



# Preventing, Delaying, and Managing Chronic Disease



We are living longer. Today, men and women who reach age 65 will live another 19 to 21 years respectively, on average.<sup>1</sup> As the human body ages, normal biological changes increase vulnerability to illness, and the risk of developing disease increases. At the same time, advances in public health, medicine and health care have reduced deaths from acute conditions, like infection and accidents, and have increased our chances of living longer into the human life span. Thus, we now have greater chances of developing one or more chronic diseases. Sixty percent of adults in the U.S. live with at least one chronic condition; 40% have two or more.<sup>2</sup> When we reach age 65, those numbers rise to 80% and 68%.<sup>3</sup>

According to the Center for Disease Prevention and Control's National Center for Chronic Disease Prevention and Health Promotion, chronic diseases are defined as conditions lasting one year or more and requiring ongoing medical attention and/or limit activities of daily living.<sup>4</sup> Chronic diseases such as cardiovascular disease, heart disease, cancer, and diabetes are the leading causes of death and disability in the U.S. and contribute to the nation's annual \$3.8 trillion in health care costs.

## Social determinants of health and their roles in chronic disease development

The World Health Organization defines the social determinants of health as the non-medical factors that influence health and are “the conditions in which people are born, grow, work, live, and age” that affect the conditions of daily life.<sup>5</sup>

Research has shown that social determinants of health can influence health more than genetics or health care and suggests that they account for 30-55% of health outcomes. Some social determinants of health that affect health equity include income, education, employment, food insecurity, housing, environment, discrimination, structural conflict, and access to good health care.<sup>6</sup>

Social determinants of health influence our lifestyle and our health practices; they enhance or limit our ability to live healthy lives. There are large and consistent chronic disease disparities among racial, ethnic, and socioeconomic groups in our country.<sup>6</sup>

## 10 Most Common Chronic Conditions for Adults 65+<sup>3</sup>



Hypertension  
58%



High Cholesterol  
47%



Arthritis  
31%



Ischemic Heart Disease  
29%



Diabetes  
27%



Chronic Kidney Disease  
18%



Heart Failure  
14%



Depression  
14%



Alzheimer's Disease and Dementia  
11%



Chronic Obstructive Pulmonary Disease  
11%

## What can we do in our communities and society to prevent or delay, control, and manage chronic diseases and reduce health disparities?

The National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP) suggests the following four chronic disease prevention efforts:<sup>7</sup>

- Epidemiology and Surveillance systems that collect data on chronic diseases and their risk factors help epidemiologists understand how chronic diseases affect people and how to put resources to the best use. Examples of epidemiology and surveillance include:
  - Assessing social and environmental factors that influence health, such as the number of fast-food restaurants in low-income neighborhoods.
  - Studying policies that affect chronic diseases, such as those related to smoke-free air, access to healthy foods, and community water fluoridation.
  - Using health information technology to improve efficacy of public health surveillance.
- Improving peoples' environment and promoting and supporting healthy behaviors in community settings such as schools, childcare programs, and worksites can make it easier for people to make healthy choices. Successful environmental approaches include:
  - Passing smoke free laws that cover all workplaces, restaurants, and bars to protect nonsmokers from exposure to secondhand smoke.
  - Banning flavored cigarettes to make smoking less attractive to youth.
  - Banning artificial trans fats from the food supply to reduce risk of heart disease.
  - Fluoridating water systems.
  - Designing communities that encourage walking and biking.
  - Providing physical activity classes and recess to children in schools and childcare.
  - Increasing access to healthy foods and beverages.
- Improving the use and quality of health care systems to deliver prevention services that diagnose diseases early, reduce risk factors, and manage complications will positively affect chronic disease management. Examples of health care system interventions include:
  - Improving access to health care.
  - Providing health insurance coverage of effective preventive services.
  - Increasing the use of health information technology and tools.
  - Improving access to cancer screenings for people who have little or no health insurance.
  - Increasing use of community health workers, patient navigators, and other allied health professionals.



- Connecting health care providers to community programs that provide patients with the resources needed to improve quality of life, prevent disease or delay its progression, and avoid complications. Ways of linking clinical providers to community organizations include:
  - Increasing the use of evidence-based community-delivered interventions—such as chronic disease self-management programs, the National Diabetes Prevention Program, and smoking cessation services.
  - Using health care workers like pharmacists, patient navigators, and community health workers to educate people on how to manage their own health and become involved in their own health care.



## How can we individually help prevent or delay the onset of chronic diseases?

Lifestyle affects health in later life. Although habits over a lifetime play out in later life, we can take steps at any time to maximize physical and cognitive function as we grow older. To help prevent or delay the onset, slow the progression, and/or effectively manage chronic conditions, we can do the following:<sup>8</sup>

**Stop smoking** and keep away from secondhand smoke.

Maintain a **healthy and balanced diet** of fruits, vegetables, whole grains, lean meats, and low-fat dairy products.

If you are overweight, **lose weight**. Even losing 5% to 7% of your body weight can help prevent or delay type 2 diabetes.

**Move!** Moderate physical activity (brisk walking or gardening) for at least 150 minutes a week can help you prevent, delay, or manage chronic diseases.

**Drink less alcohol.** Avoiding excessive drinking can reduce your risk of developing high blood pressure, various cancers, heart disease, stroke, and liver disease.

**Get preventative care**, which can prevent disease or find disease early, when treatment can be more effective. This includes screenings for chronic conditions such as cancer, high blood pressure, and type 2 diabetes; recommended immunizations; and counseling about health behaviors. The US Preventive Services Task Force provides a complete list of all recommended services.

**Get at least 7 hours of sleep** to help prevent and manage diabetes, heart disease, obesity, and depression.

**Know your family history and talk to your doctor about when to start screening and what other steps to take to prevent disease or find it early.**

**Control stress.** Chronic stress contributes to everything from high blood pressure and heart disease to anxiety, digestive disorders, and slow wound healing. Studies from the Benson-Henry Institute for Mind Body and Medicine at Massachusetts General Hospital found that the relaxation response can help lower blood pressure, control blood sugar, and help with inflammatory bowel disease.<sup>10</sup>



### Research Spotlight<sup>9</sup>

**Lorig KR, Sobel DS, Ritter PL, Laurent D, Hobbs M. Effect of a self-management program on patients with chronic disease. Eff Clin Pract. 2001;4(6):256-262.**

**BACKGROUND:** Self-management programs for people dealing with chronic disease focus on the person's central role in managing their condition.

**OBJECTIVE:** This study evaluates the outcomes of a chronic disease self-management program in a "real-world" setting.

**METHOD:** Before and after cohort study of 613 patients from Kaiser Permanente hospitals and clinics recruited for the study (489 had complete baseline and follow-up data.) Participants with different chronic conditions attended the Chronic Disease Self-Management Program (CDSMP), a 7-week, small-group intervention taught by peer instructors. The CDSMP, developed by Stanford University, is based on self-efficacy theory and emphasizes problem solving, decision making, and confidence building. Health behavior, self-efficacy (confidence in ability to deal with health problems), health status, and health care utilization were assessed at baseline and again at 12 months by self-administered questionnaires.

**RESULTS.** At 1 year, participants of the CDSMP experienced statistically significant improvements in health behaviors (exercise, cognitive symptom management, and communication with physicians), self-efficacy, and health status (fatigue, shortness of breath, pain, role function, depression, and health distress) and had fewer visits to the emergency department.

**Participate in a chronic disease self-management education program if you have been diagnosed with a chronic condition.** Self-management education teaches problem solving skills and helps people use techniques to make their own decisions and take appropriate actions. In the research spotlight, we overview the original work on chronic disease and self management, but there are many additional resources for learning about self-management. Self-management education complements traditional patient education.<sup>11</sup> Stanford University's evidence-based self-management education programs are offered by local social service, aging network, and educational organizations. Here are descriptions of some of the programs:



- **Chronic Disease Self-Management Program (CDSMP):** The CDSMP is a peer-led, community-based intervention that helps people with any chronic condition learn how to build confidence and skills needed manage their illness and symptoms. The program focuses on pain management, nutrition, exercise, medication use, emotions, and communicating with doctors.
- **Diabetes Self-Management Program (DSMP):** In DSMP, people with type 2 diabetes learn techniques to manage fatigue, pain, hyper/hypoglycemia, stress, and emotional problems such as depression, anger, fear and frustration. They also learn about exercise needed to maintain and improve strength and endurance, healthy eating, appropriate use of medication, and working more effectively with health care providers.
- **Chronic Pain Self-Management Program (CPSMP):** The CPSMP is for people managing chronic pain. Classes focus on dealing with frustration, fatigue, isolation, and poor sleep. Participants also learn about exercises for maintaining and improving strength, flexibility, and endurance, appropriate use of medications, how to communicate effectively with family, friends, and health professionals, nutrition, pacing activity and rest, and how to evaluate new treatments.

The CDSMP and DSMP are also available on-line, along with the Arthritis Self-Management Program and other programs. To find a listing of evidence-based programming near you, including the Stanford Self-Management Education Workshops, go to this [website](#).

## Resources



Oasis is a national organization with a purpose to serve older adults through lifelong learning, health, and volunteering. They offer health and wellness classes for adults ages 50 and older, including evidence-based falls prevention programs and chronic disease self-management workshops.



The Evidence-Based Leadership Collaborative, whose mission is to increase delivery of multiple evidence-based programs that measurably improve the health and wellbeing of diverse populations, can help locate chronic disease management programs near you.



For more information on Stanford's Self-Management Programs, visit <https://selfmanagementresource.com/programs/> or read more about each program at <https://www.ncoa.org/article/evidence-based-chronic-disease-self-management-education-programs>

Websites for organizations that help people with specific chronic diseases contain helpful resources, such as: Arthritis Foundation; American Diabetes Association; American Heart Association; Alzheimer's Association

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