

## Looking Toward 2000 - State Health Assessment

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### BLOOD PRESSURE

#### Summary

High blood pressure or hypertension is the most important risk factor for stroke and is a major risk factor for heart disease. Because high blood pressure produces no clear symptoms, regular blood pressure measurements are necessary for detection and control. Treatment with medication, behavior modification, or both can often prevent or postpone serious health problems.

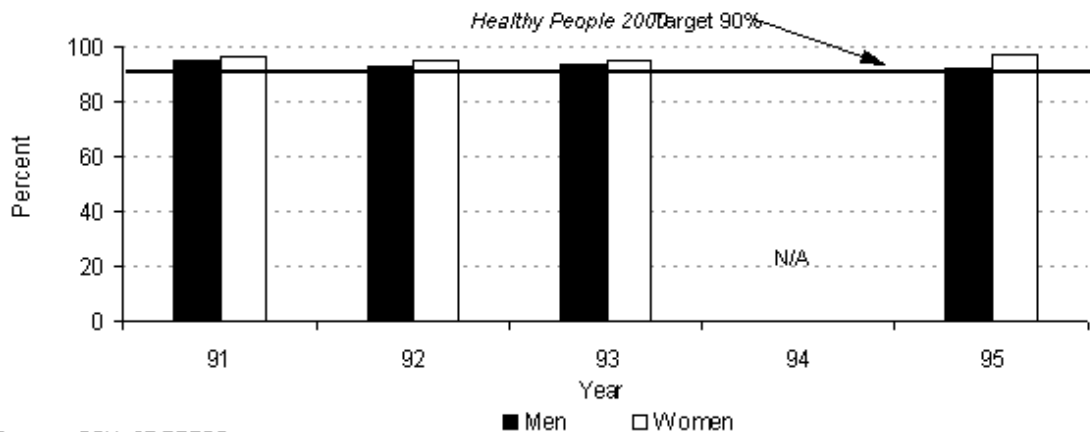
#### Time Trends

Starting in 1991, BRFSS respondents were asked about how long it had been since they last had their blood pressure taken by a doctor, nurse, or other health professional. They were not asked to state what the blood pressure reading was. In each year, over 94% of respondents reported they had their blood pressure measured by a health professional within the past 2 years (Figure 3-19), thus meeting part of a *Healthy People 2000* objective. In all years, rates were somewhat higher for women than for men, and in 1995 this difference reached statistical significance. Further improvement in blood pressure screening to meet objectives does not appear necessary.

Figure 3-19

#### Adults Who Had Blood Pressure Measured within 2 Years

Connecticut, 1991-95

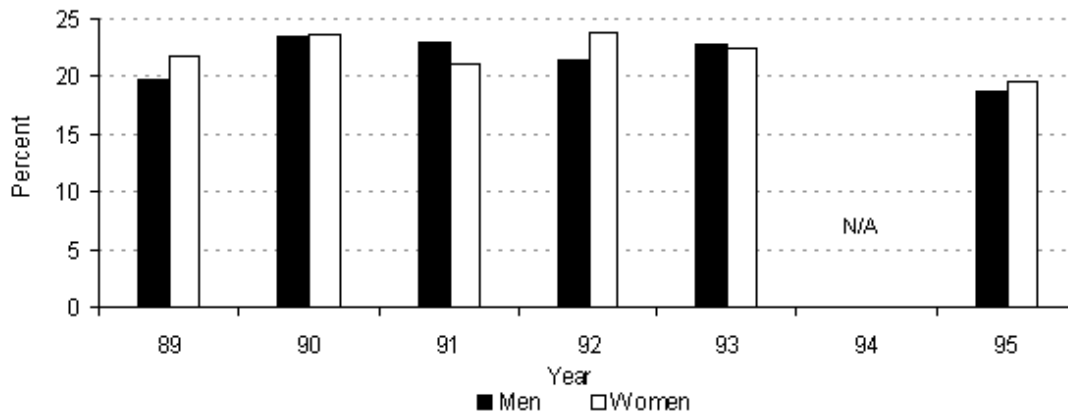


Although not a *Healthy People 2000* objective, hypertension awareness has been measured by the BRFSS in most years. In 1995 nearly 1 in 5 adults (19.1%) had ever been told their blood pressure was high. This rate compares favorably with other states, where the median rate was 22.0% and the range was 18.5% to 29.8%. The rate for men or women did not change much from 1989-1995 (Figure 3-20).

Figure 3-20

#### Adult Respondents Ever Told Blood Pressure Is High

Connecticut, 1989-95



Source: DPH, CT BRFSS

## High Risk Populations

Young males 18-34 years of age and low-income persons may be at high risk for not having their blood pressure screened recently. In terms of hypertension awareness, rates were similar for men and women and were not significantly different between whites and non-whites, but the rate was directly related to age, with 39.7% of the 65 and older respondents reporting they had ever been told their blood pressure was high. Nationally, blacks have a higher incidence and prevalence of hypertension than whites.

## Potential for Intervention

*Healthy People 2000* and *Healthy Connecticut 2000* objectives emphasize screening for and control of hypertension, rather than reducing its prevalence, in keeping with current guidelines that encourage maintaining treatment and control among those already identified. Screening may still be important for certain high-risk populations, such as low-income persons and young males. As high blood pressure is related to other lifestyle risk factors, weight reduction and/or increasing physical activity may offer preventive benefits. These strategies, along with other lifestyle changes, are often recommended in the first stages of treatment, before beginning drug therapy.

## Intervention Strategies

Promote healthy lifestyles incorporating weight control, physical activity, lower salt intake, non-smoking, and moderate alcohol consumption that reduce the risk of high blood pressure.

Provide blood pressure screening programs targeting high risk populations.

Reduce, and remove where possible, any barriers to follow-up services, to help persons with high blood pressure adhere to recommended treatment schedules.

## BLOOD CHOLESTEROL

### Summary

High blood cholesterol is one of the major modifiable risk factors for cardiovascular disease, especially coronary heart disease (CHD). High blood cholesterol may account for as much as 30% of CHD in the United States. A simple blood test can identify those at risk.

### Time Trends

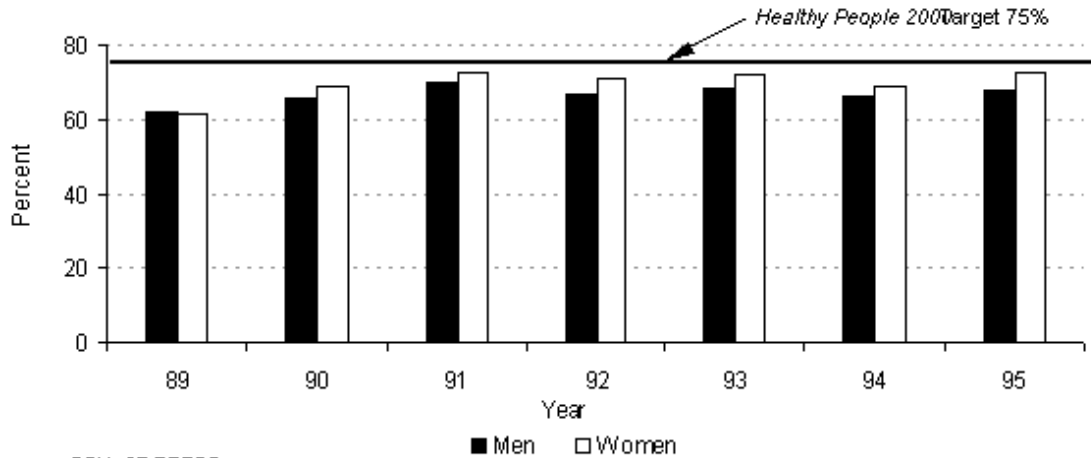
BRFSS respondents were asked if they ever had their blood cholesterol checked, and if so, how long had it been since it was last checked. About three-fourths of all adults had ever had their cholesterol

checked, and in most cases it was within the previous five years. The percent of all respondents who had their cholesterol checked in the past 5 years, which is a *Healthy People 2000* objective, increased from 1989 to 1991 and has subsequently leveled off at about 70% (Figure 3-21).

Figure 3-21

Adults Who Had Cholesterol Tested within 5 Years

Connecticut, 1989-95



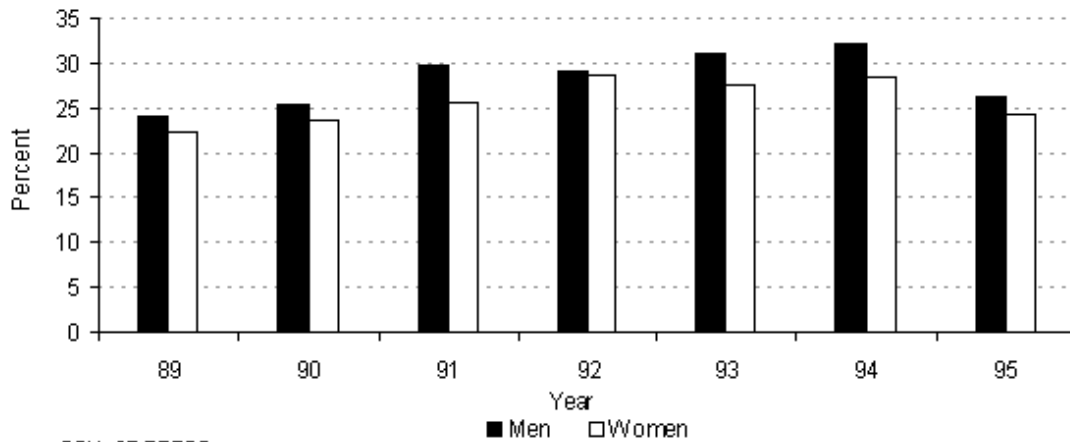
Source: DPH, CT BRFSS

Respondents who had been tested were asked if they had ever been told their cholesterol was high. In 1995, 25.2% answered "yes." This represented about 472,000 Connecticut residents. The rate increased slightly between 1989 and 1991 and remained fairly constant through 1995 (Figure 3-22), while rates of screening also remained steady (Figure 3-21).

Figure 3-22

Adults Tested Ever Told Cholesterol Is High

Connecticut, 1989-95



Source: DPH, CT BRFSS

### High Risk Populations

Younger persons (especially those 18-24), non-whites, and those with lower incomes were less likely to ever have had their blood cholesterol checked or checked in the past five years. The rate of testing in

the past five years in 1995 was 72.2% for whites and only 59.2% for non-whites, a statistically significant difference. Among persons who had been tested, whites and all persons aged 45 and older were more likely than others to have been told their cholesterol was high.

## Potential for Intervention

A diet high in fat, especially saturated fat, is a risk factor for high cholesterol. There are also non-modifiable genetic factors that increase the risk of hyper-cholesterolemia. Body mass index is directly correlated with cholesterol levels, so weight reduction may be beneficial. Physical inactivity and smoking are related to lower levels of HDL--the "good" cholesterol. Recommendations for adults include having a cholesterol screening every five years, reducing dietary fat, especially saturated fat, and maintaining desired weight. Treatment of high cholesterol may also start with dietary changes and move to drug therapy if necessary.

## Intervention Strategies

Coordinate interventions with other programs that promote physical activity, avoidance of tobacco, and weight control, which all affect cholesterol levels.

Provide nutrition information at point of purchase, and utilize social marketing to promote the consumption of healthy diets, including low fat items.

Encourage healthy eating habits at an early age through comprehensive school health education and education of food service staff.

Encourage adults to have their cholesterol screened at least every five years, and remove any barriers to screening for high risk populations.

Reduce and remove where possible any barriers to follow-up services, so that persons with borderline-high or high blood cholesterol follow recommendations for treatment.

## DIET AND OVERWEIGHT

### Summary

Poor diet and physical inactivity account for an estimated 300,000 deaths each year in the U.S. The factors related to diet that are represented on the BRFSS include overweight (or obesity) and consumption of fruits and vegetables. Each is related to a *Healthy People 2000* objective. Overweight has been associated with a higher risk of cardiovascular disease, type II diabetes, hypertension, high blood cholesterol, and certain cancers.

One of the *Healthy People 2000* objectives is for 100% of Americans to eat a total of five servings of fruits and vegetables each day. Consumption of fruits and vegetables has been associated with positive health outcomes and reductions in cancer risk, heart disease, and neural tube defects. BRFSS respondents were asked six questions in 1994 that addressed the frequency of consumption of fruit juice, fruits, green salads, potatoes, carrots, and other vegetables. Serving size and actual number of servings were not considered. From their responses, respondents were classified by frequency of consumption. The proportion of adults who consumed fruits and vegetables five or more times a day was 33.5% overall, including 27.9% of men and 38.7% of women. While this is very far from the objective of 100% of adults, the rate for Connecticut was the highest among the 50 BRFSS participants.

Results of a 1995 survey of 12,402 Connecticut students aged 12-18 show that this population group is doing even worse than adults. Over 50% of those surveyed reported not eating any fruit, and 1 in 4 reported not eating any vegetables the previous day.

### Time Trends

Overweight is determined from self-reports of height and weight obtained during the interviews, and is

converted into body mass index (BMI: weight in kilograms divided by height in meters squared). BMI's of 27.8 or higher for men and 27.3 for women are considered overweight, and are approximately 20% above desirable body weight.

The proportion of overweight Connecticut adults was less than or equal to the national and state objective of 20% only in 1989 and 1992. In 1995, 24.7% of all adults, 21.9% of women, and 27.8% of men were overweight. In each year from 1989-1995, men were more likely to report being overweight than women; the prevalence rate for men was above the 20% target each year, while women had reached the objective in five of the seven years (Figure 3-23). If men and women are reporting with similar degrees of accuracy, these results suggest that more work is needed to reduce overweight among men to meet the overall objective.

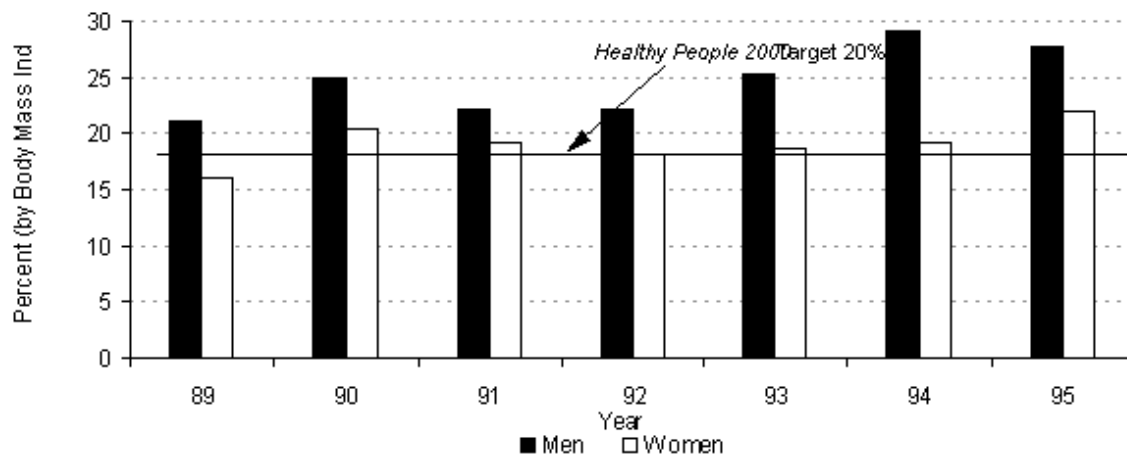
### High Risk Populations

Men, especially non-whites (31.5%) are more likely to be considered obese than others based on BRFSS results. Other demographic groups that appear to be at higher risk for obesity from the BRFSS include blacks (43.4%) and 55-64 year olds of any race (37%). Recent national results where height and weight were actually measured indicate that 33% of men and 36% of women were obese. These and other results based on actual measurements suggest that obesity is under-reported in the BRFSS. Men and youth are high risk subgroups for low fruit and vegetable consumption.

Figure 3-23

#### Overweight Adults

Connecticut, 1989-95



Source: DPH, CT BRFSS

### Potential for Intervention

Early interventions using a realistic behavioral approach to calorie control, in combination with increasing physical activity, may be effective in reducing obesity. Increasing public and professional awareness about prevention and the consequences of obesity are key. Voluntary weight loss is a popular activity, and results from the BRFSS indicated that 36% of all respondents and 63% of overweight respondents were trying to lose weight in 1994. In spite of this, obesity remains a considerable problem, suggesting that commonly used strategies are not always successful. Because dietary and exercise habits are frequently established at an early age, interventions should be designed to target the young and even preschoolers.

### Intervention Strategies:

Develop programs at the state and community level to educate the public about the importance of healthy diets that are low in fat and contain at least five servings a day of fruits and vegetables.

Provide nutrition information at point of purchase, and utilize social marketing to promote the consumption of healthy diets including low fat items and fruits and vegetables.

Promote increased physical activity along with reduced caloric intake as a more effective method to lose weight than either technique alone.

Encourage primary care physicians to determine the body mass index of their patients and to counsel overweight patients to lose weight.

Encourage healthy eating habits at an early age through the use of comprehensive health education and education of food service staff.

## SUMMARY

The results of the 1995 Behavioral Risk Factor Surveillance Survey for the health-related behaviors discussed above are summarized in Table 3-10. The findings are presented for both sexes combined as well as separately, and with reference to *Healthy People 2000* objectives and progress made since 1990.

**Table 3-10**  
**Prevalence of Health-related Behaviors by Sex for Adults Aged 18+**  
**Connecticut, 1995**

Characteristic	Sex			Healthy People 2000 Objective	Objective Achieved?	Improved since 1990?
	Male	Female	Both Sexes			
Current smoking <sup>a</sup>	21.0%	20.6%	20.8%	15%	No	Yes
Chronic drinking <sup>b</sup>	7.4%	1.7%	4.4%	-	-	?
Binge drinking <sup>c</sup>	23.0%	6.6%	14.4%	-	-	Yes
Drinking & driving <sup>d</sup>	4.5%	0.6%	2.5%	-	-	?
No exercise <sup>e</sup>	17.0%	26.4%	21.9%	15%	No	Yes
Regular exercise <sup>f</sup>	30.3%	23.9%	26.9%	30%	Yes (Men)	Yes
Blood pressure checked <sup>g</sup>	92.4%	96.8%	94.7%	90%	Yes	Unchanged
Told blood pressure high <sup>h</sup>	18.7%	19.5%	19.1%	-	-	?

Cholesterol screened <sup>i</sup>	67.7%	72.5%	70.2%	75%	No	Unchanged
Told cholesterol high <sup>j</sup>	26.2%	24.3%	25.2%	-	-	-
Overweight <sup>k</sup>	27.8%	21.9%	24.7%	20%	No	No
Fruit/veg. Consumption <sup>l</sup>	27.9%	38.7%	33.5%	100%	No	N/A

<sup>a</sup> Respondents who report ever smoking 100 cigarettes and who smoke now (regularly or irregularly).

<sup>b</sup> Percent of adults who reported drinking 60 or more drinks in past month.

<sup>c</sup> Percent of adults who consumed five or more drinks on one occasion in the past month.

<sup>d</sup> Percent of all adults who reported having driven after having perhaps too much to drink in the past month.

<sup>e</sup> Percent who engage in no leisure time physical activity (1994 data).

<sup>f</sup> Percent who exercise 5 times per week for 30 minutes at a time (1994 data).

<sup>g</sup> Percent who had blood pressure checked within 2 years.

<sup>h</sup> Percent of all respondents who have been told their blood pressure was high.

<sup>i</sup> Percent who had blood cholesterol checked within the past 5 years.

<sup>j</sup> Percent of those who had cholesterol checked who were told it was elevated.

<sup>k</sup> Overweight: females with body mass index (BMI - weight in kilograms divided by height in meters squared) equal to or more than 27.3, and males with BMI equal to or greater than 27.8.

<sup>l</sup> Percent of all adults who consume five or more servings of fruits and vegetables per day.

? Either trend is not evident or meaning of any trend is not clear.

Source: DPH, Behavioral Risk Factor Surveillance System analysis, 1995.

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