Major Risk and Protective Factors

Risk factors are characteristics of individuals, families, and communities that contribute to disease, injury, or disability. Protective factors shield us from poor health and help make us healthy.[1] Risk and protective factors often are mirror images of each other. For instance, a sedentary lifestyle is a risk factor for disease, while physical activity is protective. For some risk and protective factors, the picture is more complex. Moderate alcohol drinkers, for example, have the lowest risk of heart disease, abstainers have the next lowest risk, and heavy drinkers have the highest risk.

Two recent articles offer perspectives on risk factors that lead to preventable death in the United States.[2,3] These factors are also important in Washington. Socioeconomic position, access to medical care, and the physical environment are among the important risk and protective factors that can make it easier or harder for people to adopt healthy ways of living. Other sections of *The Health of Washington State, 2007* provide information on these contextual topics. This section discusses ways of living, or lifestyle factors, that impact health.

Section Overview

Each chapter in *The Health of Washington State, 2007* describes risk and protective factors related to the chapter's topic. This section focuses on lifestyle factors associated with many health outcomes. It includes the following chapters:

- Tobacco Use
- Obesity and Overweight
- Physical Activity
- Nutrition
- Alcohol Abuse and Dependence
- Drug Abuse and Dependence
- Sexual Behavior

Highlights and Discussion

Tobacco smoking is the leading cause of preventable death in the United States[3] and likely in Washington, as well. Tobacco Use notes that since 2001, the proportion of Washington State adults who smoke cigarettes has been decreasing. Declines in smoking among high school youth during 1999–2004 seem to be leveling off. In 2006, about 17% of Washington adults and about 15% of 10th graders reported smoking. Marketing by the tobacco industry continues to challenge efforts to decrease smoking in Washington. Effective deterrents to smoking include mass media campaigns, telephone support systems, and community-based activities to prevent youth from beginning to smoke. These efforts have been helped by several recent voter initiatives that increased taxes on tobacco and restricted smoking in indoor public places.

Poor diet and lack of physical activity, together, are the second leading cause of preventable death in the United States, in part because of their strong association with obesity.[3] These topics are covered in three chapters, Obesity and Overweight, Physical Activity, and Nutrition. The increase in obesity over the past decade in Washington mirrors the national increase. In 2006, nearly a fourth of adults reported weights and heights indicating obesity, and more than another third of adults were overweight.

Many components of a poor diet, such as eating too much, too much saturated or trans-fats or salt, and too few fruits and vegetables, contribute to ill health. In 2005, only a quarter of Washington's adults reported eating fruits and vegetables five times each day. Breastfeeding improves the infant's potential for growth and development and reduces the incidence or severity of a variety of infectious diseases. In 2004, about 70% of mothers breastfed their babies for at least two months. For 2002-2004 combined, adults in about 10% of Washington households reported food insecurity—they skipped meals, ate smaller portions, or ate less nutritious food because they did not have enough money.

In 2005, nearly two-thirds of adults in Washington reported levels of physical activity (either at work or in their leisure time) that met national recommendations. In addition to helping control overweight and obesity, physical activity can reduce the prevalence or negative effects of many chronic diseases. Current public health actions focus on developing environments and policies that make it easy for individuals to be physically active and to eat healthy foods.

Heavy alcohol use is the third leading cause of preventable death, and illicit drug use is the ninth.[3] Alcohol Abuse and Dependence notes that the percent of binge drinkers in Washington has been relatively constant since 1990, with about one in seven adults reporting drinking five or more drinks on one occasion in the past month. Drug Abuse and Dependence notes that since 1990, the rate of drug-related deaths, including deaths from illicit drugs and legal drugs used recreationally, more than doubled. However, there are still fewer drug-related deaths than deaths related to alcohol. Alcohol and drug abuse also results in illness and social disruption that can be long-lasting, such as when abuse hinders healthy fetal development. Advice from a health care provider to reduce or stop drinking is effective in preventing major drinking problems.[4] Minimum legal drinking age laws, .08 blood alcohol concentration laws, and sobriety checkpoints reduce alcohol-related traffic deaths.[5,6] School-based programs can reduce drug use among youth. Drug treatment programs also reduce drug use, although most studies do not measure long-term success. Needle-exchange programs reduce human immunodeficiency virus (HIV) and hepatitis among injection drug users.

Unhealthy sexual behavior is another major cause of preventable death.[3] New treatments for HIV have decreased the proportion of deaths attributable to unhealthy sexual behavior. Rather than death, complications of sexually transmitted diseases, unintended pregnancies, and the emotional impacts of unwanted or premature sexual activity might more accurately measure the impact of unhealthy sexual behavior. Sexual Behavior discusses these and related issues. Communities can foster environments in which healthy sexual behaviors can occur. Approaches include providing access to comprehensive sex education, appropriate health services, and counseling.

Disparities

Compared to Washington residents with higher incomes and higher levels of education, those with lower incomes or less education are more likely to smoke, be obese, be food insecure, and abuse alcohol or drugs. In addition, those with lower incomes or education are less likely to eat sufficient fruits and vegetables, breastfeed their babies, and meet recommendations for physical activity.

Risk and protective factors also vary among Washingtonians of different races or Hispanic origin. Many of these disparities are reduced or disappear altogether after accounting for differences in socioeconomic factors. Several risk factors that remain after accounting for income and education include high rates of smoking among American Indians and Alaska Natives and low levels of physical activity among Asians and Pacific Islanders. Protective factors also vary by race and Hispanic origin: Asian and Pacific Islanders have the lowest rates of obesity, and Hispanics and Asians and Pacific Islanders have relatively low rates of alcohol and drug abuse. There is often large variation among subgroups within the broad race and Hispanic origin categories. Cultural practices, socioeconomic positions, gender, and length of time in the United States are among the important factors that contribute to differences in lifestyles within the larger categories.

Summary

The chapters in this section provide a summary of the major lifestyle factors that influence a wide spectrum of health outcomes. Reducing ways of living that harm health and increasing those that support health require environmental and social changes, as well as individual educational approaches.

Endnotes

---

[1] Last, J. M. (Ed.). (2001) *A Dictionary of Epidemiology, 4th Edition*. New York: Oxford University Press

[2] McGinnis, J. M., Williams-Russo, P., Knickman, J. R. (2002). The case for more active policy attention to health promotion. *Health Affairs, 21,* 78-93.

[3] Mokdad, A. H., Marks, J. S., Stroup, D. F., Gerberding, J. L. (2004). Actual causes of death in the United States, 2000. *Journal of the American Medical Association, 291,* 1238-1245.

[4] Berglund, M., Thelander, S., & Jonsson, E. (2003). *Treating Alcohol and Drug Abuse: An Evidence Based Review*. Weinheim, Germany: Wiley—VCH.

[5] Chaloupka, F. J., Grossman, M., & Saffer, H. (2002). The effects of price on alcohol consumption and alcohol-related problems. *Alcohol Research & Health, 26,* 22-34.

[6] Shults, R. A., Elder, R. W., Sleet, D. A., Nichols, J. L., Alao, M. O., Carande-Kulis, V. G., et al. (2001). Reviews of evidence regarding interventions to reduce alcohol-impaired driving. *American Journal of Preventive Medicine, 21*, 66-88.