Foundations for Health Promotion
Levels of Prevention

Amer Eltwati Ben Irhuma,*

Abstract:
Prevention averts the development of disease that will manifest in the future. It consists of all measures, including definitive therapy, that limit disease progression. There are three levels of prevention, primary, secondary, and tertiary that operates on a continuum but may overlap in practice. Primary prevention precedes disease or dysfunction. Primary prevention intervention includes health promotion, such as health education about risk factors for heart disease, and specific protection, such as immunization against hepatitis B. Its purpose is to decrease the vulnerability of the individual or population to disease or dysfunction.
Secondary prevention ranges from providing screening activities and treating early stages of disease to limiting disability by averting or delaying the consequences of advanced disease. Tertiary prevention occurs when a defect or disability is permanent and irreversible. The process involves minimizing the effect s of disease and disability by surveillance and maintenance activities aimed at preventing complications and deterioration. Tertiary prevention focuses on rehabilitation to help people attain and retain an optimal level of functioning regardless of the disabling condition.
Keywords: health, promotion, protection, prevention, primary, secondary, tertiary.

Introduction:
Prevention, in a narrow sense, means averting the development of disease that will manifest in the future. In a broad sense prevention consists of all measures, including definitive therapy. Leavell and Clark[1] defined three levels of prevention; primary, secondary, and tertiary. Although the levels of prevention are related to the natural history of disease, they can be used to prevent disease and provide starting points in making effective, positive changes in the health status of their clients. Within the three levels of prevention, there are five steps. These steps include;

1. Heath promotion (primary prevention).
2. Specific protection (primary prevention).
3. Early diagnosis and prompt treatment (secondary prevention).
4. Disability limitation (secondary prevention).
5. Restoration and rehabilitation (secondary prevention).

Some confusion exists in the interpretation of these concepts; therefore, a consistent understanding of primary, secondary, and tertiary prevention is essential. The levels of prevention operate on a continuum but may overlap in practice. The health care worker must clearly understand the goals of each level to intervene effectively in keeping people healthy.

Primary Prevention:
Primary prevention precedes disease or dysfunction. However, primary prevention is therapeutic in that it includes health as beneficial to well-being, it uses therapeutic treatment s and, as a process or behavior toward enhancing health, it involves symptom identification when teaching stress-reduction techniques. Primary prevention intervention includes health promotion, such as health education about risk factors for heart disease, and specific protection, such as immunization against hepatitis B. Its purpose is to decrease the vulnerability of the individual or population to disease or dysfunction. Interventions at this level encourage individuals and groups to become more aware of the means of improving health and the things they can do at the primary preventive health and the optimal health level.[2-4]

Health Promotion:
Health promotion is defined as "the science and art of helping people change their lifestyle to move toward a state of optimal health". Health promotion holds the best promise for

*) Professor of Surgery & Dean Faculty of Medicine, University of Sebha, Libya.

lower-cost methods of limiting the constant increase in health care costs and for empowering people to be responsible to be responsible for the aspects of their lives that enhance well-being (Box 1). Health promotion and disease prevention objectives include increasing the proportion of people who : are at a healthy weight, consume at least two daily servings of fruit, consume at least three servings of vegetables with at least one-third being dark green or deep yellow vegetables, consume at least six daily servings of grain products with at least one third being whole grains, consume less than 10% of calories from saturated fat, consume no more than 30% of calories from fat, and consume 22400 mg or less of sodium daily. *Healthy people* 2010 is centered on 10 leading indicators that "reflect the major public health concerns in the United States and were chosen based on their ability to motivate action, the availability of data to measure their progress, and their relevance as broad public health issues". These include: physical activity, overweight and obesity, tobacco use, substance abuse, responsible sexual behavior, mental health, injury and violence, environmental quality, immunization, and access to health care.[2-5]

Research clearly shows an increase longevity, a decrease in early mortality and morbidity, and an improvement in the quality of life for individuals who have been involved in health promotion. It must be emphasized that health promotion requires life-style change. Once a life-style change has been adopted, vigilance is needed to ensure that it is maintained to fit developmental and environmental Changes.[4-6]

Box 1. Primary prevention – Health promotion

Heath promotion
Health education
Good standard of nutrition adjusted to development al phases of life
Attention to personality development
Provision of adequate housing, recreation , and agreeable working conditions
Marriage counseling and sex education
Genetic screening
Periodic selective examination

Box2. Primary prevention – Specific Protection

Use of specific immunizations
Attention to personal hygiene
Use of environmental sanitation
Protection from accidents
Use of specific nutrients
Protection from carcinogens
Avoidance of allergens

Specific Protection:

This aspects of primary prevention focuses on protecting people from disease by providing immunizations and reducing exposure to occupational hazards, carcinogens, and other environmental health risks.[6] Primary prevention intervention is considered health protection, because it emphasizes shielding or defending the body (or the public) from injury.

Implementing interventions that prevent a specific health problem may seem easier than promoting well-being among individuals, groups, or communities; because the variables are delineated more clearly in prevention than in promotion and the potential influences are less diverse (Box 2).

Secondary Prevention:
Although primary prevention measures have decreased the hazards of chronic diseases such as cardiovascular disease, conditions that preclude a healthy quality of life are still prevalent. Secondary prevention ranges from providing screening activities and treating early stages of disease to limiting disability by averting or delaying the consequences of advanced disease.

Screening is secondary prevention, because the principal goal is to identify individuals in an early, detectable stage of the disease process. However, screening provides an excellent opportunity to offer health teaching as a primary protective measure. Screening activities have become an important aspects in the control of chronic diseases such as heart disease, stroke, and colorectal cancer. Additionally, screening activities provide early diagnosis and treatment of nutritional, behavioral, and other related problems.
Delayed recognition of disease results in the need to limit future disability in late secondary prevention.[7,8]

Tertiary Prevention:
Tertiary prevention occurs when a defect or a disability is permanent and irreversible. The process involves minimizing the effects of the disease and disability by surveillance and maintenance activities aimed at preventing complications and deterioration. Tertiary prevention focuses on rehabilitation to help people attain and retain an optimal level of functioning regardless of the disabling condition. The objective of is to return the affected individual to a useful place in society, maximize remaining capacities, or both. The responsibility here is ensure that people with disabilities receive services that enable them to live and work according to the resources that enable them to live and work according to the resources that are still to them. When a person has a stroke, rehabilitating this individual to the highest level of functioning and teaching lifestyle change to prevent future strokes are examples of tertiary prevention.[9,10]

Box 3. Secondary Prevention

Early Diagnosis and prompt treatment:
Case-finding by individual and mass screening surveys
Selective examinations to:
Cure and prevent disea se process
Prevent spread of communicable Disease
Prevent complications and sequelae
Shorten period of disability
Disability Limitations
Adequate treatment to arrest disease process and prevent further complications and sequelae
Provision of facilities to limit disability

Box 4. Tertiary Prevention

Restoration and Rehabilitation
Provision of hospital and community facilities for retraining and education to maximize use of remaining capacities
Education of public and industry to use rehabilitated persons to fullest possible extent
Selective placement
Work therapy
Use of sheltered colony

References:

1. Leavell, H., & Clark, A. Preventive medicine for doctors in the community. New York; McGraw-Hill.
2. Irhuma, A.T. Health promotion. Sebha Medical Journal, 2009;8:1-3.
3. U.S.Department of Health and Human Services. Public Health Service. 2000.

Washington DC: U.S. Government Printing Office.
4. Edelman C. & Mandle, C. Health promotion throughout the life span. Mosby. New York. 2006.
5. ODonnell M. Definition of health promotion. American Journal of Health Promotion. 1987;10:106.
6. Pender, N. . Murdaugh, C. & Parson, M. Health promotion in nursing practice. Upper Saddle River NJ: Prentice Hall. 2002.
7. Folding, J. The proof of the health promotion pudding . Journal of occupational medicine, 1988;30:113.
8. Nigg, C., Burbank, P., Padula, C., & et al. Stages of change across ten health risk behaviors for older adults. The Gerontologist 1999;39:472.
9. U.S. Preventive Services Task Force. A guide to delivering clinical preventive services. AHRQ Publications No. APPIP01-0001. Washington DC: U.S. 2002.
10. World Health Organization. About the World Health Organization. http://www.who.int/about/en/. 2004.