RISK for falls *(see reverse side)*

☐ **NONE** of the fall severity characteristics have been identified. Therefore, I will proceed with Mobility Screening

MOBILITY SCREENING

Question	Answer	Notes
Is the gait speed noticeably slow? *Can also be formally assessed as Gait Speed ≤ 0.8 m/s or TUG > 15s *(see **Mobility Screening Guidelines**)*	☐ Yes ☐ No	

☐ The patient has **NO significant impairment** with their gait. Therefore, I will proceed with ensuring the delivery of interventions for a person at LOW RISK for falls *(see reverse side)*

☐ The patient **demonstrated or reported difficulties** with their mobility. Therefore, I will proceed with ensuring the delivery of interventions for a person at INTERMEDIATE RISK for falls *(see reverse side)*

Based on the World guidelines for falls prevention and management for older adults: a global initiative, Age and Ageing, 2022 Sep 2;51(9):afac205 and the Summary of the updated American Geriatrics Society/British Geriatrics Society clinical practice guideline for prevention of falls in older persons. J Am Geriatr Soc. 2011; 59 (1): 148-157.

Ensure the delivery of the following recommended interventions for patients at **LOW, INTERMEDIATE** and **HIGH** risk for falls. Use clinical judgement to determine the need to assess and manage additional modifiable fall risk factors.

PATIENT AT LOW RISK FOR FALLS

- ☐ Provide education on falls prevention (visit *FindingBalanceNB.ca* for fall prevention resources for Older Adults)
- ☐ Encourage uptake and adherence to the Canadian *24-Hour Movement Guidelines for Adults 65 years and older*
- ☐ Reassess at least once yearly

PATIENT AT INTERMEDIATE RISK FOR FALLS

- ☐ Provide education on falls prevention (visit *FindingBalanceNB.ca* for fall prevention resources for Older Adults)
- ☐ Refer to individual or group exercise-based fall prevention program if available (e.g. *Zoomers on the Go*)
- ☐ Reassess at least once yearly

PATIENT AT HIGH RISK FOR FALLS

Consider developing a feasible individualized care plan that takes into consideration the priorities, beliefs, preferences, and resources of the older adult.

- ☐ Optimize the management of underlying acute and chronic medical issues
  Complete a physical exam and routine labs (including B12, Vit D and TSH levels)
- ☐ Complete a medication review to deprescribe fall-risk-increasing drugs
  Consider a referral to a pharmacist for a comprehensive medication review
- ☐ Check for orthostatic hypotension with lying and standing BP, and manage if present
  Defined as a systolic drop ≥ 20 mm Hg or diastolic drop ≥ 10 mm Hg
- ☐ Assess and manage concerns about falling with validated tool (e.g. *Staying Confident Checklist*)
  Consider a referral for occupational therapy and/or cognitive behavioural therapy
- ☐ Refer to an optometrist to assess and optimize vision
- ☐ Screen for osteoporosis and treat if present
- ☐ Refer for OT home safety assessment and modifications (e.g. EMP, outpatient or private)
- ☐ Provide education on falls prevention (visit *FindingBalanceNB.ca* for fall prevention resources for Older Adults)
- ☐ Refer to PT for gait aid assessment, and optimization of strength/balance (e.g., EMP, outpatient or private)
- ☐ Plan follow-up within 3 months to review the individualized care plan

For more fall prevention information for healthcare professionals, caregivers, and older adults, consult the **Finding Balance NB** *website at* **www.findingbalancenb.ca**

ANYONE CAN FALL

Help prevent it from happening

Staying Independent Checklist

Most falls are predictable and preventable. However, older adults are unlikely to initiate a conversation about fall risk, even if they have sustained injuries from falls in the past. Fall risk screening is essential to identify older adults at increased risk of falls who would likely benefit from a more in-depth evaluation. To help you with this process, we encourage you to use a validated risk assessment tool that can be seamlessly incorporated into your practice.

The Staying Independent Checklist (see reverse side) is a valuable self-screening tool that can be completed by most older patients who live in a community setting while waiting for their medical appointment. Keep in mind that this tool can also be used as a means to encourage a discussion around personal fall risk factors.

Check Your Risk for Falling

This checklist was developed by the Greater Los Angeles VA Geriatric Research Education Clinical Center and affiliates and is a validated fa ll risk self-assessment tool (Rubenstein et al. J Safety Res; 2011: 42(6)493-499). Adapted with permission of the authors.

Circle "Yes" or "No" for each statement below			Why it matters
Yes (2)	No (0)	I have fallen in the past 6 months.	People who have fallen once are likely to fall again.
Yes (2)	No (0)	I use or have been advised to use a cane or walker to get around safely.	People who have been advised to use a cane or walker may already be more likely to fall.
Yes (1)	No (0)	Sometimes I feel unsteady when I am walking.	Unsteadiness or needing support while walking are signs of poor balance.
Yes (1)	No (0)	I steady myself by holding onto furniture when walking at home.	This is also a sign of poor balance.
Yes (1)	No (0)	I am worried about falling.	People who are worried about falling are more likely to fall.
Yes (1)	No (0)	I need to push with my hands to stand up from a chair.	Strengthening your leg muscles can reduce your risk of falling and being injured.
Yes (1)	No (0)	I have some trouble stepping up onto a curb.	This is also a sign of weak leg muscles.
Yes (1)	No (0)	I often have to rush to the toilet.	Rushing to the bathroom, especially at night, increases your chance of falling.
Yes (1)	No (0)	I have lost some feeling in my feet.	Numbness in your feet can cause stumbles and lead to falls.
Yes (1)	No (0)	I take medicine that sometimes makes me feel light-headed or more tired than usual.	Side effects from medicines can sometimes increase your chance of falling.
Yes (1)	No (0)	I take medicine to help me sleep or improve my mood.	These medicines can sometimes increase your chance of falling.
Yes (1)	No (0)	I often feel sad or depressed.	Symptoms of depression, such as not feeling well or feeling slowed down, are linked to falls.

Total ________

Answer the statements above then add up the number of points for each "yes" answer. If you scored 4 points or more, you may be at risk for falling. Remember to bring this checklist to your primary healthcare provider to discuss your risk factors.

Staying Confident Checklist

Any older adult who falls, with or without sustained injury, may develop a fear of falling. This may cause curtailment of activities, leading to reduced mobility and physical fitness, and increasing risk of falling and injury. Assessment of fear of falling, followed by appropriate interventions, is crucial to promote independence, mobility, function, wellness, and safety of older adults.

The Falls Efficacy Scale-International (FES-I) is a short, easy to administer tool that measures the level of concern about falling during 16 social and physical activities inside and outside the home whether the person does the activity or not.

We would like to ask some questions about how concerned you are about the possibility of falling.

Please reply thinking about how you usually do the activity. If you currently don't do the activity (e.g. if someone does your shopping for you), please answer to show whether you think you would be concerned about falling **IF** you did the activity. For each of the following activities, please tick the box which is closest to your own opinion to show how concerned you are that you might fall if you did this activity.

		NOT AT ALL CONCERNED 1	SOMEWHAT CONCERNED 2	FAIRLY CONCERNED 3	VERY CONCERNED 4
1	Cleaning the house *(e.g. sweep, vacuum or dust)*	1 ☐	2 ☐	3 ☐	4 ☐
2	Getting dressed or undressed	1 ☐	2 ☐	3 ☐	4 ☐
3	Preparing simple meals	1 ☐	2 ☐	3 ☐	4 ☐
4	Taking a bath or shower	1 ☐	2 ☐	3 ☐	4 ☐
5	Going to the shop	1 ☐	2 ☐	3 ☐	4 ☐
6	Getting in or out of a chair	1 ☐	2 ☐	3 ☐	4 ☐
7	Going up or down stairs	1 ☐	2 ☐	3 ☐	4 ☐
8	Walking around in the neighbourhood	1 ☐	2 ☐	3 ☐	4 ☐
9	Reaching for something above your head or on the ground	1 ☐	2 ☐	3 ☐	4 ☐
10	Going to answer the telephone before it stops ringing	1 ☐	2 ☐	3 ☐	4 ☐
11	Walking on a slippery surface *(e.g. wet or icy)*	1 ☐	2 ☐	3 ☐	4 ☐
12	Visiting a friend or relative	1 ☐	2 ☐	3 ☐	4 ☐
13	Walking in a place with crowds	1 ☐	2 ☐	3 ☐	4 ☐
14	Walking on an uneven surface *(e.g. rocky ground, poorly maintained pavement)*	1 ☐	2 ☐	3 ☐	4 ☐
15	Walking up or down a slope	1 ☐	2 ☐	3 ☐	4 ☐
16	Going out to a social event *(e.g. religious service, family gathering or club meeting)*	1 ☐	2 ☐	3 ☐	4 ☐
	Subtotal				

Answer the statements above and add up the number of points for each column in the corresponding subtotal. Then, add up each of the 4 subtotals to obtain your total score. If you obtain a score of 28 points or more, the older adult may have a high level of concern about falling.

Total ___________

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This checklist was developed in a collaborative effort with members of the Prevention of Falls Network Europe (ProFaNE) and is a validated self-assessment tool (Yardley L. Todd C. et al. Development and initial validation of the Falls Efficacy Scale-International (FES-I) *Age and Aging* 2005; 34(6): 614-619).

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Mobility Screening Guidelines

Fall risk screening involves a three-part process: Opportunistic Screening, Fall Severity Screening and Mobility Screening. Gait or balance disturbances should be assessed only if the older patient DID NOT sustain a severe fall in the past 12 months according to their Fall Severity Screening. For more information about Fall Severity Screening in addition to recommended interventions for patients at LOW, INTERMEDIAT E and HIGH risk for falls, consult the Fall Risk Screening and Interventions Checklist.

GAIT SPEED TEST (4-METRE)

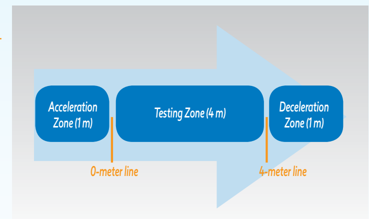
(RECOMMENDED TEST)

Purpose:

Predicting falls risk

Equipment:

- A measuring tape
- A stopwatch



Directions:

Identify with masking tape or another marker, the 3 zones along a level surface as indicated. Ask the patient to walk down a specified direction through a 1-metre zone for acceleration, a central 4-metre "testing" zone, and a 1-metre zone for deceleration.

Start the timer with the first footfall after the 0-metre line and stop the timer with the first footfall after the 4-metre line.

Note: Patients may use an assistive device, if needed.

Instruct the patient to:

1. Walk at their normal/ natural pace.
2. The patient should not start to slow down before the 4-metre mark

Observations:

An older adult who takes longer than 5 seconds to walk 4 metres (<0.8 m/s) suggests an increased risk of falling.

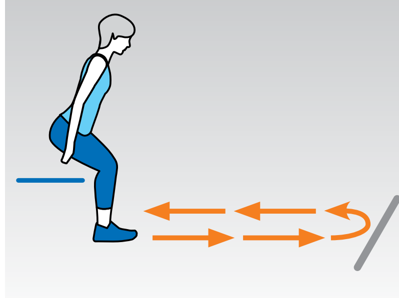
TIMED UP AND GO (TUG)
(ALTERNATIVE TEST)

Purpose:

To assess mobility

Equipment:

- A standard chair with a straight back and arm rests
- A measuring tape
- A stopwatch



Directions:

Patients should wear their regular footwear and can use a walking aid, if needed. Begin by having the patient sit back in a standard chair and identify with masking tape or another marker, a line on the floor 3 meters or 10 feet away.

On the word "Go," begin timing and stop timing after the patient sits back down.

Note: Always stay by the patient for safety

Instruct the patient to:

1. Stand up from the chair when hearing the word "Go".
2. Walk to the line on the floor at a normal pace.
3. Turn around in order to face the chair.
4. Walk back to the chair at a normal pace.
5. Sit down again.

Observations:

Observe the patient's postural stability, gait, stride length, and sway.

Note all that apply:

- Slow tentative pace
- Loss of balance
- Short strides
- Little or no arm swing
- Steadying self on walls
- Shuffling feet
- Turning "en bloc"
- Not using assistive device properly

An older adult who takes ≥12 seconds to complete the Timed Up And Go is at increased risk for falling.

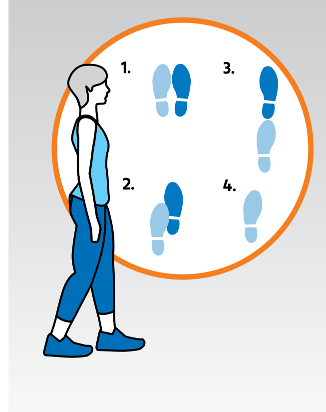
4-STAGE BALANCE TEST
(ALTERNATIVE TEST)

Purpose:

To assess static balance

Equipment:

- A standard chair with a straight back and arm rests
- A stopwatch



Directions:

Describe and demonstrate each of the four progressively more challenging standing positions to the patient.

1. Parallel Stance
2. Semi-Tandem Stance
3. Tandem Stance
4. One-Legged Stance

Patient should not use an assistive device (cane or walker). However, they must keep their eyes open during the test. Patients may hold their arms out, or move their body to help keep their balance, but without moving their feet.

When the patient is steady, instruct them to let go of the chair and time how long they can maintain each position. On the word "Go", begin timing. After 10 seconds, say "Stop". If the patient can hold a position for 10 seconds without moving their feet or needing support, go to the next position. If not, stop the test.

Note: Stand next to the patient to help them assume the correct position and to remain ready to assist, in case they lose their balance.

Instruct the patient to:

1. Place their feet in the correct way for each of the four standing positions
2. Hold onto the chair until they feel balanced
3. Let go of the chair when they hear the word "Go"
4. Try to stand in the same position without holding on or taking a step until hearing the word "Stop"

Observations:

Observe the patient's postural stability and the amount of sway. An older adult who cannot hold the tandem stance for at least 10 seconds is at increased risk of falling.

30-SECOND CHAIR STAND TEST
(ALTERNATIVE TEST)

Purpose:

To assess leg strength and endurance

Equipment:

- A standard chair with a straight back without arm rests
- A stopwatch

Directions:

It is recommended to place the chair against a wall to prevent it from moving during the test. Begin by having the patient sit back in a chair without arm rests.

On the word "Go," begin timing. Count and record the number of times the patient comes to a full standing position in 30 seconds. Do not continue if you feel the patient may fall during the test.

Note: Always stay by the patient for safety

Instruct the patient to:

1. Sit in the middle of the chair.
2. Place their hands on the opposite shoulder crossed, at the wrists.
3. Keep their feet flat on the floor.
4. Keep their back straight, and to keep their arms against their chest.
5. Rise to a full standing position, and then sit back down again once they hear the word "Go".
6. Repeat this for 30 seconds

Observations:

Observe the patient's ability to get up from a seated position. If the patient is over halfway to a standing position when 30 seconds have elapsed, count it as a stand. If the patient must use his/her arms to stand, stop the test. Record the number "0" for their score. An older adult with a below average score for their age and sex indicates an increased risk for falls.

SCORING TABLE

AGE	MEN	WOMEN
60-64	< 14	< 12
65-69	< 12	< 11
70-74	< 12	< 10
75-79	< 11	< 10
80-84	< 10	< 9
85-89	< 8	< 8
90-94	< 7	< 4

Additional Resources

We all have a role to play in helping to prevent falls and falls-related injuries. However, as a healthcare professional, you play an essential role in ensuring that screenings, interventions, and necessary follow-ups occur based on best available evidence for clinical practice. To further support you with this process, you are encouraged to consult the following fall prevention resources and websites.

Fall Prevention Toolkit for Older Adults

Healthcare providers should provide an opportunity for older adults to receive additional information about their personal fall risk factors after their visit. The Fall Prevention Toolkit for Older Adults was developed to help older adult take action to prevent falls and stay independent. This recommended resource includes informative fact sheets on important fall prevention topics such as Medication Safety, Staying Physically Active and Moving Safely at Home along with a Fall Prevention Personal Action Plan.

Home Safety Checklist

Falls in older adults are often due to hazards that are easy to overlook but simple to fix. To help reduce their risk of falls at home, we recommend that older adults at LOW to INTERMEDIATE RISK for falls use the Home Safety Checklist. This resource along with its accompanying Personal Action Plan checklist will help those older adults with efforts to identify and manage some of the most common hazards in and around their home.

Finding Balance NB

Finding Balance is designed to raise awareness about the prevention of slips, trips, and falls among older adults. With the support from Trauma NB, Finding Balance NB aims to foster a collaborative approach to facilitate the sharing of evidence-based information and resources for healthcare professionals, older adults, family members, concerned friends and any other interested individual. For a copy of the Fall prevention Toolkit for Older Adults, we encourage you to visit this central repository of fall prevention resources online at *www.findingbalancenb.ca*.

Fall Talk

November is Falls Prevention Month across Canada. In New Brunswick, Trauma NB is committed to provide continuing support for the delivery of the FALL TALK campaign. Be part of the effort to encourage older adults, their families, their friends, caregivers, healthcare professionals and others to talk about falls and ways to prevent them. In addition, you can consult the latest information, videos, and resources which are available to help facilitate the conversation. For more information about the Fall Talk campaign, please visit *www.falltalk.ca*.

Fall Prevention Community of Practice (LOOP)

Loop is a bilingual online communication platform that brings together peers and experts in fall prevention from across Canada to problem-solve and discuss how to implement evidence-informed and promising fall prevention practices. This Fall Prevention Community of Practice was also created to support the exchange information on how to create supportive communities where adults maintain their independence through fall prevention. By registering, you will have access to upcoming webinars, e-newsletters, and the knowledge center. For more information, visit *www.fallsloop.com*.