

Practice Tips

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Preventing hip fractures in elderly patients

Hip fractures are a serious problem for our elderly patients; 14% to 36% of patients die in the first year after a fracture, and the risk of loss of independence is more than 40%.¹ There is evidence that some of these fractures can be avoided, however, by improving bone density and preventing or mitigating falls. In this article I discuss preventive measures I have implemented in my practice.

Preventing and treating osteoporosis

Evidence shows that a daily intake of 1200 mg or more of calcium and 800 IU of vitamin D is effective for preventing some fractures in elderly people.² I ask my patients how much milk they drink and how much yogurt or cheese they eat. If they are not getting enough calcium (very few of them are), I suggest they take calcium carbonate (Tums Extra[®]) with their meals. I also ask them to buy vitamin D tablets (800 IU) to take daily, and I give them a note to give to the pharmacist to this effect. I note this advice on their preventive health tables (my tables can be found at <http://members.rogers.com/mgreiver/tables.htm>)³ and review it yearly.

In elderly people with osteoporosis, alendronate (10 mg daily⁴) or risedronate (5 mg daily⁵) have been found to decrease risk of fractures. A recent article⁵ showed that risedronate reduced risk of hip fractures by 30% in women older than 70 with hip T scores of -3 or less combined with risk factors for falls, or T scores of -4 or less. These medications are reasonable preventive therapy for women at very high risk of hip fractures.

Preventing and mitigating falls

Some elderly patients are at high risk of falls because of previous history of falls, balance problems, dementia, or polypharmacy; the United States Preventive Services Task Force recommends

multifactorial intervention for such people if resources are available (level B, fair evidence for inclusion).⁶ In my community, we are fortunate to have access to a specialized geriatric services program. This program has a multidisciplinary team under the leadership of a geriatrician and is part of the Regional Geriatric Program of Toronto, Ont. Such programs are available in several communities across Ontario.

After a faxed referral, an occupational therapist or physiotherapist makes a home visit to assess both my patient and his or her environment and will recommend and arrange for measures to decrease risk of falls. The recommendations are specific and comprehensive and often include measures to improve home safety (eg, grab bars in the bathroom, removal of loose area rugs), walkers or canes, referral to home care services for additional support, and assignment to a social worker.

Sometimes, an elective admission to the geriatric day hospital is arranged. Patients attend twice weekly for 2 to 3 months. The program includes strengthening, balance, and flexibility exercises; and my patients are taught how to prevent falls.

A nurse, a dietitian, a pharmacist, and a social worker are also on the team. I have found communication with teams in this program to be excellent. I receive a letter shortly after initial assessment or a telephone call if there are additional concerns. The team also sends a note if admission to day hospital is arranged and after discharge to outline follow-up plans. In communities where this service is not available, Community Care Assessment Centres can often do a home safety assessment and sometimes offer seniors' exercise classes.

We encourage readers to share some of their practice experience: the neat little tricks that solve difficult clinical situations. *Canadian Family Physician* pays \$50 to authors upon publication of their Practice Tips. Tips can be sent by mail to Dr Tony Reid, Scientific Editor, Canadian Family Physician, 2630 Skymark Ave, Mississauga, ON L4W 5A4; by fax (905) 629-0893; or by e-mail tony@cfpc.ca.

Hip protector

Even with maximal intervention, however, some patients still fall. A recent randomized controlled trial

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found that patients wearing hip-protector garments had 60% fewer hip fractures than controls. If patients were wearing the garment at the time of a fall, 80% of fractures were prevented.⁷ These garments have padding over the greater trochanters to help cushion the impact of a fall. A Critical Appraisal of this article published in *Canadian Family Physician*⁸ agreed that recommending the garment is an effective intervention, but noted that a major barrier could be getting patients to wear it.⁸

One of my colleagues on the Canadian Medical Association's on-line clinical discussion group suggested an Internet search, using the term "hip protector," to find a local vendor. I have been unable to find a distributor in North America for the particular hip protector used in the *New England Journal of Medicine* study (the KPH 2), so I am recommending the garment with the second-highest impact reduction capacity as determined by laboratory tests,⁹ the Hipsaver®.

I found a Canadian company, Help Mates, that will sell and ship the garments to my patients (www.helpmates.on.ca, telephone 1-888-771-0977). I asked one of my patients, an elderly lady, to contact them. She has severe postural instability due to gentamycin-induced vestibular damage and has had many falls and fractures. She ordered two garments (at \$60 each) and is now wearing them daily. She tells me they are comfortable, and she feels reassured that she is doing something to protect herself against hip fractures. I think this garment would be suitable for certain patients, and I plan to recommend it more often in the future.

Conclusion

Family physicians can use several effective interventions to reduce risk of hip fractures. These include calcium and vitamin D supplementation, medication, geriatric programs, exercises, and hip protectors. Using these interventions will likely benefit our elderly patients at risk by reducing mortality and helping to keep them at home and independent. ❖

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