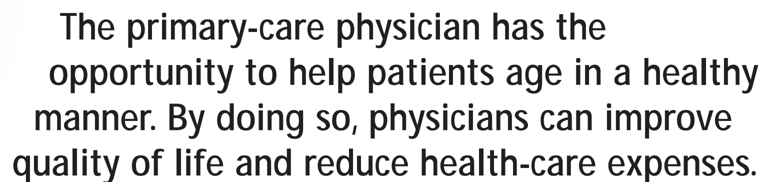
How to Help Your Patients Get Older



The primary-care physician has the opportunity to help patients age in a healthy manner. By doing so, physicians can improve quality of life and reduce health-care expenses.

By W. B. Dalziel, MD, FRCPC

A consensus description of healthy aging is "a lifelong process of optimizing opportunities for improving and preserving health, as well as physical, social and mental wellness, independence, and quality of life." The goal of healthy aging is to achieve three key characteristics: low risk of disease and disease-related disability, high mental and physical function, and active enjoyment of life. The MacArthur Study on Aging shows only 30% of physical aging is genetic.[1] Approximately 70% of the physical and mental decline accompanying aging was felt to be due to lifestyle risk factors, influenced by such things as physical activity, smoking, nutrition, and injury prevention.

Improvements in health status

The elderly can be functionally divided into three groups: the well elderly (80%), the frail elderly (15%) and the institutionalized elderly (5%). For all three groups, there are different strategies the family physician can use to ensure healthy aging. A recent Statistics Canada report, *Health Reports — How Healthy are Canadians?,* showed not only that elderly Canadians are living longer, but they are also healthier. In the last years, life expectancy has increased by 2.4 years for males and 1.4 years for females.[2] The baby boomers are suffering from less arthritis,

Table 1

Primary prevention

Primary prevention
Tobacco cessation
Nutritional advice: • Fat < 30% daily calories • Fibre > 20 g/day • ? Moderate Na restriction • Avoid over/under nutrition
Calcium: 1200-1500 mg elemental calcium daily
Exercise: • Aerobic • Strength
Safe driving: • Counseling/screening • Seat belt counseling
Vaccinations: • Influenza • Pneumococcal - high risk, ?65 + (once or twice?) • Tetanus - single booster age 65
Sun exposure advice
Noise reduction/hearing protection
Oral/dental hygiene counseling.

A "?" indicates a measure is recommended by some but not all task force reports.

hypertension and chronic obstructive pulmonary disease (COPD) as compared to 20 years ago. The prevalence of chronic conditions has not increased among seniors in the last 20 years. Long-term care institutional rates are lower and activity limitations are less, particularly in the younger elderly (65 to 74 years old).

This report emphasized that seniors' health status is dynamic, not static. One half of those reporting fair or poor health in 1994 improved by 1998. Of the 310,000 seniors reporting activity dependent on others in 1994, 13% had improved to limited, but not dependent, and 19% had improved to no limitation whatsoever. It is not too late to teach old dogs new tricks. Much evidence has been accumulated to suggest that only recent bad habits hurt, and only recent good habits help.[3,4] Table 1 outlines evidence-based primary prevention manoeuvres.

Dr. Dalziel is associate professor at the University of Ottawa, is with the Ottawa hospital and is chief, Ottawa Regional Geriatric Program, Ottawa, Ontario.

SMOKING

Smoking is the number one preventable cause of death and disease in Canada. It is also implicated in eight of the top 14 causes of death for seniors.[5] Smoking cessation rates are actually higher for older people. Family members, particularly children and grandchildren can often provide the motivation for a senior to stop smoking.

Smoking is age blind. While the risks of smoking persist into old age, so do the benefits of smoking cessation, particularly the almost immediate benefits for reducing coronary heart disease and stroke. The benefits for respiratory function occur over a longer period of time. Advice from a family physician is associated with smoking cessation rates of approximately 15% and

is considered to be one of the most cost-effective health promotion activities.[6] Unfortunately, although seniors see their doctors more frequently, most seniors still do not receive smoking cessation advice and assistance, even though seniors have higher quit rates than younger patients.

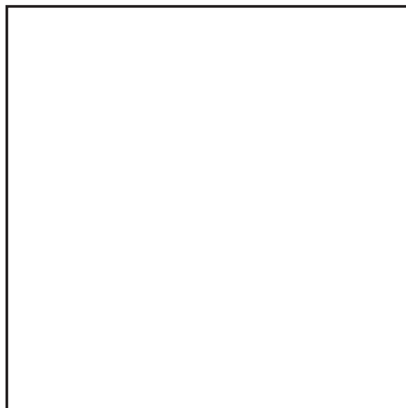
Table 2
Secondary prevention

Hypertension treatment	Benefits to age 84
Osteoporosis/cardiovascular	Estrogen counselling
Alcoholism	Case finding/counselling
Vision/hearing problems	Screening aids
Falls	Review risk factors
Carcinoma (breast)	Screening: clinical exam *vs.* mammography to age 69 or older?
Carcinoma (cervix)	Screening: Pap smear to age 69, every 3 years, discontinue if consecutive smears negative
Excessive LTC institutionalization	Home visit by nurse
Atrial fibrillation	Screening
Tuberculosis screen	Elderly in LTC or high risk

LTC: Long term care

Exercise

The benefits of aerobic exercise and strength training have been demonstrated in hundreds of studies over the past decade. Health-related benefits have been associated with improvements for sufferers of arthritis, heart disease and stroke, diabetes, colon and breast cancer, osteoporosis, hypertension, stress-related conditions, depression, obesity, back pain, and falls. There is now conclusive evidence that active living is a key contributor to health. Appropriate aerobic exercise should be encouraged among all elderly persons, particularly the well elderly and those aged 65 to 80. In a Japanese study using a stationary bicycle and resistance exercise for four hours per week for 25 weeks, seniors showed a net gain in maximum voluntary ventilation (VO_2 max) equivalent to being years younger in level of aerobic capacity.[7]



For the older elderly (those over 80), and those who suffer a degree of frailty, strength training is particularly important. The author's favourite exercise study is entitled *High Intensity Strength Training in Nonagenarians in a Nursing Home.*[8] In this study, seniors followed simple quadriceps-strengthening sessions, three times per week for eight weeks. This resulted in an increase in quadriceps strength of 174%, an increase in tandem gait speed of 40%, and marked improvement in mobility with decreased falls and use of walking aids. These are dramatic results using a very simple program.

Table 3
Costs of some preventive health-care manoeuvres

Manoeuvre	Cost per life year gained (1983) U.S. dollars
Influenza vaccination (all citizens)	141
Pneumococcal vaccination	1,769
Tetanus vaccination by age 65	4,527
Nicotine gum smoking cessation advice for men aged 65-69	9,072
Cervical cancer screening every 3 years for women aged ≤65	2,778
Physical examination for breast cancer	9,597
Mandatory seat belt law	69

Table 4
Dalziel's practical, not-all-evidence-based, preventive geriatrics

At Age 65

(a) Habits
- Tobacco*
- Exercise (aerobic/strength)*
- Problems with alcohol*
- Safe driving/seat belts
- Sun exposure
- Noise reduction
- Nutrition/osteoporosis
- Environmental safety/fall prevention
- Dental (brushing/flossing)

(b) History/Physical
- Ask about for concerns about cognition (caregiver also)*
- Ask about for concerns about depression (caregiver also)*
- Ask about for concerns about activities of daily living (functional screen and get-up-and-go test)*
- Ask about for incontinence/bladder problems*
- Ask about for hearing/vision problems*
- Ask about for frailty*
- Breast exam*
- Pap smear (if not done in past 2 years)
- Blood pressure (lying and standing)*
- Palpate for aortic aneurysm*
- Pulse for atrial fibrillation*
- Mouth exam and dental exam*
- Weight*

(c) Tests/Interventions
- Influenza vaccination*
- Lipids
- Hemoglobin/creatinine
- Thyroid stimulating hormone

* This should be done annually.

Secondary Promotion/ Prevention

There are several secondary preventive strategies (Table 2) that will help with healthy aging. One of the most important things to address is falls. The 12% of the Canadian population who are over 65 account for 33% of injury-related hospital admissions and 61% of injury-related hospital days. Falls account for the majority of seniors' injuries and have associated risk factors that are not only identifiable, but also associated with successful prevention strategies. The younger elderly

are more likely to fall because of environmental causes, whereas the older elderly tend to have multiple medical conditions that contribute to a higher risk of falling. A cluster of frequent recent falls is of particular importance. This suggests significant underlying medical conditions requiring urgent medical assessment. A review of risk factors, accompanied by physiotherapy and occupational therapy assessment and intervention, often can decrease a patient's risk of falls significantly.

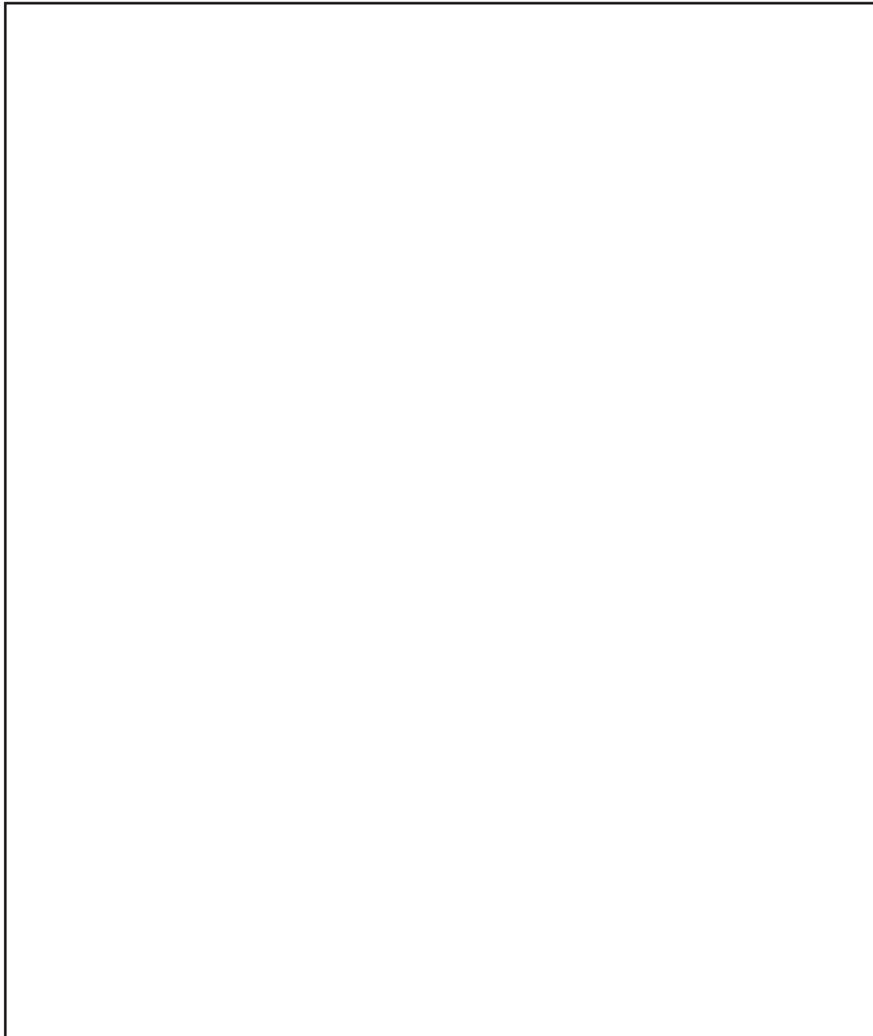
Costs of healthy aging strategies

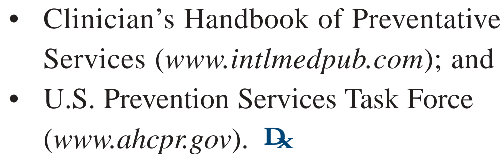
Preventive health-care manoeuvres do not have to be expensive (Table 3). A Randomized Controlled Trial of a Health Promotion Program for Frail Elderly used a series of visits by the project nurse to develop personal health plans for seniors.[9] At three years follow-up, 75% of participants in the treatment group were alive and living at home versus 59% in the control group ($p < 0.05$ with a number needed to treat [NNT] of 16).

The Bank of America Study, which was based on completion of a questionnaire, showed the results of a health promotion program for retirees. Written feedback consisted of health advice.[10] Global health status for the group was 9.4% better at one year ($p < 0.001$) and overall health risk scores were 23% better in two years ($p < 0.001$). Clearly the family physician can play a big role in promoting healthy aging.

Practical, office-based approach

Physician's should develop a system of practical, healthy, aging office-based manoeuvres. The author's system in presented in Table 4.





For comprehensive further information on healthy aging topics, there are two excellent Web sites:

- Clinician's Handbook of Preventative Services (*www.intlmedpub.com*); and
- U.S. Prevention Services Task Force (*www.ahcpr.gov*). Dx

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