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Keeping Strong, Living Long Fall Prevention Among Older Adults in Durham Region

Every year, about 1 in 3 Canadians experience a fall. [1] Falls can affect people of all ages. However, they have a greater impact on the health and wellbeing of older adults. Falls and their consequences can be costly to an older adult, their family, and the healthcare system. They are the leading cause of hospitalization due to an injury among older Canadian adults. [1] Older adults are also more likely to become disabled or die due to a fall and remain hospitalized for a longer period of time compared to other causes of hospitalization. [1,2]

There are many interacting factors that can increase the risk of falling among older adults. Biological risk factors include muscle weakness, balance disturbances, acute or chronic health conditions, and vision or other sensory problems. [1,3] There are also behavioural risk factors that increase the risk of falling, such as: alcohol use, poor nutrition, medication use, and wearing inappropriate clothing or footwear. [1] Environmental factors in and around the home that increase the risk of falling include rugs and loose carpets, changes in elevation, electrical cords in walkways, poor lighting, slippery surfaces, and not having aids in the bathroom such as grab bars or hand rails. [3]

Although falls are common among older adults, they are **not** part of the normal aging process. There are steps older adults can take to prevent falls from occurring that are related to their health and making changes in the home. This report will focus on older adults in Durham Region, aged 55 years and older, their risk factors and protective behaviours related to falls.

RRFSS Data Collection

In 2013 and 2015, the Rapid Risk Factor Surveillance System (RRFSS) was used to measure the prevalence, awareness, risk factors, prevention strategies, and behaviour implications with falls among older adults. During 2013 and 2015, the RRFSS interviewed a total of 3,808 Durham Region residents aged 18 and older. Results were based on these two time periods:

- January to December 2013 - 1,807 respondents age 18+ plus 200 older respondents age 65+
- January to December 2015 - 1,801 respondents age 18+

Summary of Results

Awareness of Falls Among Older Adults

Only 16% ($\pm 2\%$) of the adults aged 18 and older surveyed knew that the chance of a person 65 years and older falling is 1 in 3. However, 88% ($\pm 2\%$) of adults agreed that the chance of falling is less for physically active people age 55 and older. The majority of survey participants (66% $\pm 2\%$) thought that falling was part of the normal aging process, which is a misconception.

Prevalence of Falls

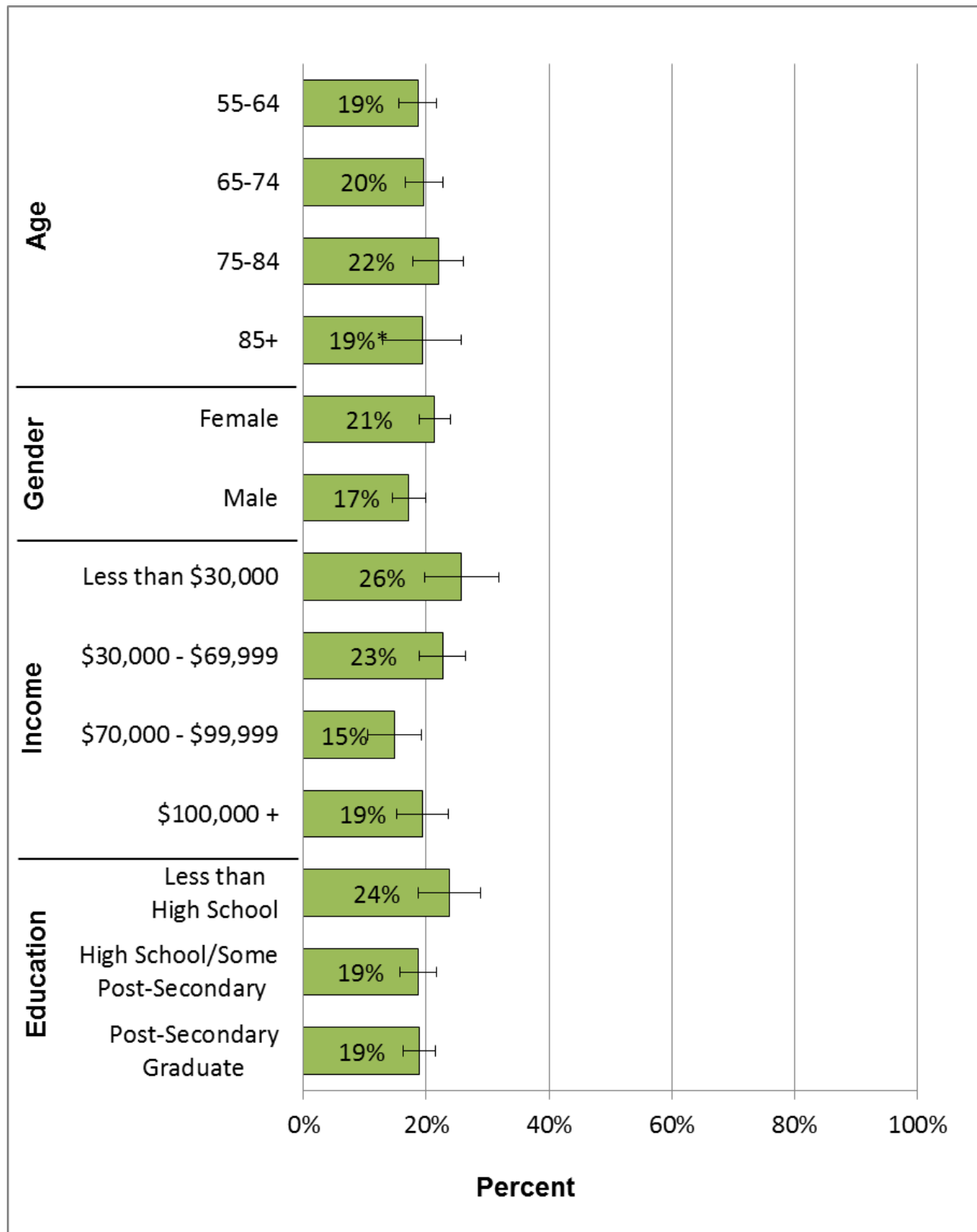
For the years 2013 and 2015 combined, 1 in 5 adults aged 55 and over in Durham Region reported falling in the past year (20% $\pm 2\%$), and 7% ($\pm 1\%$) reported having a serious fall that limited their activities. Among older adults who fell, there were significant differences between genders, with females more likely to have fallen within the past year compared to males. Significant differences were also observed between income groups, as older adults in a lower income group were more likely to have fallen in the past year.

Table 1. Durham Residents Age 55+ Who Fell in the Past 12 Months, by Selected Socio-demographics, 2013, 2015

Age Group	Estimate	95% CI
55 - 64	19%	16 – 22
65 - 74	20%	17 – 23
75 - 84	22%	18 – 26
85+	19%*	13 – 26
Gender	Estimate	95% CI
Female	21%	19 – 24
Male	17%	15 – 20
Income	Estimate	95% CI
Less than \$30,000	26%	20 – 32
\$30,000 - \$69,999	23%	19 – 26
\$70,000 - \$99,999	15%	10 – 19
\$100,000 or more	19%	15 – 24
Education	Estimate	95% CI
Less than High School	24%	19 – 29
High School/Some Post-Secondary	19%	16 – 22
Post-Secondary Graduate	19%	16 – 22

Note: * Interpret with caution due to high variability: Coefficient of Variation between 16.6% and 33.3%.

Figure 1. Durham Residents Age 55+ Who Fell in the Past 12 Months, by Selected Socio-demographics, 2013, 2015



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Fear of Falling and Restriction of Activities (age 55+)

Fear of falling can be a risk factor for falls and can also prevent older adults from performing daily activities. [1] Among adults aged 55 and older in Durham Region, almost 40% reported being worried about falling and injuring themselves. There were significant differences observed between genders, with females being more concerned about falling compared to males. Significant differences also occurred between age groups, with adults 75 years and older being more concerned about falling compared to younger age groups.

Among adults 55 years and older, 12% ($\pm 2\%$) said they use the stairs less often, while 9% ($\pm 2\%$) said they avoid crossing the street alone and use the bathtub and shower less often. Furthermore, 7% ($\pm 2\%$) of older adults said they limit use of public transportation and escalators due to their fear of falling.

Table 2. Restriction of Activities Due to Fear of Falling, Adults 55+, Durham Region, 2013, 2015

Restricted Activity Due to Fear of Falling	Estimate	95% CI
Use Stairs Less Often	12%	10 – 14
Avoid Crossing Street Alone	9%	7 – 11
Use Bathtub/Shower Less Often	9%	7 – 11
Limit Use of Public Transportation	7%	5 – 9
Limit Use of Escalators	7%	5 – 8

Use of Personal Assistance (age 55+)

The use of personal assistance includes older adults who need the help of another person or who use aids such as a handrail, wheelchair, walker, or cane to move about inside their home. Of the adults aged 55 and older in Durham Region, 16% ($\pm 2\%$) reported using personal assistance or mobility aids to move about inside their home and 3% ($\pm 1\%$) require personal assistance when getting in and out of the bathtub or shower.

Medication Use as a Risk Factor (age 65+)

Older adults who take medications are at an increased risk of falling due to side effects caused by some medications or from taking a combination of medications. [1,2] Adults who take 4 or more medications, which can include prescription, over-the-counter, or herbal medications, are considered high risk for falling. Almost half (47% $\pm 3\%$) of Durham residents aged 65 years and older are at high risk of falling due to their medication use. There was a significant difference between age groups, with adults aged 75 - 84 years having the highest risk for falls due to their medication use, compared to the other age groups. No significant differences in gender were observed. Only half of older adults (54% $\pm 4\%$) said that they talked to a doctor about possible side effects of the medications.

Table 3. High Risk for Falls Due to Medication Use, Adults 65+, Durham Region

Age Group	Estimate	95% CI
65 – 74	43%	40 – 47
75 – 84	54%	49 – 60
85+	49%	39 – 59
Gender	Estimate	95% CI
Female	46%	42 – 49
Male	50%	45 – 55

Prevention Strategies in the Home (age 65+)

When asking adults 65 years and older about adjustments in the home that can prevent falls, almost 9 in 10 adults (89%) responded that they have hand railings on stairs inside or outside of their home. While, 72% of older adults reported that they have small mats or scatter rugs, 67% said they have non-slip surfaces in the bathtub or shower, and 66% said they have mats and rugs that are secured to the floor. Furthermore, 64% of older adults in Durham Region said they have extra lighting in their home. The prevention strategies that were less common included having grab bars in the bathtub (37%) and having a raised toilet seat (25%).

Discussion

In 2013 and 2015, 1 in 5 older adults in Durham Region had fallen within the past year, with 7% of older adults having a fall serious enough to limit activities. The prevalence of falls varied according to gender and income group, with falls being more common in females and older adults in a lower income group. Falls can be prevented by making changes to your lifestyle and home. It is important to maintain strong bones, muscles, and good balance by exercising regularly, staying hydrated, and eating a well-balanced diet. Canada's Guidelines for Physical Activity for Older Adults recommend doing at least 2.5 hours of aerobic exercise per week, and to incorporate exercises that focus on balance and muscle strength. [4] Regular vision and health checkups, in addition to medication management, are also important strategies for falls prevention. There are things you can do in your home to help prevent falls, such as using non-slip surfaces in the bathtub or shower, reducing clutter and removing obstacles on the floor, installing additional lighting and night lights, using solid handrails on stairways, and removing rugs or having non-slip rugs.

Health Department Initiatives

Durham Region Health Department continues to provide Durham residents and stakeholders with information and support for fall prevention through:

- Distribution of educational resources to promote fall prevention among adults 50+
- Promotion of seniors' fall prevention e-learning course targeting health care providers and students

Key Resources

- [Falls Across the Lifespan](#)
- [Workplace Toolkit - Preventing Falls](#): A Resource for Adults
- “[Feeling Good](#)” - A Resource for Adults 50+
- “[Positive Steps Work](#)”- Fall prevention e-learning for seniors’ care providers and students.
- [Medication Safety Checklist](#)

Data Notes

RRFSS is a random-digit-dialed telephone survey of adults aged 18 years and older, conducted by the Institute for Social Research at York University, on behalf of the Durham Region Health Department (DRHD). Since 2001, a sample of at least 100 Durham Region residents has been surveyed on a monthly basis regarding health risk behaviours such as smoking, alcohol use, immunization, etc. For further information see rrfss.ca and durham.ca (public health/health statistics). The information is essential to the DRHD for planning and evaluating programs and services, as well as for monitoring emerging health issues.

95% Confidence Interval (CI) refers to the variability around the estimate. Percentages are expressed in the form of the point estimate and the 95% CI around the estimate. The true or actual percentage falls within the range of values 95 out of 100 times. A wide confidence interval reflects a large amount of variability or imprecision. Usually, the larger the sample size the narrower the confidence intervals. In bar charts, the 95% confidence interval is represented by an error bar at the top of each bar.

Coefficient of Variation (CV) refers to the precision of the estimate. When a CV is between 16.6% and 33.3%, the estimate should be interpreted with caution because of high variability. An estimate with a CV over 33.3% is not releasable.

Significant Difference refers to a difference between two estimated percentages that is not likely due to chance. If the 95% Confidence intervals of two estimates do not overlap there is considered to be a significant difference between the estimates.

Household Weights are applied when calculating the estimates to compensate for the unequal probability of respondent selection based on the number of adults in the household.

For more information or if you require this information in an accessible format, please contact the Durham Health Connection Line at 905-666-6241 or 1-800-841-2729.

References

1. Public Health Agency of Canada. Seniors' Falls in Canada: Second Report. 2014. Available at: http://www.phac-aspc.gc.ca/seniors-aines/publications/public/injury-blessure/seniors_falls-chutes_aines/index-eng.php
2. World Health Organization. Falls. 2012. Available at: <http://www.who.int/mediacentre/factsheets/fs344/en/>
3. National Institute of Health (NIH) Senior Health. Falls and Older Adults. 2013. Available at: <http://nihseniorhealth.gov/falls/causesandriskfactors/01.html>
4. Canadian Society for Exercise Physiology. Canadian Physical Activity Guidelines for Older Adults – 65 Years & Older. Accessed on July 2016. Available at: http://www.csep.ca/CMFiles/Guidelines/CSEP_PAGuidelines_older-adults_en.pdf