Diabetes and Falls: When health concerns collide

Falls are a serious health risk for older Canadians. When diabetes is added to the mix, the risk of falling is much worse.

It’s a well-known fact: older adults have a very high risk of falling. One in three Canadians aged 65 and over falls each year, and 50% fall at least twice. In many cases the only damage is to one’s pride, but 20-30% of seniors who fall suffer moderate to severe injuries that jeopardize health, mobility and the ability to live independently.

Many risk factors have been identified that increase the likelihood of a fall, but one of the most significant is seldom mentioned and has only recently begun to receive the attention it deserves: diabetes.

DM (diabetes mellitus) is a rapidly growing healthcare concern in Canada, particularly amongst seniors. According to 2009 data from Statistics Canada and the Canadian Diabetes Association, seniors are notably over-represented amongst diabetics: people aged 65 and over account for 47% of all diabetics but only 14% of the total population.

cont’d page 2...
When health concerns collide (cont’d from page 1)

Why diabetes is such a significant falls risk factor

Type I and II diabetics are prone to several complications that can increase the chance of a fall, especially if blood sugars are not being managed effectively, including:

**Hypoglycemia:** A hypoglycemic reaction is perhaps the greatest falls risk factor for diabetics. Low blood sugar levels due to missed meals or an increase in activity level can lead to uncontrolled tremors, dizziness, sweating, blurred vision, delirium and in extreme cases, loss of consciousness.

**Medications:** The falls risk associated with polypharmacy is greater for diabetics than for non-diabetics because their condition requires the use of an additional medication: insulin or a hypoglycemic drug such as Metformin. Not only is the opportunity for negative drug interactions higher; some diabetic medications can elevate the risk of falls even on their own.

**Diabetic Peripheral Neuropathy:** DPN, impairment of the nervous system, is one of the most common diabetic complications, affecting approximately 30% of older patients. DPN causes tingling, pain or loss of feeling in the lower extremities.

**Retinopathy:** Damage to the retina of the eye is the leading cause of blindness in Canada and the U.S. Symptoms include blurred or cloudy vision and problems adjusting to changes in lighting that increase the risk of a fall.

**Renal failure:** Diabetes is the leading cause of kidney failure, accounting for almost half of newly diagnosed cases. Symptoms of kidney disease include poor endurance, muscle cramps, weight loss and difficulty thinking clearly.

Preventing DM-related falls

The incidence of diabetes in the population is increasing at an alarming pace. As the Baby Boom generation continues its shift into the age 65+ cohort, the number of senior diabetics will swell significantly. Healthcare providers will need to redouble their efforts to warn senior diabetic patients and their caregivers about the additional falls risks they face and encourage them to reduce their risk by controlling their blood sugar levels, following their medication regimen carefully, remaining active and eating healthy meals.

Healthcare providers must also remind patients to think about how they would get help if a health emergency leaves them unable to get to a phone.

Lifeline is a smart investment for senior diabetic patients so that they have access to fast, expert emergency help 24 hours a day. The Lifeline with AutoAlert option is a particularly wise choice in case a fall or hypoglycemic reaction prevents them from pushing their Help Button on their own.

**SOURCES:**

2. Statistics Canada; Annual Demographic Estimates, Table 2.1–1, 2010.
3. Schiller et al.; Fall Injury Episodes Among Noninstitutionalized Older Adults: United States, 2001-2003, Table 2. Annualized frequency and rates of fall injury episodes by health characteristics.
5. Piper, Barby; Falls and Diabetes.

When diabetes collides with seniors’ propensity to fall, a kind of double jeopardy sets in because DM complications further increase the likelihood of a fall.

Research shows that elderly diabetics fare worse than non-diabetics on several critical fall-related measures:

- 25% more likely to fall (Schiller; 2007).
- 58% higher likelihood of recurrent falls (Pijpers et al., 2011).
- 97% higher injury rate (NHIS, 2001-2003).

Additional differences include:

- Slower rehabilitation following a fall-related hip fracture (Semel et al., 2010).
- Worse functional outcomes following rehabilitation after hip fracture surgery (Liberman et al., 2007).
- Lower preoperative health related quality of life, more pain, co-morbidities and reduced health status following a hip fracture (Ekstrom et al., 2013).

**FREE**

Diabetes and the Risk of Falls

brochures

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Prescription for hospitalization

Elderly Canadians rely heavily on medications to manage health issues, but without proper care these same meds can also send them to the hospital.

Although annual increases in prescription drug spending have decreased substantially in the past decade from earlier double-digit peaks, the fact remains that spending is increasing faster for seniors than it is for the rest of the population.

Older adults are Canada’s heaviest users of prescription medications, averaging 3 to 6 medications daily. Of greater concern is the fact that seniors are much more susceptible than the average population to adverse drug reactions (ADRs) and the health problems they can cause such as falls and hip fractures.

According to a recent study by the Canadian Institute for Health Information (CIHI), adults aged 65 and older represent 14% of Canada’s population but account for 40% of all prescription medications and a very significant 57.6% of ADR-related hospitalizations. In fact, seniors are five times more likely to end up in hospital due to a drug-related health emergency than younger adults.

The top 3 medication classes causing adverse drug reactions

The CIHI report sheds light on which medication classes are most likely to result in ADRs serious enough to require hospitalization. The top three medications named in the study are:

1. Anticoagulants (12.6% of ADRs): Blood thinners prescribed for heart attack and stroke prevention are notoriously difficult to manage and require frequent monitoring.

2. Antineoplastic medications (12.1%), used in cancer chemotherapy treatment, can lead to a decrease in disease-fighting white blood cells.

3. Opioids and related analgesics (7.4%) used for pain management can cause nausea, vomiting and constipation.

Identifying high risk ADR patients

The CIHI study also identifies factors that indicate a likelihood of ADR hospitalization. These factors can help healthcare professionals identify high-risk patients, and include:

- **New starts**: The highest risk of an ADR occurs in the days following the start of a new drug therapy. Whether and how soon a reaction develops varies by medication.
- **Number of medications**: There is a pronounced correlation between the number of medications being taken and the likelihood of an ADR.
- **Age**: The older the patient, the greater the likelihood of an ADR that results in a hospital admission.

SOURCES:

2. How you can help seniors use medication safely, Health Canada.
4. Seniors and Prescription Drug Use, CIHI.
Falls and the senior diabetic patient
Seniors with Type I or Type II diabetes have a higher risk of falling and fall more frequently than non-diabetic patients. This informative brochure will help your diabetic patients understand how their condition increases the risk of falling as well as the severity of the potential injuries that can result. Lifeline’s ability to provide fast, expert help in such emergencies is explained, including *Lifeline with AutoAlert*, and a helpful fall prevention checklist for diabetics is included.

Act now and receive:
- A **FREE** supply of *Diabetes and the Risk of Falls* patient education brochures
- **Savings Coupons** for your patients

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**Recommend Lifeline**
The Lifeline medical alarm service enables your senior and physically challenged patients to receive fast, expert help anytime they need it, 24 hours a day.

To receive a supply of Lifeline Referral Savings Coupons for your patients, call **1-800-LIFELINE** (1-800-543-3546).

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**Lifeline never turns away a patient in need**
**Subsidy programs** are available to reduce the cost of the Lifeline service. For more information, call **1-800-LIFELINE**.