

CARDIOVASCULAR DISEASES

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CARDIOVASCULAR DISEASES

◆ *Coronary Heart Disease* *Hypertension*

Background

Cardiovascular diseases include hypertension (high blood pressure), coronary heart disease, stroke, and rheumatic heart disease.¹

Size

68 million people (about 25% of the US population) suffer from some form of cardiovascular disease.²

1 in 10 Americans between the ages of 45 – 64 suffer from some form of heart disease.²

50 million people in the US (about 18%) have high blood pressure.²

In 1994, 19% of Americans age 20-74 had high cholesterol levels.⁵

In 1995, there were 20.4 million physician visits for cholesterol reduction.⁵

Seriousness

Over 10 million Americans over the age of 65 report disabilities caused by heart disease.¹

Stroke is a leading cause of disability in the United States, accounting for over 1 million people with disabilities.⁴

Each year almost 1 million people in the US die from heart disease.¹

Cardiovascular disease is America's leading health problem and cause of death for men and women between the ages of 35 – 64.¹

Risk Factors

Tobacco, alcohol, and other drug use can increase the risk for heart disease, stroke, and hypertension.⁶

Cigarette/Tobacco Smoke – One-fifth of deaths from cardiovascular disease are attributable to smoking; approximately 37,000-40,000 nonsmokers exposed to environmental tobacco smoke die from cardiovascular diseases each year.¹

Overweight – 1994 data shows that 65.7 million Americans exceeded the healthy weight range.¹

Physical Inactivity – 1994 data shows that more than 60% of adults do not achieve the recommended amount of physical activity.¹

Other risk factors include:⁵

Diabetes

Family history of early heart disease

High blood pressure

High cholesterol

Poor nutrition

Stress

High Risk Populations

About 1/6 of all people killed by cardiovascular disease are under the age of 65.¹

In 1995, death rates from cardiovascular disease were 221.3 for white males and 330.9 for black males (49.4% higher); for white females 127.5 and for black females 213.2 (67.2% higher). (Death rates are per 100,000 population.)¹

Women smokers who use oral contraceptives are much more likely to have a heart attack or a stroke than women who are nonsmokers and do not use oral contraceptives.¹

High cholesterol levels are most prevalent among white, non-Hispanic females in the United States.⁵

High cholesterol levels are least prevalent among Black males in the United States.⁵

Prevention

Lifestyle modifications including diet, exercise, stress reduction, weight loss, alcohol intake reduction, controlling diabetes, controlling high blood pressure, lowering cholesterol, and smoking cessation.⁵

Model Programs

SPARK (Sports, Play, and Active Recreation for Kids)²

- ◀ Physical education and staff development program for elementary schools
- ◀ Includes health-related curricula and teacher in-service programs
- ◀ Designed to increase physical activity in and out of the school environment
- ◀ Results show that student activity increased in physical education classes by as much as 70%.
- ◀ Increased activity levels led to improved sports skills and higher fitness levels.
- ◀ More information is available on-line at www.foundation.sdsu.edu/projects/spark.html

CATCH (Child and Adolescent Trial for Cardiovascular Health)²

- ◀ School-based and home-based interventions to change children's behavior and promote a lifestyle that will reduce their risk of heart disease.
- ◀ Targeted children and their environment in 96 elementary schools in 4 states.
- ◀ Key goals were to reduce the total fat and saturated fat content of school lunches and to increase the amount of vigorous physical activity in physical education classes.
- ◀ Included school food service, physical education (PE) classes, classroom curricula and family involvement.
- ◀ Results show the intervention was effective in reducing the children's intake of total fat and saturated fat, significantly increasing the intensity of physical education in PE classes, and increasing daily vigorous physical activity.

LIVE! Computer Assisted Cardiovascular Disease Risk Reduction for Adolescents²

- ◀ School-based intervention to motivate teenagers to modify cardiovascular disease risk factors
- ◀ Implemented in high school health or physical education classes
- ◀ Curriculum includes interactive, multimedia computer lessons and group activities
- ◀ Computer gives students self-directed instruction and lightens the load of the teacher
- ◀ Results show that students increased their knowledge of risk factors, increased their physical activity levels, decreased their dietary fat intake, and decreased their smoking behavior.

LIGHT Way Project²

- ◀ A health promotion pilot project targeting African American families.
- ◀ Incorporates church and family influences by holding classes and activities at a local church
- ◀ Sessions focus on four areas of development – spiritual, mental, physical and social including reducing and coping with stress, adopting healthful eating habits, body image, self-esteem, time management, goal setting, keeping daily diaries, physical activity, food labeling and food preparation.
- ◀ Includes separate lessons and activities for children and adults.
- ◀ Staff provide weekly telephone and mail contact with families.
- ◀ Based on initial findings of little nutrition knowledge, low-reading levels, and families not regularly visiting doctors, the lessons and activities are being revised.
- ◀ This is a unique project that builds on existing spiritual commitment and family support.

Coronary Health Assessment Study⁶

- ◀ Patient completes a patient-specific, multifactorial computerized coronary risk profile.
- ◀ Profile is given to physician prior to patient's appointment.
- ◀ Profile is used as a clinical decision aid to support the primary prevention of coronary heart disease.
- ◀ Use of computerized profiles resulted in a significantly higher follow-up visit rate and significant reductions in cholesterol and in predicted coronary risk.
- ◀ Computerized coronary risk profiles were effective in assisting physicians to identify high-risk patients, providing an opportunity for reduction of coronary heart disease risk factors, and improving patient compliance with follow-up appointments.

Resources

- ◀ American Heart Association, (619) 291-7454, www.amhrt.org
- ◀ Heart Information Network, www.heartinfo.org
- ◀ Center for Nutrition Policy and Promotion, www.usda.gov/fcs/cnpp.htm
- ◀ National Center for Chronic Disease Prevention and Health Promotion, www.cdc.gov/nccdphp/nccdhome.htm
- ◀ National Heart, Lung and Blood Institute, www.nhlbi.nih.gov/nhlbi/nhlbi.htm

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1. American Heart Association. Retrieved from the World Wide Web: <http://www.amhrt.org>
2. National Heart, Lung and Blood Institute. Retrieved from the World Wide Web: <http://www.nhlbi.nih.gov/nhlbi/nhlbi.htm>
3. United States Department of Health and Human Services. (1998). Healthy People 2010, Draft Report for Public Comment. Washington, DC: US Government Printing Office
4. Centers for Disease Control and Prevention. National Center for Health Statistics FASTATS. Retrieved from the World Wide Web: <http://www.cdc.gov/nchswww/fastats/fastats.htm>
5. Heart Information Network. Retrieved from the World Wide Web: <http://www.heartinfo.org>
6. Lowenstyn, I., Joseph, L., Levinton, C., Abrahamowicz, M, Steinert, Y., Grover S. (1998). Can Computerized Risk Profiles Help Patients Improve Their Coronary Risk? The Results of the Coronary Health Assessment Study (CHAS). Preventive Medicine 27, (5 Pt 1), 730-7.

CORONARY HEART DISEASE

Background

Coronary heart disease (CHS) is caused by atherosclerotic narrowing of the coronary arteries. It is likely to produce angina pectoris (chest pain), heart attack, or both.¹

Size

*San Diego County*²

In San Diego County, 4,564 people died of coronary heart disease (CHD). This accounts for 25% of all deaths.

San Diego County Coronary Heart Disease Deaths

1996 Rate: 93.1 deaths per 100,000 population, age adjusted; 70.2 not age adjusted. **(Table 1)**

1993-1996 Trend: Increased from 169.2 to 170.2 (not age adjusted rates). **(Fig. 1)**

National

Coronary heart disease is the most common form of heart disease.³

There are 22.2 million cases of heart disease reported each year.⁴

In 1996, there were 4.83 million hospital discharges for patients with heart disease.⁴

Seriousness

Average Years of Productive Life Lost in San Diego County: 10.5 years per death

Healthy People 2000 Objective: The San Diego County mortality rate for CHD (93.1 age adjusted) is **less than the Healthy People 2000 Objective** (100.0 age adjusted).

CHD is the number one killer of men and women in the US.³

In 1996, there were 733,834 deaths from heart disease – an age adjusted death rate of 135 deaths per 100,000 population.⁴

More than 500,000 Americans die of heart attacks caused by coronary heart disease each year.³

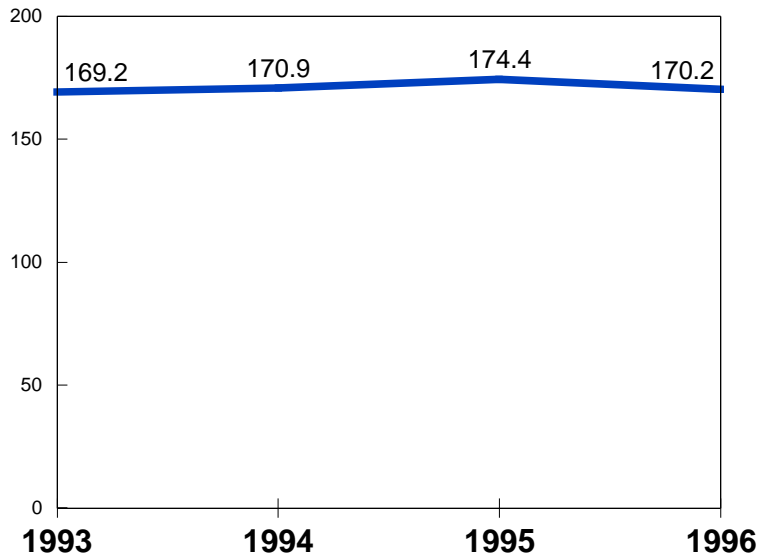
Billions of dollars in direct and indirect medical expenditures related to CHD are spent each year.⁵

Studies show US death rates from heart disease are on the decline. The same data shows a 40% drop in the prevalence of hypertension, a 28% drop in high cholesterol, and a 25% drop in cigarette smoking.⁵

Table 1
San Diego vs. the Nation – Coronary Heart Disease Death Rates*,2

| San Diego County 1996** | County Trends 1993-1996 | California 1992** | National 1993 | HP2000 Objective** |
|-------------------------|--|-------------------------|-----------------------------|-----------------------|
| 93.1 (age adjusted) | Increased 169.2 - 170.2 (not age adjusted) | 106.5 (age adjusted) | 108.0 (not age adjusted) | 100 (age adjusted) |

Figure 1
Coronary Heart Disease Death Rate* Trend
San Diego County, 1993-1996²



* Rates per 100,000 Population

**Age adjusted using the US 1940 standard million population

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Community Concerns

Focus Group Discussion Points:

Asian/PI group was very concerned about heart disease.

Risk Factors

Risk factors include:¹

- ◀ Increasing age
- ◀ Male sex
- ◀ Heredity, including race
- ◀ Cigarette and tobacco smoke
- ◀ High blood cholesterol levels
- ◀ High blood pressure
- ◀ Physical inactivity
- ◀ Obesity and overweight
- ◀ Diabetes
- ◀ Stress

High Risk Populations

Age(s): Seniors (**Fig. 2**)

Ethnicity(s): Blacks

The mortality rate for Blacks (155.7 age adjusted) is much higher than the overall rate (93.1 age adjusted) (**Fig. 3**)

County Areas: (Based on 1996 age adjusted rates)

- ◀ Regions: Central, South, East (**Fig. 4**)
- ◀ SRAs: National City, Central San Diego, Chula Vista (**Table 2**)

Studies show that the risk of death from heart disease is much greater for the least educated than for the most educated.¹

Figure 2
Overall Coronary Heart Disease Mortality Rates* by Age San Diego County 1996²**

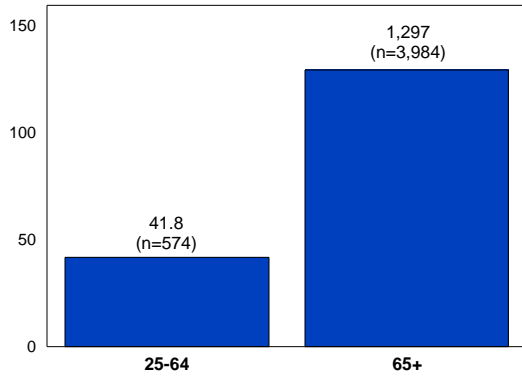


Figure 3
Coronary Heart Disease Mortality Rates* by Ethnicity/Race San Diego County 1996²**

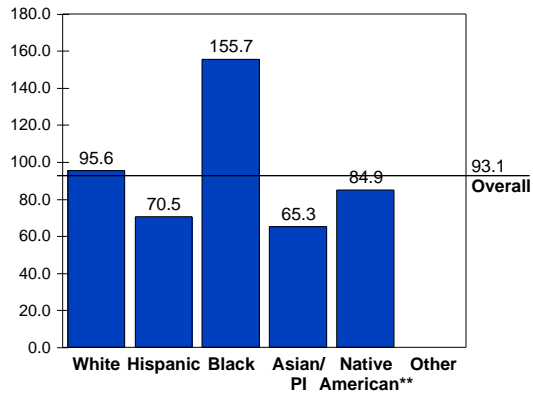


Figure 4
Coronary Heart Disease Mortality Rates* by San Diego County Region 1996²**

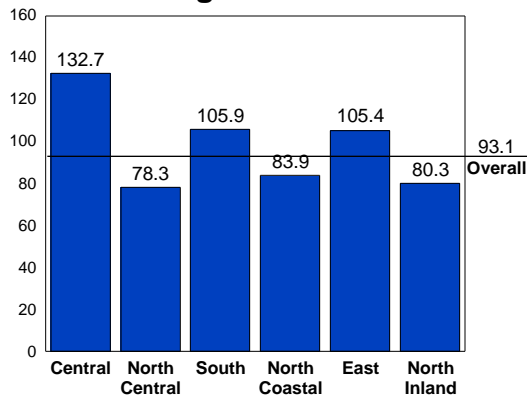


Table 2
San Diego County SRAs with the Highest Coronary Heart Disease Mortality Rates,* 1996²**

| San Diego County | National City | Central San Diego | Chula Vista |
|-----------------------|----------------------|----------------------|----------------------|
| 93.1 (4,564 cases) | 162.4 (121 cases) | 129.6 (333 cases) | 127.5 (272 cases) |

* Rates per 100,000 Population

**Age adjusted using the US 1940 standard million population

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Prevention

Prevention recommendations include:⁵

- ◀ Lose excess weight
- ◀ Quit smoking
- ◀ Exercise regularly
- ◀ Eat a low fat diet
- ◀ Lower blood pressure and cholesterol levels
- ◀ Control diabetes
- ◀ Eat foods rich in fiber
- ◀ Eat fish on weekly basis
- ◀ Drink alcohol in moderation only
- ◀ Eat foods rich in calcium

Studies show that primary care doctors could do more during office visits to help their patients prevent heart disease including cholesterol testing, advice on how to lose weight, and suggestions on how to quit smoking. This indicates a need to enhance the training or continuing medical education of primary care physicians.⁵

Resources

American Heart Association, www.amhrt.org

Heart Information Network, www.heartinfo.org

National Center for Chronic Disease Prevention and Health Promotion,
www.cdc.gov/nccdphp/nccdhome.htm

National Heart, Lung and Blood Institute, www.nhlbi.nih.gov/nhlbi/nhlbi.htm

References

1. American Heart Association. Retrieved from the World Wide Web: <http://www.amhrt.org>
2. Unless otherwise noted, all San Diego statistics were based upon information provided to the San Diego County Health and Human Services Agency from the California Department of Health Services, Center for Health Statistics, Vital Statistics Section
3. National Heart, Lung and Blood Institute. Retrieved from the World Wide Web: <http://www.nhlbi.nih.gov/nhlbi/nhlbi.htm>
4. Centers for Disease Control and Prevention. National Center for Health Statistics FASTATS. Retrieved from the World Wide Web: <http://www.cdc.gov/nchswww/fastats/fastats.htm>
5. Heart Information Network. Retrieved from the World Wide Web: <http://www.heartinfo.org>

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HYPERTENSION

Background

High blood pressure or hypertension is a major cause of heart attacks, heart failure and stroke.¹

Size

National

More than 50 million Americans (about 18% of the US population) suffer from hypertension; 35% of the people with hypertension do not know that they have it.¹

More than half of American women will develop high blood pressure in their lifetime.¹

Over 75% of women aged 75 and over and 64% of men aged 65 and over have hypertension.²

Studies show hypertension is on the decline. From 1987 to 1994, hypertension prevalence fell by 40%.³

In 1996, there were 12,947 deaths from hypertension – a death rate of 2 deaths per 100,000 population.²

In 1995, there were 10.2 million ambulatory care visits for hypertension.²

In 1994, 23% of Americans ages 20-74 had hypertension.²

Seriousness

In 1995, hypertension (high blood pressure) killed 39,981 Americans and contributed to the deaths of approximately 190,000.¹

The 1995 death rates from high blood pressure were 6.8 for white males, 31.0 for black males, 5.0 for white females, and 22.2 for black females. (Deaths rates are per 100,000 population.)¹

More than 50% of people with hypertension do not have their high blood pressure under control.³

Hypertension is a major risk factor for heart disease and stroke.⁴

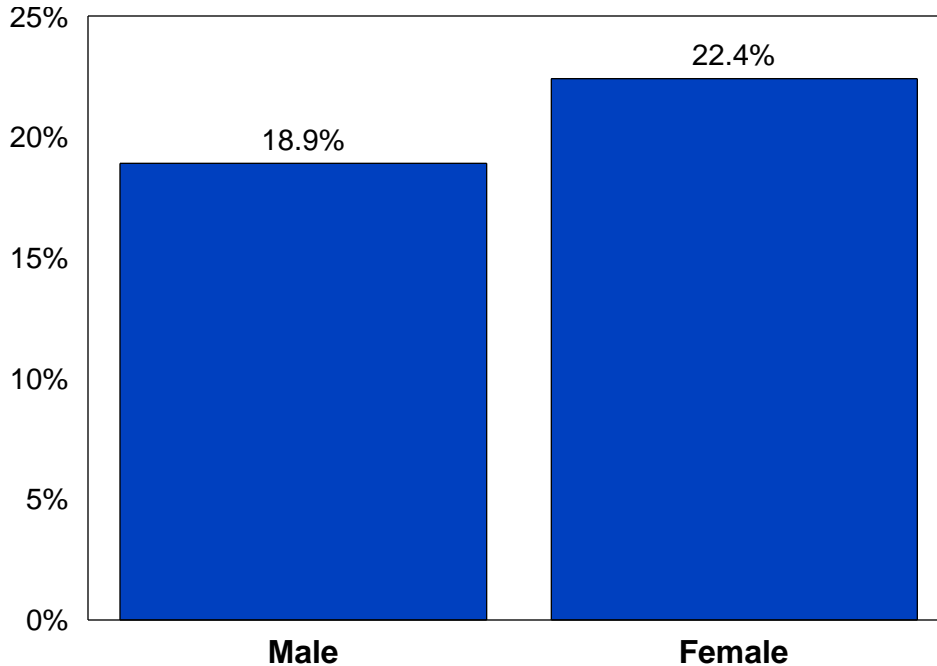
Community Concerns

Focus Group Discussion Points:

The **Asian/PI** and **Latino** groups identified hypertension as a major concern.

The **Latino** group explained there is a lack of education and awareness of this problem in the community.

Figure 1
Percent of Surveyed Adults by Gender Who had Ever been Told by a Health Care Practitioner that they had High Blood Pressure, San Diego County, 1995⁵



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Risk Factors

Lifestyle factors that contribute to high blood pressure include:⁶

- < High salt intake
- < Excessive consumption of calories
- < Physical inactivity
- < Excessive alcohol consumption
- < Deficient intake of potassium

Ethnicity, family history, and education level are also risk factors for hypertension.⁶

High Risk Populations

Age(s): Men are at greater risk for high blood pressure than women are until age 55. From age 55-74 the risks for women are slightly higher; after that, women are at greater risk than men.

Ethnicity(s): Blacks, Puerto Ricans, and Cuban and Mexican Americans are more likely to suffer from high blood pressure than are non-Hispanic whites.¹

Special Populations: Obese persons, heavy drinkers, and women taking contraceptives.

County Areas: Not Available

People with lower education and income levels have higher levels of blood pressure.¹

Less active, less fit persons have a 30-50% greater risk of developing high blood pressure.¹

Prevention

Dietary interventions such as reduced sodium intake and weight loss have proven to be feasible, effective, and safe nonpharmacologic treatments for hypertension in all age groups including older adults.⁷

Everyone - regardless of race, age, sex, or heredity - can help lower their chance of developing high blood pressure with the following recommendations:⁶

- ◀ Maintain a healthy weight—lose weight if you are overweight
- ◀ Be more physically active
- ◀ Choose foods lower in salt and sodium
- ◀ If you drink alcoholic beverages, do so in moderation
- ◀ If you smoke, stop smoking

A comprehensive approach to hypertension prevention and reduction should include:⁶

- ◀ Public education campaigns targeting schools and high risk populations
- ◀ Changes in the food industry including the production of low sodium and low calorie processed foods and food labeling
- ◀ Changes in food preparation practices including schools, worksites, restaurant, especially fast food restaurants, and hospitals
- ◀ Promotion of physical activity – especially in institutional settings such as schools, worksites, and community facilities
- ◀ Education and support of health care providers including patient counseling guidelines for providing information and referral, patient education materials promoting lifestyle and behavior changes, and compensation for prevention-oriented activities

Resources

American Heart Association, (619) 291-7454, www.amhrt.org

National Center for Chronic Disease Prevention and Health Promotion,
www.cdc.gov/nccdphp/nccdhome.htm

National Heart, Lung and Blood Institute, www.nhlbi.nih.gov/nhlbi/nhlbi.htm

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3. Heart Information Network. Retrieved from the World Wide Web: <http://www.heartinfo.org>
4. United States Department of Health and Human Services. (1998). Healthy People 2010, Draft Report for Public Comment. Washington, DC: US Government Printing Office
5. California Department of Health Services. (1996). Behavioral Risk Factor Survey. Sacramento, CA.
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7. Feldman, B. (1998). Nonpharmacologic Interventions Successfully Treat Hypertension in Older Persons. Nutrition Review, 56 (11), 341-3

