PERIOPERATIVE SERVICES

A Guide to Preventing Falls

Falling is a very serious health problem for seniors

## Did you know?

* In Ottawa and across the country, one in three seniors fall each year. *1*
* Ninety percent of broken hips in seniors are a result of a fall. *2*
* By the age of 75, falls are the major cause of fatal injuries. *3*
* Forty percent of admissions to nursing homes are related falls. *4*
* For 1995, in Ottawa, costs associated to falls were $86.7 million. *5*

## Who do so many seniors fall?

Usually falls have more than one cause. For example, someone who slips or falls on a slippery floor may have weak leg muscles and be experiencing dizziness as a side effect of medication.

This booklet reviews the causes of falls and recommends changes you can make in the following areas to prevent falling and injury:

* Exercise
* Medication
* Assistive devices
* Environmental hazards (surroundings inside and outside home)

1. O Loughlin & al. (1993) American Journal of Epidemiology.
2. Journal of American Medicine Association, 1989.
3. Zuckerman, J.D. (1996) New England Journal of Medicine.
4. Rawsky, E. (1998) Journal of Nursing Scholarship.
5. Injury Profile Eastern Ontario, 2000.

Exercise

Inactivity, chronic disabilities such as diabetes, arthritis, abnormal blood pressure and changes associated with normal aging can lead to gait, balance disorders and loss of mobility. Regular physical activity and exercise will increase muscle strength, improve co-ordination and help to prevent falls.

## Stay active to prevent falls:

* Flexibility activities, e.g. Tai Chi or gardening.
* Strength and balance activities, e.g. climbing stairs.

## What to do:

* Talk to your Doctor or Nurse Practitioner before you start an exercise program.
* Tell your doctor about changes in balance.
* Avoid sudden changes in position.
* Use caution when bending down all the way to the floor and avoid get­ting up quickly after stooping.
* Make sure the exercises you choose are beneficial for you.
* Look at the resource list on the last page for program ideas.
* Make your activities as enjoyable as possible. Find a buddy!
* Find out about exercise/activity programs for seniors in your area.

Refer to the City of Ottawa Activity Guide or call 613-580-2400.

**Call 1-888-334-9769 for a free copy of Canada’s Physical Activity Guide for Older Adults**

Nutrition: For Healthy Strong Bones

Calcium helps maintain your bone strength. A well balanced diet that includes a good supply of calcium is very important for keeping your bones strong. If your body does not get the calcium it needs from your diet, it will remove it from your bones. As you age, your body does not absorb calcium as well. This, in turn, increases your need for calcium-rich foods.

## How much calcium is enough?

Osteoporosis Canada recommends the following amounts of calcium every day to maintain strong bones.

**1000 - 1500 mg per day**

## Which foods are best for calcium?

| Milk & Milk Products | Portion | Serving |
| --- | --- | --- |
| Milk - 2%, 1%, skim, chocolate | 1 cup | 300 mg |
| Yogurt | ¾ cup | 295 mg |
| Cheese-Cheddar, Edam, Gouda | 1 ¼” / 3 cm cube | 245 mg |
| Ice Cream | ½ cup | 80 mg |
| Cottage cheese – 2%, 1% | ½ cup | 75 mg |

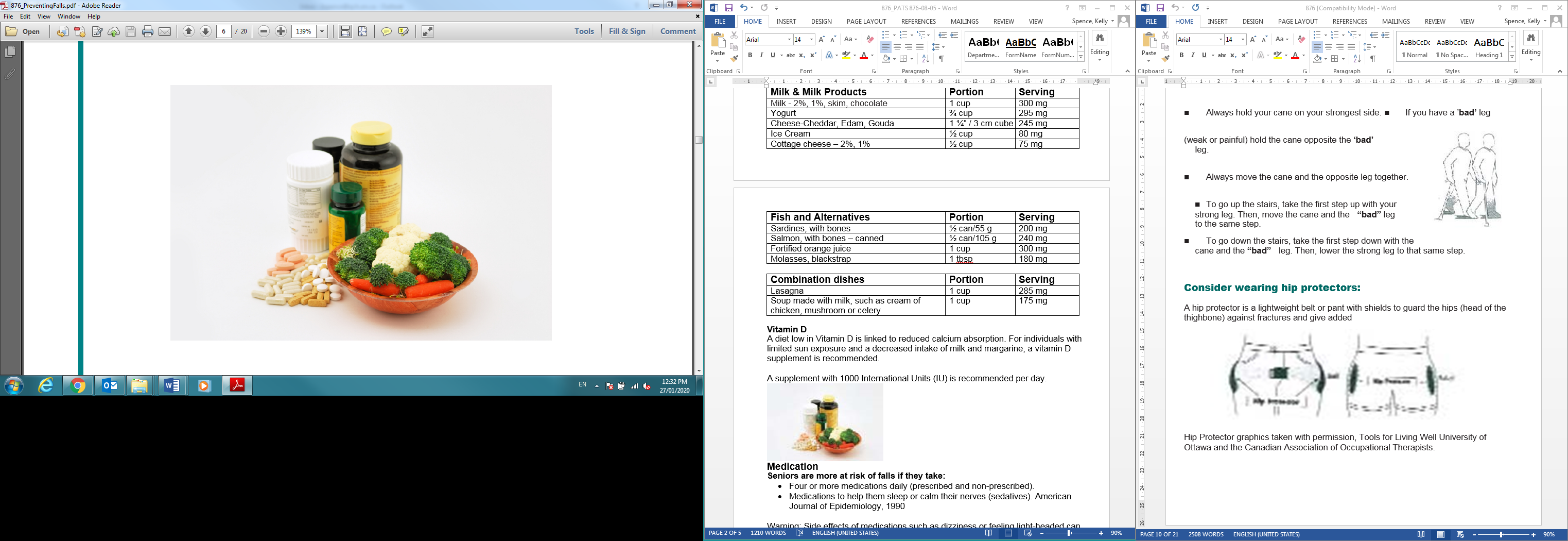
| Fish and Alternatives | Portion | Serving |
| --- | --- | --- |
| Sardines, with bones | ½ can/55 g | 200 mg |
| Salmon, with bones – canned | ½ can/105 g | 240 mg |
| Fortified orange juice | 1 cup | 300 mg |
| Molasses, blackstrap | 1 tbsp | 180 mg |

| Combination dishes | Portion | Serving |
| --- | --- | --- |
| Lasagna | 1 cup | 285 mg |
| Soup made with milk, such as cream of  chicken, mushroom or celery | 1 cup | 175 mg |

## Vitamin D

A diet low in Vitamin D is linked to reduced calcium absorption. For individu­als with limited sun exposure and a decreased intake of milk and margarine, a vitamin D supplement is recommended.

A supplement with 1000 International Units (IU) is recommended per day.



Medication

## Seniors are more at risk of falls if they take:

* Four or more medications daily (prescribed and non-prescribed).
* Medications to help them sleep or calm their nerves (sedatives). American Journal of Epidemiology, 1990

Warning: Side effects of medications such as dizziness or feeling light-headed can also increase your risk of falling. Some medications react with others and this may increase the side effects.

## What to do:

* Review all your medications with your doctor every six months.
* Ask your doctor, nurse or pharmacist about the side effects of the medica­tion you take.
* Take medications correctly as indicated. Consider using a medication box.
* Tell your doctor if your medication makes you dizzy or light headed.
* Avoid taking alcohol with medications.
* Talk to your pharmacist before you take non-prescription, over-the-counter and herbal remedies.
* Never take someone else’s medication.
* Instead of taking medication to help you sleep, consider alternatives such as listening to soft music, reading, relaxation exercises, or drinking warm milk.
* Talk to your doctor if insomnia persists.
* Keep a list or record of all your medications with you at all times.
* Shop at one pharmacy to have all your prescriptions filled.
* Return all expired medications to your pharmacist.

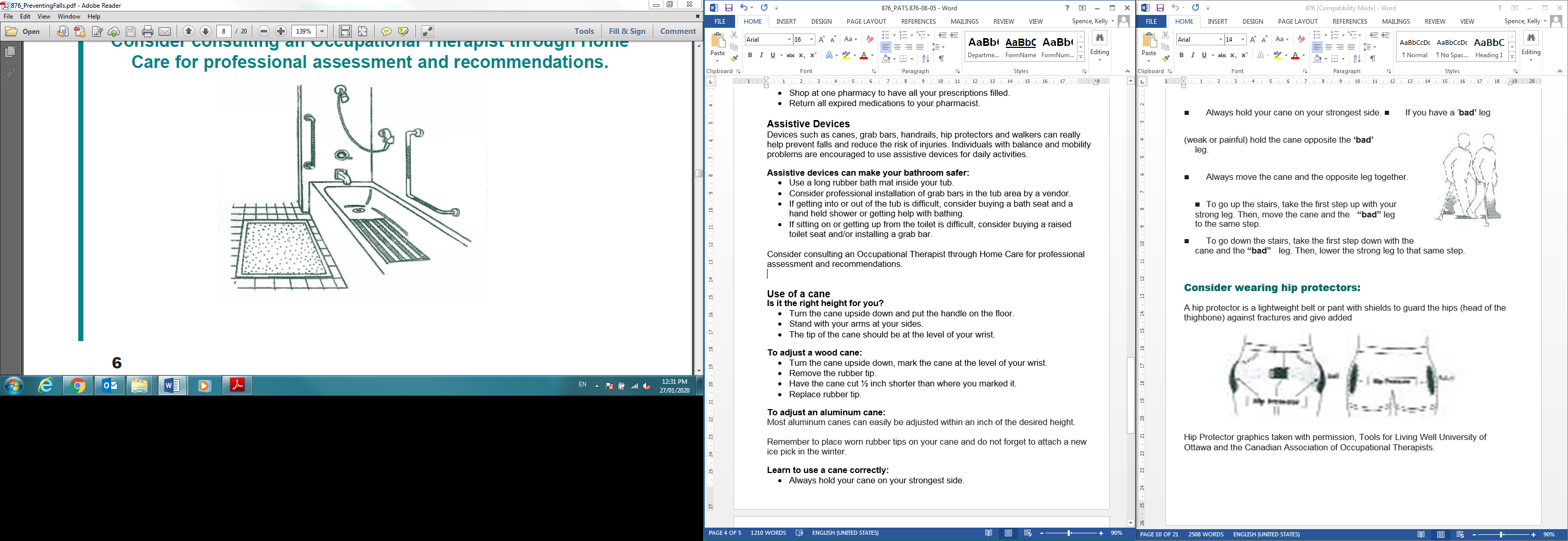
Assistive Devices

Devices such as canes, grab bars, handrails, hip protectors and walkers can really help prevent falls and reduce the risk of injuries. Individuals with balance and mobility problems are encouraged to use assistive devices for daily activi­ties.

## Assistive devices can make your bathroom safer:

* Use a long rubber bath mat inside your tub.
* Consider professional installation of grab bars in the tub area by a vendor.
* If getting into or out of the tub is difficult, consider buying a bath seat and a hand held shower or getting help with bathing.
* If sitting on or getting up from the toilet is difficult, consider buying a raised toilet seat and/or installing a grab bar.

Consider consulting an Occupational Therapist through Home Care for professional assessment and recommendations.



Use of a cane

## Is it the right height for you?

* Turn the cane upside down and put the handle on the floor.
* Stand with your arms at your sides.
* The tip of the cane should be at the level of your wrist.

## To adjust a wood cane:

* Turn the cane upside down, mark the cane at the level of your wrist.
* Remove the rubber tip.
* Have the cane cut ½ inch shorter than where you marked it.
* Replace rubber tip.

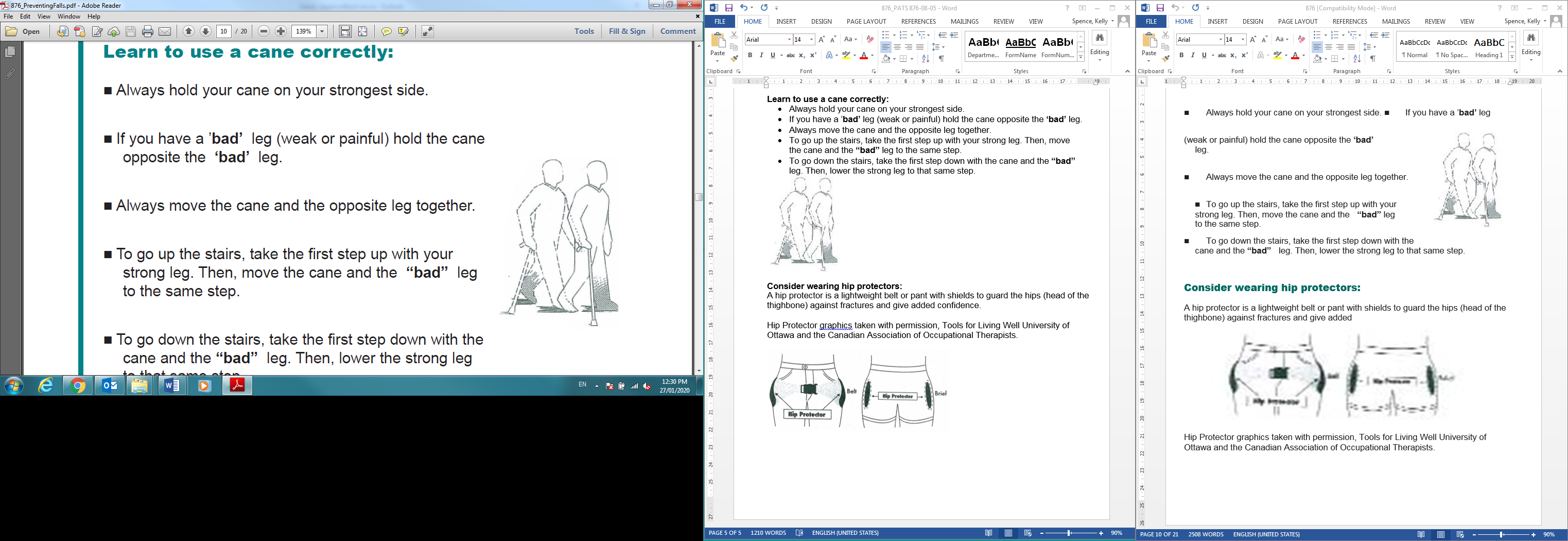
## To adjust an aluminum cane:

Most aluminum canes can easily be adjusted within an inch of the desired height.

Remember to place worn rubber tips on your cane and do not forget to attach a new ice pick in the winter.

## Learn to use a cane correctly:

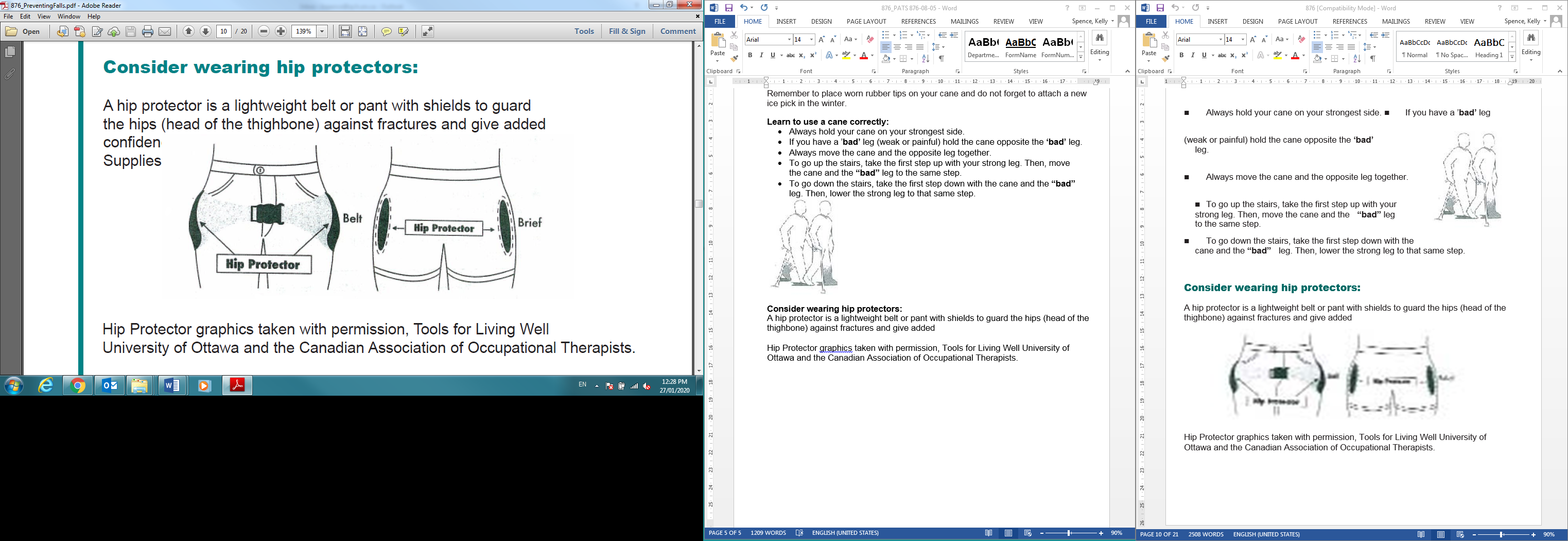
* Always hold your cane on your strongest side.
* If you have a ’**bad’** leg (weak or painful) hold the cane opposite the **‘bad’** leg.
* Always move the cane and the opposite leg together.
* To go up the stairs, take the first step up with your strong leg. Then, move the cane and the **“bad”** leg to the same step.
* To go down the stairs, take the first step down with the cane and the **“bad”** leg. Then, lower the strong leg to that same step.



## Consider wearing hip protectors:

A hip protector is a lightweight belt or pant with shields to guard the hips (head of the thighbone) against fractures and give added confidence.

Hip Protector graphics taken with permission, Tools for Living Well University of Ottawa and the Canadian Association of Occupational Therapists.



Use a walker for safer travels:

* Have your walker adjusted to your height (see cane height)
* Roll the walker forward as you take steps standing straight into the centre of the walker.

## Learn to use the hand brakes correctly:

**To sit on the seat of the walker:**

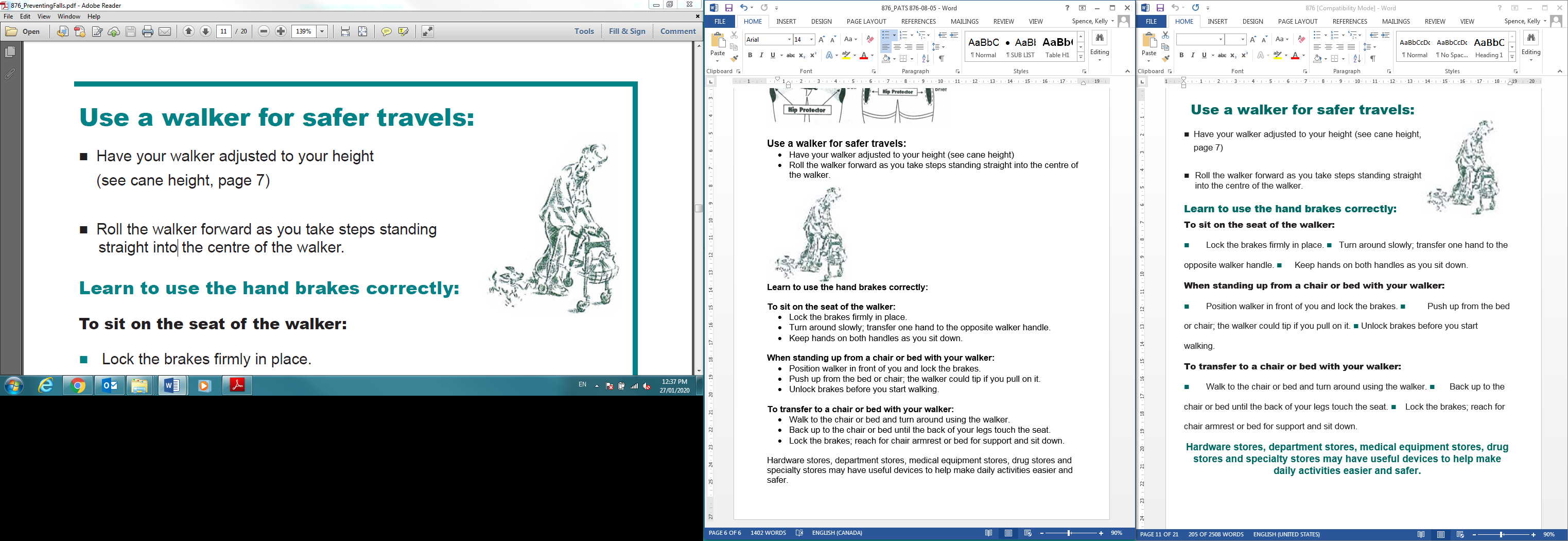
* Lock the brakes firmly in place.
* Turn around slowly; transfer one hand to the opposite walker handle.
* Keep hands on both handles as you sit down.

**When standing up from a chair or bed with your walker:**

* Position walker in front of you and lock the brakes.
* Push up from the bed or chair; the walker could tip if you pull on it.
* Unlock brakes before you start walking.

**To transfer to a chair or bed with your walker:**

* Walk to the chair or bed and turn around using the walker.
* Back up to the chair or bed until the back of your legs touch the seat.
* Lock the brakes; reach for chair armrest or bed for support and sit down.



Hardware stores, department stores, medical equip­ment stores, drug stores and specialty stores may have useful devices to help make daily activities easier and safer.

Hazards In and Around Your Home

Unsafe surroundings contribute to 30 percent of both indoor and outdoor falls.

\* Poor lighting, unsafe footwear and icy sidewalks are just a few of the environ­mental hazards that cause people to fall.

\* Baseline Data, Ottawa-Carleton Falls Research Project, 1994.

## What to do:

* Identify unsafe areas inside and outside your home.
* Complete the checklist on the following pages.

Your risk of falling increases with the number of hazards identified with a **No** answer.

* Start today to make changes to reduce the hazards in your home.
* Report hazards outside your home to the proper authorities:

In an apartment building, store or restaurant, contact the owner or manager.

In a shopping mall, contact the mall authority.

On city streets or sidewalks, call the City of Ottawa at 613-580-2400

| Throughout Your Home | Yes | No |
| --- | --- | --- |
| Floors are not slippery. Spills are wiped up promptly. |  |  |
| Pathways are clear of extension cords and other objects. |  |  |
| Rugs have no ripples or tears. |  |  |
| Scatter mats are removed or securely taped to floor. |  |  |
| Low tables are removed from the middle of the living room. |  |  |
| All furniture is sturdy. |  |  |
| Chairs have armrests and are the correct, comfortable height. |  |  |
| All light fixtures have a minimum of 60 watt bulbs. Good lighting is installed in and around the house. |  |  |
| Entrance to every room has a light switch. |  |  |
| Stepladders or step stools are never used. |  |  |
| Items used every day are stored within easy reach. |  |  |
| Exterior stairs are kept free of ice and snow. Sprinkle grit of non-clumping cat litter. |  |  |

| Entrance | Yes | No |
| --- | --- | --- |
| Doors open easily. |  |  |
| There is a sturdy seat with armrests. |  |  |
| Mail is within easy reach. |  |  |
| Exterior and interior lighting is good. |  |  |
| Outside pathways are free of lawn furniture, hoses and other objects. |  |  |

| Stairs (Inside and Outside) | Yes | No |
| --- | --- | --- |
| Stair edges are marked with contrasting colour. |  |  |
| All steps are the same height and the same depth. |  |  |
| Stairs are well lit with a light switch at the bottom and top of the stairs |  |  |
| Stairs have a non-slip surface and are in good repair. |  |  |
| Handrails are well attached and present on both sides of stairs. |  |  |
| Handrails are at the height of 36 to 39 inches or 90 cm (1 m). |  |  |
| Handrails extend 12 inches beyond top and bottom steps. |  |  |
| Your hand should wrap around two-thirds of handrail. |  |  |
| Stairs are free of clutter or any objects at all times. |  |  |

| Bathroom | Yes | No |
| --- | --- | --- |
| Bathtub plug is easy to reach and to use. |  |  |
| Full-length rubber bathtub mat is used for very bath or shower. |  |  |
| There are at least two grab bars in the tub area. |  |  |
| Portable grab bars (on the side of the tub) do not move when used  for support. |  |  |
| Rug outside the bathtub has a rubber backing |  |  |

| If you have problems getting into or out of the bathtub | Yes | No |
| --- | --- | --- |
| Use a bath seat. |  |  |
| Use a hand-held shower. |  |  |
| Ask for help with bathing. |  |  |

| If you have problems sitting on or getting up from the toilet | Yes | No |
| --- | --- | --- |
| Use a raised toilet seat. |  |  |
| Use a grab bar conveniently located. |  |  |

| Bedroom | Yes | No |
| --- | --- | --- |
| A telephone is easily reached from the bed. |  |  |
| A lamp and flashlight are easily reached from the bed. |  |  |
| The bed is the correct height (90 degree knee bend). |  |  |

| Personal Habits | Yes | No |
| --- | --- | --- |
| I move slowly after lying or sitting to prevent dizziness and sit on the side of the bed a few minutes before I stand. |  |  |
| I do not hurry. |  |  |
| I remove my reading glasses when using the stairs. |  |  |
| I always wear well-fitted shoes or slippers with closed and low heels  and non-slip soles. |  |  |
| I do not use bath oil and I use liquid soap to avoid bending for a bar  of soap. |  |  |
| I do not wear long skirts, long house coats or loose slacks that I  might trip or step on. |  |  |
| I turn on a night-light before I go to bed. |  |  |
| I turn on a light when I get up at night. |  |  |
| I avoid using a ladder or step stool and ask someone for help to  reach high objects. |  |  |
| Living alone, I use a Personal Emergency Response Calling Service  or I buddy with a neighbor, family or friends for a daily phone call. |  |  |

Resource List

Ottawa Public Health Injury Prevention Team Ginette Asselin, Public Health Nurse

613-580-6744 ext. 26236 Ginette.Asselin@ottawa.ca

Community Health Research Unit/ University of Ottawa [www.falls-chutes.com](http://www.falls-chutes.com)

Health Canada: [www.hc-sc.gc.ca/seniors-aines](http://www.hc-sc.gc.ca/seniors-aines)

Canadian Centre for Activity and Aging-Home Support Exercise Program: www.uwo.ca/actage or 519-661-1612

Exercise to prevent falls...A Winning Formula for Older Adults-Video $10

Peteborough County City Health Unit 705-743-1000

Active Living Coalition for Older Adults: [www.alcoa.ca](http://www.alcoa.ca)

Active Seniors Program for Older Adults manual and audiocassette $20

Ottawa Public Health 613-580-6744, ext. 23766

Exercise: A Guide from the National Institute on Aging: [www.nia.nih.gov/exercisebook](http://www.nia.nih.gov/exercisebook)

Osteoporosis Society Bone Smart Video #35, Be Taller, Stronger, Longer! Booklet: $4.28 1-800-463-6842.

Positive Steps; booklet, audio cassette and video $15 booklet $3: 1-306-766-7731

Celebrate Active Living: Gentle Exercises for People with Arthritis Video $10, Arthritis Society of Canada: 1-800-321-1433

Growing Stronger: StrengthTraining for Older Adults: www.cdc.gov/nccdphp/dnpa/ physical/growing stronger

Taoist Tai Chi for seniors: 613-233-2318

Canada Mortgage and Housing Corporation (CHMC) 1-800-668-2642 www.chmc-schl.gc.ca

Falls Clinic Elisabeth Bruyere 613-562-6351 www.scohs.on.ca

Community Care Access Centre of Ottawa (CCAC) 613-745-5525

## Financial assistance for assistive devices or aids:

Assistive Devices Program (Ontario) 1-800-268-6021

Veterans Affairs Canada, Ottawa Office: 613-998-9460

City of Ottawa, Employment and Financial Assistance, 65 years and older: 613-560-6000