

Screening and Prevention *in older adults*

Cancer is one the leading causes of death for both men and women over age 60;¹ thus, early detection and prevention represent a key opportunity to reduce cancer-related morbidity and mortality in the elderly population.² Preventive care and education can also significantly influence the health-related effects of various lifestyle choices on elderly individuals, including those of tobacco use, excessive alcohol consumption, and lack of exercise. For example, findings from the scientific literature on screening and prevention indicate that:

Mammography screening every one to two years among women age 50 to 74 clearly results in a statistically significant reduction in the risk of death from breast cancer, although the strength of the effect decreases with age.³⁻⁶ Similarly, annual screening for colorectal cancer using fecal occult blood testing (FOBT) as the first step in multiphase screening among men and women age 50 to age 80 results in small, but statistically significant, decreases in mortality.⁷

Comprehensive geriatric assessment programs, which systematically review the medications, functional status, cognition, affect, gait/balance, nutrition, social support systems, and senses of elderly individuals, are associated with improvements in mortality and quality of life when they are coupled with referrals for necessary services, verification of treatment, and appropriate follow-up.⁸⁻¹²

Approximately 15 percent of elderly men and 12 percent of elderly women suffer from problem drinking,¹³ resulting in rates of alcohol-related hospitalization similar to those seen for myocardial infarction.¹⁴ Several studies, including one in a cohort of elders, have shown that brief outpatient counseling (of 5 to 20 minutes' duration) with appropriate follow-up can significantly reduce alcohol consumption in non-dependent drinkers.¹⁵⁻¹⁹

Smoking cessation substantially reduces the risk of dying, even among persons who quit after age 70.²⁰ There is evidence based on the U.S. adult population as a whole to suggest that screening interventions to identify smokers and brief (3 to 10 minute) counseling sessions increase the rate of smoking cessation^{21,22} and are cost effective.^{23,24}

Physical activity decreases the risk of death among persons of all ages.²⁵⁻²⁸ Among elderly individuals in particular, it decreases spinal bone loss,²⁹ lowers blood pressure,³⁰ and reduces the incidence of both coronary heart disease³¹⁻³³ and diabetes mellitus.^{33,34}

These research findings suggest that widespread implementation of existing preventive and screening measures could significantly improve the outcomes and quality of care for vulnerable elders.

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References

1. American Cancer Society. Cancer statistics 1999. *CA: A Cancer Journal for Clinicians*. 1999;49:21.
2. Walsh JME. Cancer screening in older adults. *West J Med*. 1992;156:495–500.
3. Kerlikowske K, Grady D, Rubin SM, Sandrock C, Ernster VL. Efficacy of screening mammography: A meta-analysis. *JAMA*. 1995;273:149–154.
4. Demissie K, Mills OF, Rhoads GG. Empirical comparison of the results of randomized controlled trials and case-control studies in evaluating the effectiveness of screening mammography. *J Clin Epidemiol*. 1998;51:81–91.
5. Nystrom L, Rutqvist LE, Wall S, Lindgren A, Lindqvist M, Ryden S, Andersson I, Bjurstram N, Fagerberg G, Frisell J, Tabar L, Larsson L-G. Breast cancer screening with mammography: Overview of Swedish randomised trials. *Lancet*. 1993;341:973–978.
6. Chen H-H, Tabar L, Fagerberg G, Duffy SW. Effect of breast cancer screening after age 65. *J Med Screen*. 1995;2:10–14.
7. Mandel JS, Bond JH, Church TR, Snover DC, Bradley GM, Schuman LM, Ederer F. Reducing mortality from colorectal cancer by screening for fecal occult blood. *N Engl J Med*. 1993;328:1365–1371.
8. Stuck AE, Siu AL, Wieland GD, Adams J, Rubenstein LZ. Comprehensive geriatric assessment: A meta-analysis of controlled trials. *Lancet*. 1993;342: 1032–1036.
9. Stuck AE, Aronow HU, Steiner A, Alessi CA, Büla CJ, Gold MN, Yuhus KE, Nisenbaum R, Rubenstein LZ, Beck JC. A trial of annual in-home comprehensive geriatric assessments for elderly people living in the community. *N Engl J Med*. 1995;333:1184–1189.
10. Burns R, Nichols LO, Graney MJ, Cloar FT. Impact of continued geriatric outpatient management on health outcomes in older veterans. *Arch Intern Med*. 1995;155:1313–1318.
11. Reuben DB, Frank JC, Hirsch SH, McGuigan KA, Maly RC. A randomized clinical trial of outpatient comprehensive geriatric assessment coupled with an intervention to increase adherence to recommendations. *J Am Geriatr Soc*. 1999;47:269–76.
12. Rubenstein LZ, Josephson KR, Harker JO, Miller DK, Wieland D. The Sepulveda GEU Study revisited: Long-term outcomes, use of services, and costs. *Aging Clin Exp Res*. 1995;7:212–217.
13. Adams WL, Barry KL, Fleming MF. Screening for problem drinking in older primary care patients. *JAMA*. 1996;276:1964–1967.
14. Adams WL, Yuan Z, Barboriak JJ, Rimm AA. Alcohol-related hospitalizations of elderly people: Prevalence and geographic variation in the United States. *JAMA*. 1993;270:1222–1225.
15. Fleming MF, Barry KL, Manwell LB, Johnson K, London R. Brief physician advice for problem alcohol drinkers: A randomized controlled trial in community-based primary care practices. *JAMA*. 1997;277:1039–1045.
16. Nilssen O. The Tromsø Study: Identification of and a controlled intervention on a population of early-stage risk drinkers. *Preventive Medicine*. 1991;20:518–528.
17. Chick J, Lloyd G, Crombie E. Counselling problem drinkers in medical wards: A controlled study. *BMJ*. 1985;290:965–967.
18. Babor TF, Grant M, eds. Project on identification and management of alcohol-related problems. Report on Phase II: A randomized clinical trial of brief interventions in primary health care. Geneva: World Health Organization, 1992, 250–251.
19. Fleming MF, Manwell LB, Barry KL, Adams W, Stauffacher EA. Brief physician advice for alcohol problems in older adults: A randomized community-based trial. *J Fam Pract*. 1999;48:378–384.
20. Department of Health and Human Services. *The Health Benefits of Smoking Cessation: A Report of the Surgeon General*. Rockville, MD: Department of Health and Human Services, Public Health Service, Center for Disease Control, Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. DHHS Publication No. (CDC) 90–8416, 1990.
21. Fiore MC, Bailey WC, Cohen SJ, et al. *Smoking Cessation*. Clinical Practice Guideline No 18. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, Agency for Health Care Policy and Research. AHCPR Publication No. 96–0692. April 1996.
22. Raw M, McNeill A, West R. Smoking cessation: Evidence based recommendations for the healthcare system. *BMJ*. 1999;318:182–185.
23. Cromwell J, Bartosch WJ, Fiore MC, Hasselblad V, Baker T. Cost-effectiveness of the clinical practice recommendations in the AHCPR guideline for smoking cessation. *JAMA*. 1997;278:1759–1766.
24. Cummings SR, Rubin SM, Oster G. The cost-effectiveness of counseling smokers to quit. *JAMA*. 1989;261:75–79.
25. Lindsted KD, Tonstad S, Kuzma JW. Self-report of physical activity and patterns of mortality in Seventh-Day Adventist men. *J Clin Epidemiol*. 1991; 44:355–364.
26. Paffenbarger RS, Hyde RT, Wing AL, Lee I-M, Jung DL, Kampert JB. The association of changes in physical-activity level and other lifestyle characteristics with mortality among men. *N Engl J Med*. 1993;328:538–545.
27. Blair SN, Kohl HW, Barlow CE, Paffenbarger RS, Gibbons LW, Macera CA. Changes in physical fitness and all-cause mortality: A prospective study of healthy and unhealthy men. *JAMA*. 1995;273:1093–1098.
28. Sherman SE, D'Agostino RB, Cobb JL, Kannel WB. Does exercise reduce mortality in the elderly? Experience from the Framingham Heart Study. *Am Heart J*. 1994;128:965–972.
29. Bérard A, Bravo G, Gauthier P. Meta-analysis of the effectiveness of physical activity for the prevention of bone loss in postmenopausal women. *Osteoporos Int*. 1997;7:331–337.
30. Cononie CC, Graves JE, Pollack ML, Phillips MI, Summers C, Hagberg JM. Effect of exercise training on blood pressure in 70- to 79-year-old men and women. *Med Sci Sports Exerc*. 1991;23:505–511.
31. Berlin JA, Colditz GA. A meta-analysis of physical activity in the prevention of coronary heart disease. *Am J Epidemiol*. 1990;132:612–628.
32. Eaton CB. Relation of physical activity and cardiovascular fitness to coronary heart disease. Part I: A meta-analysis of the independent relation of physical activity and coronary heart disease. *J Am Board Fam Pract*. 1992;5:31–42.
33. U.S. Department of Health and Human Services. *Physical Activity and Health: A Report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Healthy Promotion, the President's Council on Physical Fitness and Sports, 1996. <http://www.cdc.gov/nccdphp/sgr/sgr.htm>
34. Manson JE, Nathan DM, Krolewski AS, Stampfer MJ, Willett WC, Hennekens CH. A prospective study of exercise and incidence of diabetes among US male physicians. *JAMA*. 1992;268:63–67.