

Mortality

ALL CAUSES

During 1995, Oregon's death rate rose 1.4 percent to 900.1 per 100,000 population, up from 887.8. In three of the past four years the rate increased. Prior to 1992 it had been following a consistent downward trend, declining annually since 1987. [Figure 6-1; Table 6-3]. During 1995, a near record 28,190 Oregonians died, 3.0 percent more than during the previous year.

Large increases occurred in the death rates for two causes: Parkinson's disease (up 17%) and Alzheimer's disease (up 13%). Both were record highs. The diabetes rate, too, continued its apparently inexorable climb, reaching a record 22.5 deaths per 100,000 population.

Between 1994 and 1995, the age-specific death rates increased for females in all age groups, except 45- to 64 year-olds; the largest increase (25%) occurred among 15- to 24 year-olds. A lesser increase (13%) was recorded for males in this age group, the only group of males other than those 65 or older to see an increase. The median age at death was 77 years, 80 for females and 74 for males. On average, an Oregonian died every 19 minutes during 1995.

Oregon's 1995 crude death rate for all causes combined was slightly higher than the nation's (880.0). However, its 1994 age-adjusted death rate was 7.4 percent lower than the nation's. [Table 6-42]¹. (Age-adjusted death rates control for the effect of the age distribution of a population on its death rate. Any remaining differences are due to factors other than age.)

On average, an Oregonian died every 19 minutes during 1995.

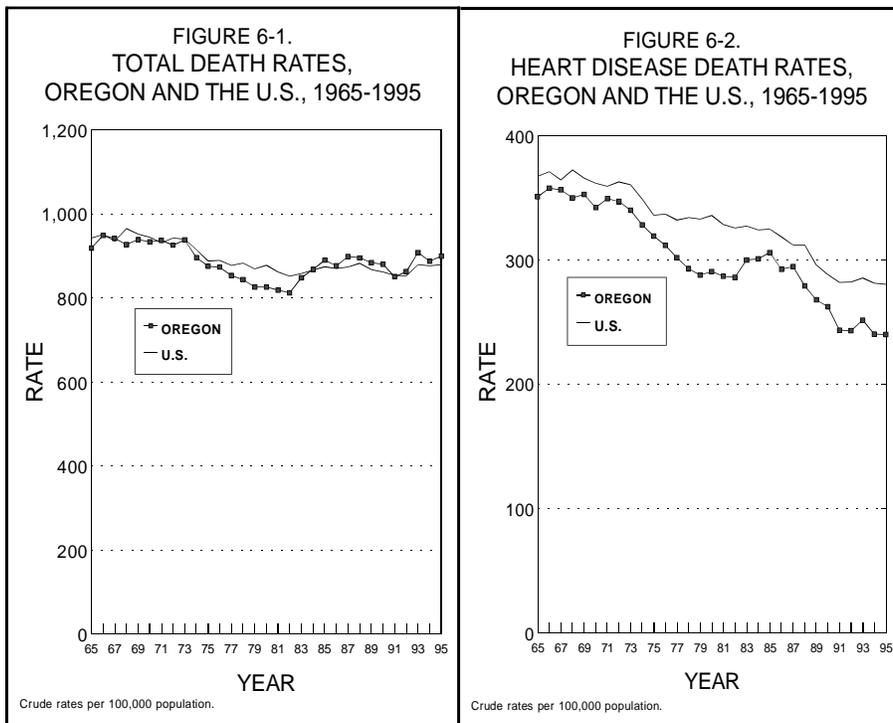
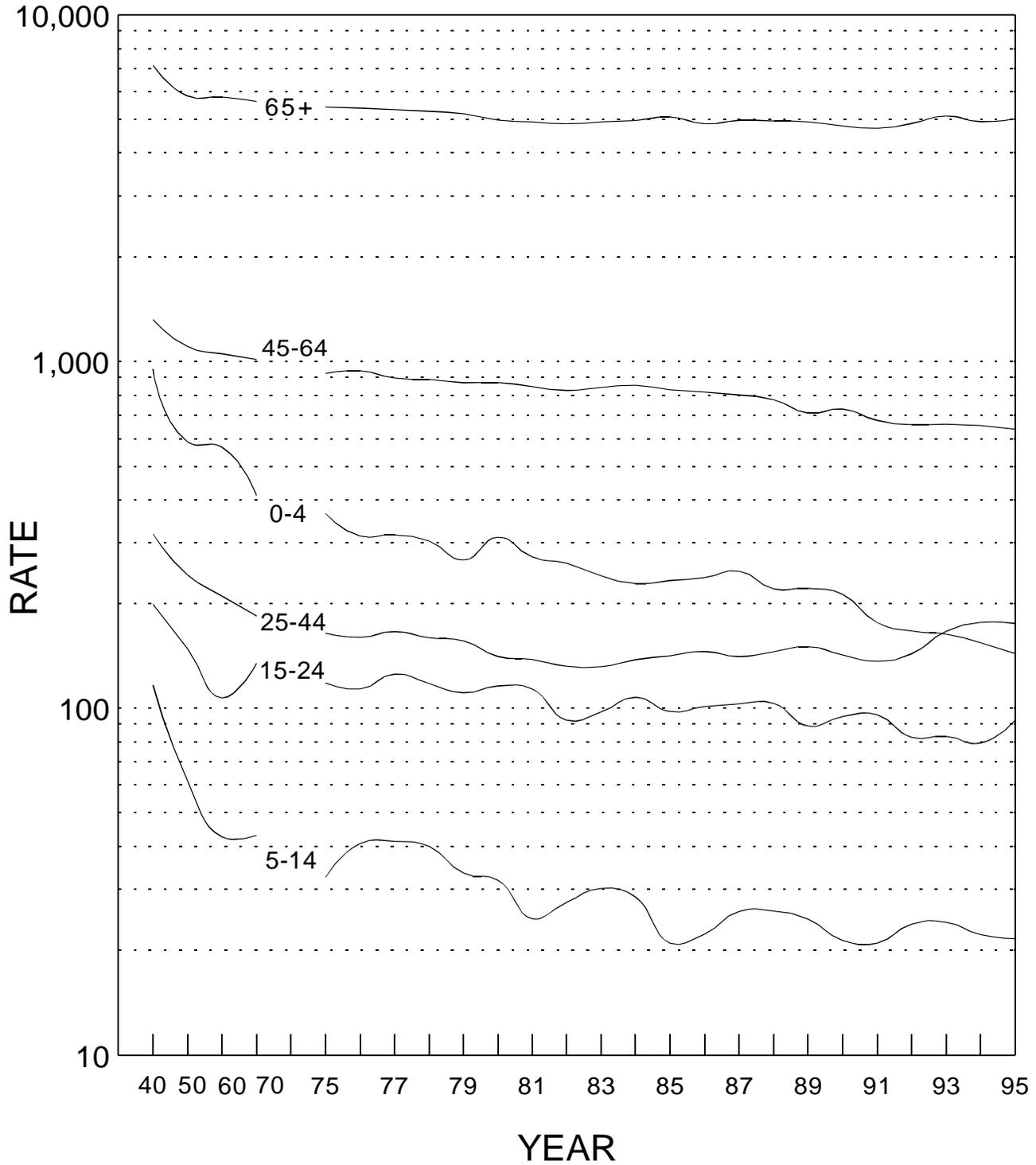
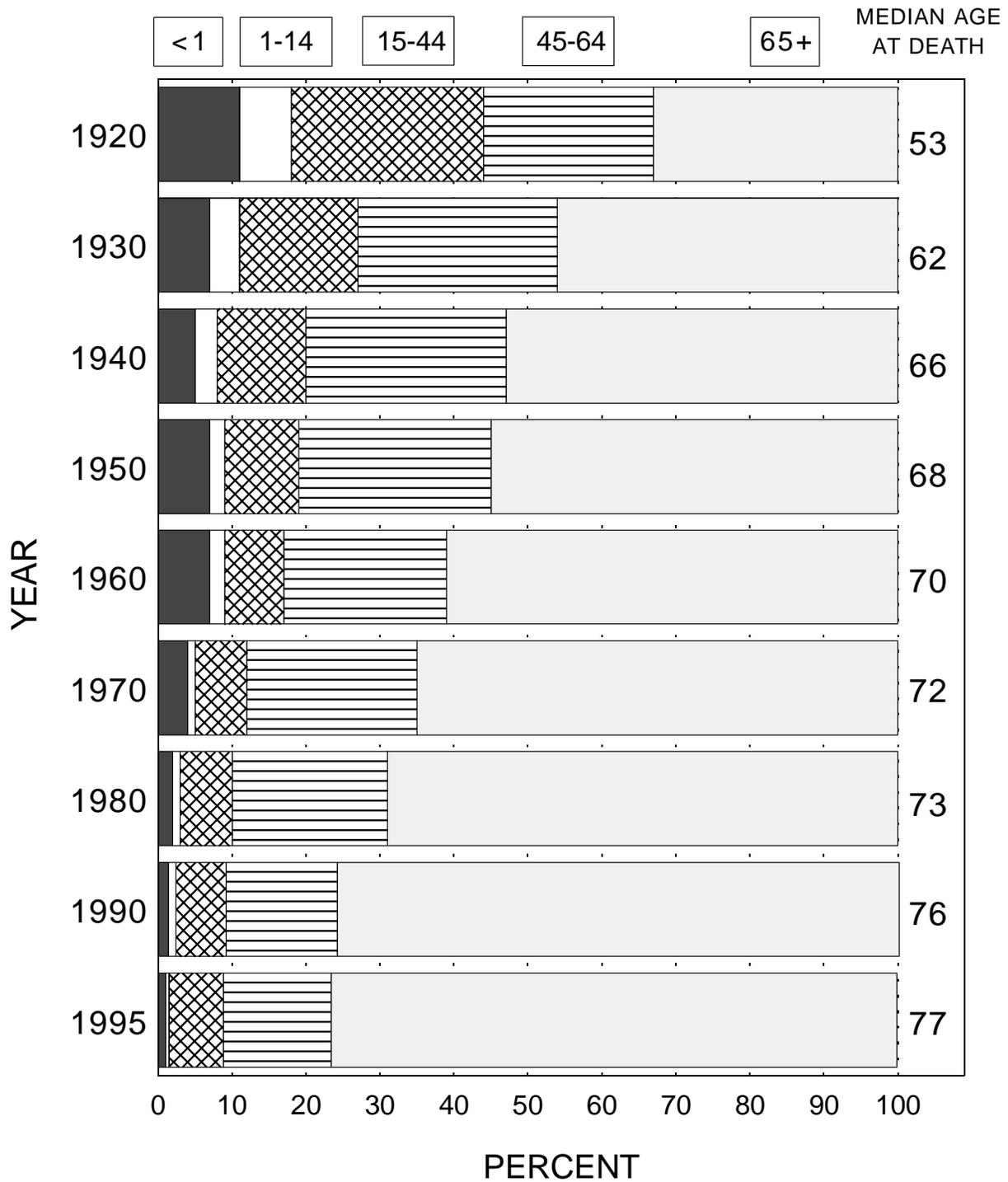


FIGURE 6-3.
AGE-SPECIFIC DEATH RATES,
OREGON RESIDENTS, 1940-1995



Rates per 100,000 population.

FIGURE 6-4.
PROPORTION OF DEATHS BY SELECTED AGE GROUPS, OREGON RESIDENTS, 1920-1995



This year's Annual Report includes a new table (6-40) that tabulates deaths by place of death (e.g., hospital, home) by sex, age and cause of death.

HEART DISEASE

Heart disease continued to be the leading cause of death in Oregon, accounting for over one of every four resident deaths. The death rate was virtually unchanged compared to the previous year, 240.4 per 100,000 population in 1995 compared to 240.7 in 1994.² [Figure 6-2; Table 6-3]. Nonetheless, this is a record low and a continuation of a long-term downward trend. Since 1985, the largest decline has been among chronic ischemic heart disease deaths; the rate fell 32% compared to 12% for other heart diseases.

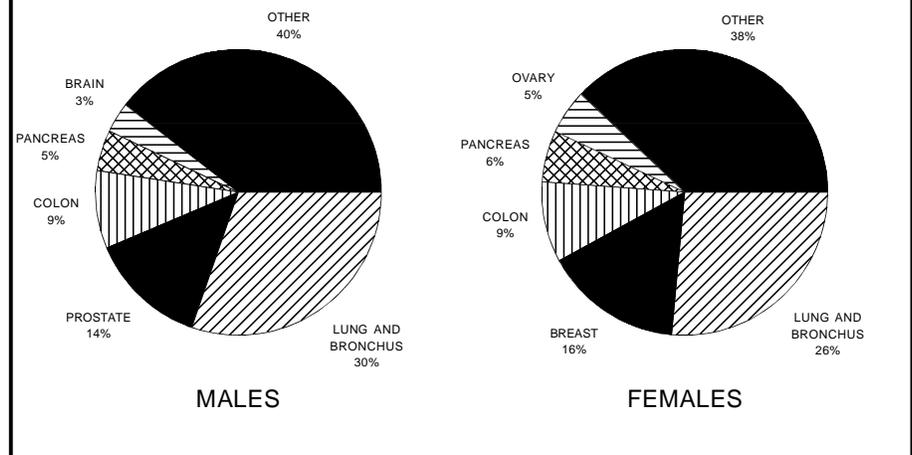
As with many causes of death, the heart disease mortality rate was higher among males than females. This disparity has narrowed during the past decade, however. [Table 6-2]. During 1985, the rate for males was 23 percent higher than that for females; by 1995, the male rate was 14.3 percent higher than the female rate.

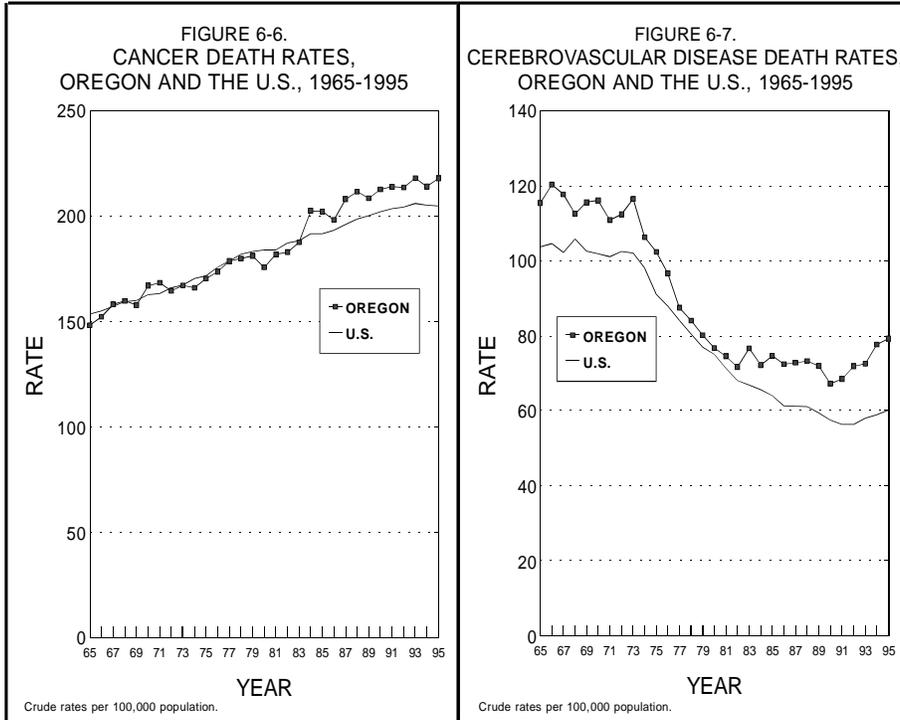
Oregon's rate has consistently been lower than the U.S. rate; in 1994, the state's age-adjusted death rate was 23 percent lower than the nation's. [Table 6-42]. An Oregonian died of heart disease every 70 minutes in 1995.

The heart disease category includes a number of conditions. Most common, and accounting for the majority of heart disease deaths, are myocardial infarctions, coronary occlusions, coronary thromboses, and coronary heart disease. The infarctions, occlusions, and thromboses are acute, often terminal events, while coronary heart disease is a chronic condition.

Over the past two decades the proportion of deaths due to heart disease declined from 36 percent to 27 percent.

FIGURE 6-5.
DISTRIBUTION OF MALIGNANT NEOPLASMS
BY SEX AND SITE, OREGON RESIDENTS, 1995





Lung cancer is the most common fatal cancer for both men and women.

CANCER

The malignant neoplasm death rate continued its long-term upward trend during 1995 to 217.9 per 100,000 population, compared to 214.1 in 1994. [Figure 6-6; Table 6-3].

Malignant neoplasms are the leading cause of death in each 10-year age group between 45 and 74 years. [Table 6-4]. During 1995 the median age at death for cancer patients increased to 73, the highest ever recorded. The death rate for males was 9.3 percent higher than that for females (227.7 versus 208.4), with the disparity greatest among the elderly. In addition to the cancer-caused deaths of 6,824 Oregonians, cancer contributed to another 839 deaths where it was not the underlying cause. [Table 6-35].

The long-term upward trend in cancer mortality has been driven principally by an increasing number of lung cancer deaths, a cause that would be rare if Oregonians did not smoke. The lungs were the most common site of cancer for both males and females, with lung cancer deaths becoming increasingly prevalent among women. A decade ago, there were 2.0 lung cancer fatalities among men for every female death. By 1995 the ratio declined to 1.2-to-1.0. The male lung cancer death rate plateaued during the mid 1980s through the early 1990s; more recently, the rate has begun to move downward and is now lower than it was in 1980. However, during the same time the rate for females has more than doubled, hitting a record high in 1995.

The total lung cancer death rate has more than quintupled since 1950, increasing from 11.6 to 62.5 per 100,000 Oregonians. (This has been accompanied by a sharp increase in chronic obstructive pulmonary disease deaths as well.) During 1995, record high death rates were recorded for myeloid leukemia and cancer of the urinary organs.

LUNG CANCER DEATH RATES			
YEAR	TOTAL	MALE	FEMALE
1970	33.5	56.4	11.4
1975	41.2	65.9	17.7
1980	48.3	69.9	27.4
1985	56.2	76.0	37.2
1990	64.3	81.2	48.1
1994	63.3	74.5	52.4

Rates per 100,000 population.

During 1994, Oregon's age-adjusted death rate was 4.0 percent less than the nation's. Cancer claimed the life of an Oregonian every 77 minutes in 1995.

CEREBROVASCULAR DISEASE

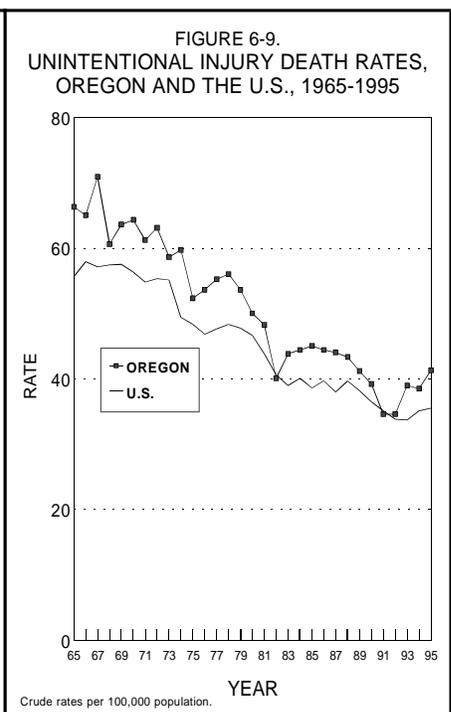
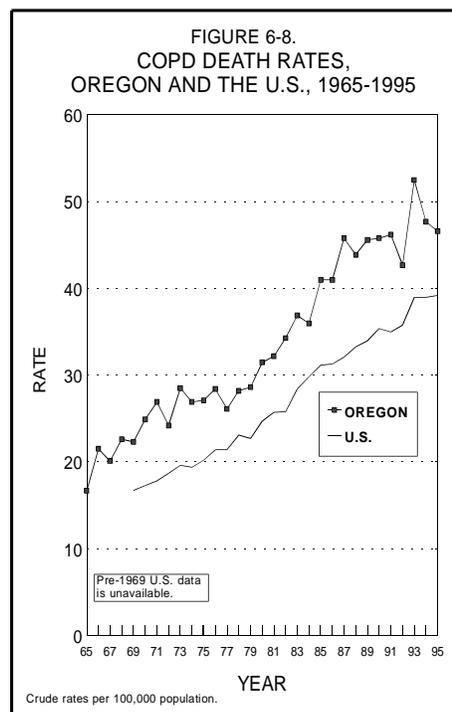
During most of the 1980s, the death rate for cerebrovascular disease fluctuated between a narrow range of values, ultimately declining to a record low 67.2 per 100,000 population in 1990. Since then, the rate has increased annually reaching 79.3 during 1995, an 18 percent increase. [Figure 6-7; Table 6-3]. Every age group has witnessed an increase in cerebrovascular disease death rates since the beginning of the decade. Besides the 2,483 deaths due to cerebrovascular disease, these conditions contributed to the deaths of another 1,302 Oregonians. [Table 6-35].

Cerebrovascular disease was the third most common cause of death among Oregonians. It struck females far more often than males (98.6 vs. 59.4). However, males 55-74 years old had higher death rates than similarly aged females. The median age at death reached 83 years, the highest level ever. [6-13].

Over the past quarter-century, the crude death rate from cerebrovascular disease has consistently been higher in Oregon than in the U.S. as a whole. Part of this difference is because the state's population is older than the nation's but even after controlling for this variable with age-adjusted death rates, Oregon's 1994 rate was 9.7 percent higher than the U.S. rate. An Oregonian died from cerebrovascular disease every 3.5 hours in 1995.

Sudden circulatory crises such as strokes, cerebral thromboses, and hemorrhages are common acute forms of these diseases; cerebral arteriosclerosis is a chronic form. Most deaths are attributable to the former.

Cerebrovascular disease claimed an Oregonian every 3.5 hours.



RESPIRATORY DISEASE

Chronic obstructive pulmonary disease (COPD) has become an increasingly common killer of Oregonians over the past several decades, and is now the fourth leading cause of death. During 1995, however, the death rate fell to 46.6 per 100,000 population, down 11 percent from the record high 52.5 recorded during 1993. [Figure 6-8; Table 6-3]. Despite fewer deaths a record number of years of potential life were lost during 1995. [Table 6-11].

There is a distinct, but decreasing, gender difference in the risk of death from COPD. In 1985, males were 84 percent more likely to die from this cause than were females; by 1995, they were only 6.9 percent more likely to do so. The vast majority of COPD deaths are caused by tobacco use; the sharp rise in deaths among women reflects their increasing smoking prevalence during past decades. No other cause has a higher proportion of deaths linked to tobacco use than does COPD. [Table 6-19].

The group of allied conditions categorized as COPD includes four principal diseases: chronic and unspecified bronchitis, emphysema, asthma, and chronic airways obstruction. The death rates for the two most common of the four have increased since 1985: emphysema by 7.6 percent, chronic airways obstruction by 19 percent. In addition to the 1,460 Oregonians whose deaths were due to chronic obstructive pulmonary diseases, COPD was a factor in another 1,774 deaths. [Table 6-35].

During 1994, Oregon's age-adjusted COPD death rate was 11 percent higher than the U.S. rate. An Oregonian died from chronic obstructive pulmonary disease every 6.0 hours in 1995. Most of these deaths could have been prevented.

UNINTENTIONAL INJURIES

Oregon's unintentional injury³ death rate had been declining until the early 1980s. The downward trend resumed in 1986 and accelerated through 1991 falling to 34.6 per 100,000 population, a record low. [Figure 6-9; Table 6-3]. Since 1991, however, the rate has trended upward reaching 41.3 in 1995, a 19 percent increase. Rates have risen for both sexes and nearly all age groups but males remained twice as likely as females to die from an unintentional injury.

Although this category ranked fifth overall in the number of deaths (1,293), it was the leading cause of premature death and the leading cause of death for Oregonians ages 1-44; more years of potential life were lost before age 65 from unintentional injuries than from any other cause. [Table 6-25]. Cancer and heart disease ranked second and third, respectively.

Motor vehicle-related deaths (582) accounted for 45 percent of all unintentional injury deaths; over half (58%) of the decedents were 15-44 years old. (Eighty of the deaths involving motor vehicles were of pedestrians. [Table 6-16].) Falls, the second most common type of fatal unintentional injury, claimed 231 Orego-

COPD DEATH RATES		
YEAR	MALE	FEMALE
1985	53.4	29.0
1995	48.2	45.1
% Change	-9.7	+55.5
Rates per 100,000 population.		

Unintentional injuries were the leading cause of years of potential life lost.

One in seven motor vehicle-related fatalities were of pedestrians.

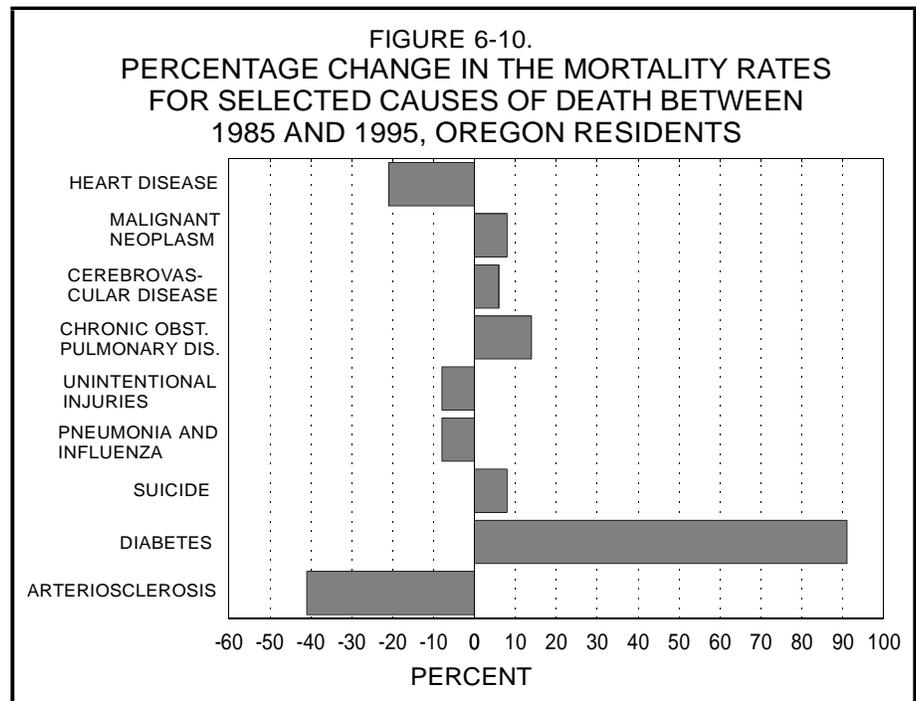
nians; three-quarters (75%) of the victims were 75 or older. Most fatal falls occurred in the home. Poisonings and drownings were the third and fourth most common causes of unintentional injury deaths. [Table 6-16]. During 1995, 57 fatal unintentional injuries were sustained in the workplace.⁴ [Table 6-14].

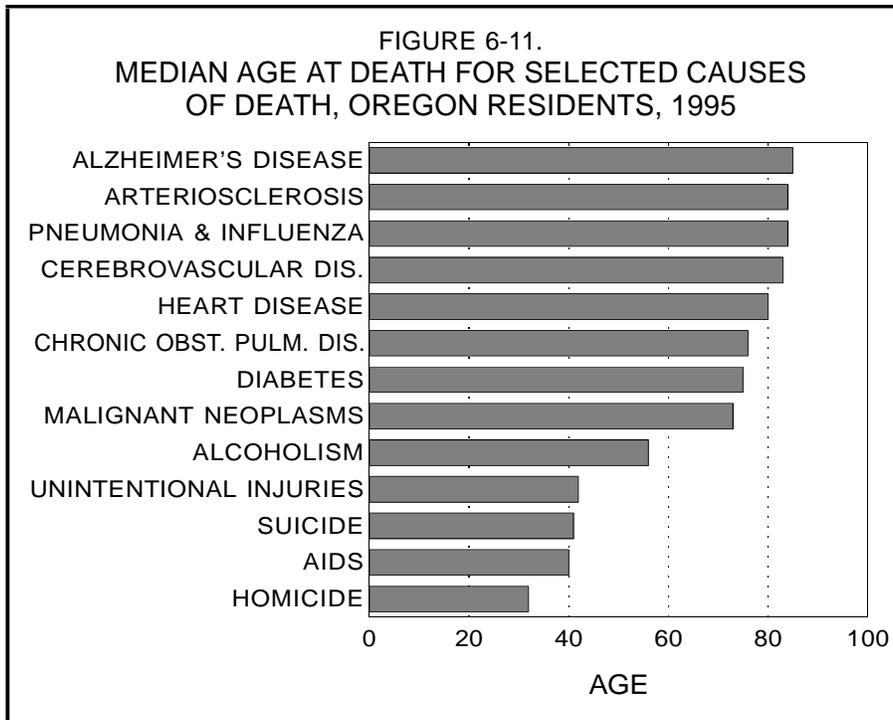
Oregonians continued to be more apt to suffer a fatal unintentional injury than the average American. During 1994 the state's age-adjusted rate exceeded the U.S. rate by 6.2 percent. An Oregonian died as a consequence of an unintentional injury every 6.8 hours in 1995.

PNEUMONIA AND INFLUENZA

The death rate for pneumonia and influenza, the sixth leading cause of death remained unchanged during 1995 at 28.7 per 100,000 population.

As is typically the case, the 1995 mortality rate for pneumonia and influenza was higher for females than males (30.0 versus 27.3). This is the fifth leading cause of death among Oregonians 75 or older. Besides the 899 deaths attributed to pneumonia and influenza, these infections played a role in another 1,291 deaths. [Table 6-35]. Oregon's 1994 age-adjusted mortality rate was 20 percent lower than the national rate. A resident died of pneumonia or influenza every 9.7 hours in 1995.





DIABETES

During the early to mid-1980s, the diabetes mellitus death rate fluctuated over a narrow range of values. Then in 1987 it moved sharply upward, with the disease claiming a record number of Oregonians. The rate has risen every year since then. By 1995, it was 83 percent higher than the 1986 rate (22.5 versus 12.3 per 100,000 population). [Table 6-3]. The increase has occurred across all age groups and both sexes. Among all Oregonians in 1995, diabetes caused 705 deaths and contributed to another 1,688. [Tables 6-3 and 6-35]. Local diabetes authorities have no explanation for the rising death rate other than improved physician awareness and reporting of the disease.

Historically, Oregon's diabetes death rate has been markedly lower than the nation's, but with the increases during recent years the gap has narrowed; the state's 1994 age-adjusted death rate was 15 percent lower than the U.S. rate. An Oregonian died of diabetes every 12.4 hours in 1995.

SUICIDE

A record 526 Oregonians committed suicide during 1995. The death rate, however, (16.8 per 100,000 population) declined slightly over the previous year's record high (17.0), a result of fewer suicides by females. Although often exhibiting considerable variation from year to year, the long-term trend in the suicide rate has been upward, driven principally by increasing suicidal behavior among the state's youth.

The diabetes death rate hit a new high for the ninth consecutive year.

**Six in ten suicides
are committed with
firearms.**

For the second year in a row suicide was the sixth leading cause of death among males; they were 4.7 times more likely to kill themselves than were females (27.9 versus 6.0 per 100,000). Male suicide rates have consistently been high in older age groups, with the rate two to four times higher for men 80 or older than for their younger counterparts. [Table 6-7]. Among females, age-specific rates typically increase slightly among 45-to 64-year-olds, and then decline. During 1995, however, the rates were highest for 25- to 44-year-olds. The youngest Oregonian to commit suicide was a 12 year-old boy and the oldest, a 92-year-old man. Suicide was the fourth leading cause of years of potential life lost before age 65, following unintentional injuries, cancer, and heart disease. [Table 6-25]. It was the second leading cause of death for Oregonians ages 15-34. [Table 6-4].

Firearms were the most frequently chosen method (61%) of completed suicide, followed by poisoning (16%) and hanging (13%). The method varied within different age and sex cohorts, however. [Table 6-17].

As in years past, the 1994 age-adjusted rate for Oregon was substantially higher (36 percent) than for the U.S. An Oregonian took his or her own life every 16.7 hours in 1995. For additional information on suicide, see *Suicide and Suicidal thoughts by Oregonians*, a recently published report by the Center for Health Statistics.

ALZHEIMER'S DISEASE

Alzheimer's disease (including Alzheimer's dementia) has been reported with increasing frequency during the past decade and is now the eighth leading cause of death. In 1995 the death rate was 22.0 per 100,000 population, 13 percent higher than the 1994 rate. Women were about twice as likely as men to die from Alzheimer's disease; the rates were 28.5 and 15.2, respectively. [Table 6-2]. Ninety percent of the victims were 75 or older at death. [Table 6-6]. Besides the 688 deaths due to this cause, Alzheimer's disease contributed to 446 deaths. [Table 6-35].

Of the 20 leading causes of death, the greatest disparity in age-adjusted death rates between Oregon and the U.S. was recorded for Alzheimer's disease; Oregon's 1994 rate was 58 percent higher and ranked fourth highest among the states and District of Columbia. [Table 6-42]. An Oregonian died from Alzheimer's disease every 12.7 hours in 1995.

ALCOHOLISM

In 1995 the Oregon alcoholism⁵ death rate was 11.4 per 100,000 population. Since 1985, the death rate has fluctuated between a low of 10.4 in 1991 and a high of 12.2 in 1986. [Table 6-3].

During 1995, alcoholism was the eleventh leading cause of death overall, but ranked fourth among Oregonians 45-54. [Table 6-4]. However, if intentional and unintentional injury deaths (e.g., motor vehicle crashes) that involved alcohol were included in this count,

**The Alzheimer's
disease death
rate increased
13 percent during
1995.**

the category would rank substantially higher. (The role, if any, of alcohol in injury deaths is rarely reported on death certificates.)

A total of 358 deaths were directly due to alcoholism and related disorders, with alcoholic liver disease accounting for the majority (65%). In addition, alcohol-related diseases were reported as contributing to another 282 deaths. [Table 6-35]. Alcoholism often led to early death; one-half of all those who died from it died by age 56, the youngest median age ever recorded for this cause. More years of potential life were lost from alcoholism during 1995 than ever before.⁶

During 1994, Oregon's age-adjusted death rate was 15 percent higher than the nation's.⁷ A non-injury alcohol-caused death occurred every 24.5 hours in Oregon during 1995.

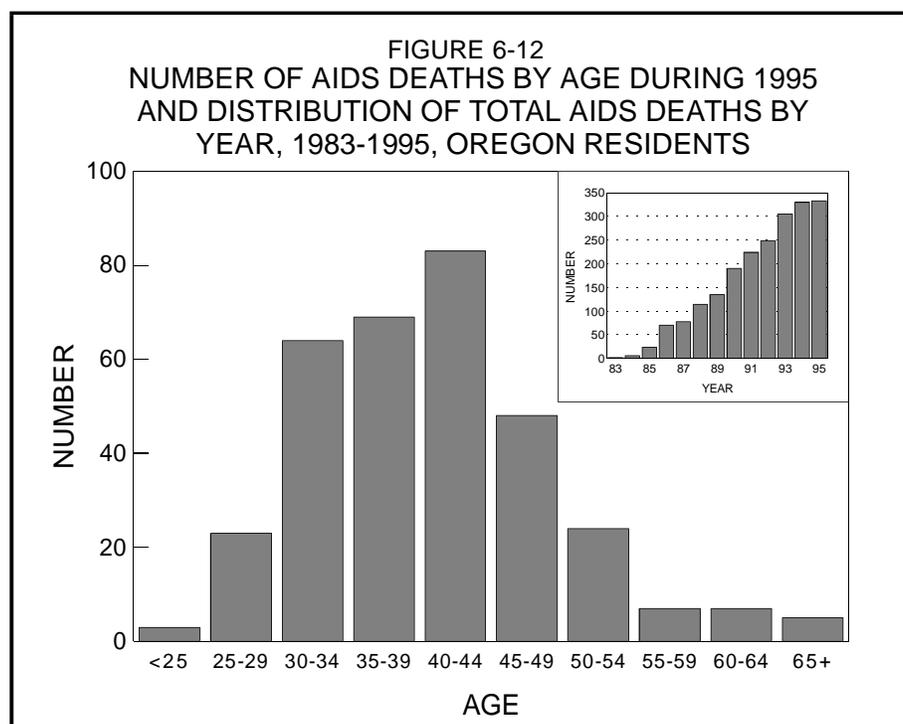
One half of all alcoholism deaths occurred by age 56.

ACQUIRED IMMUNE DEFICIENCY SYNDROME

During 1995, the AIDs death rate declined for the first time since the epidemic began, falling from 10.7 per 100,000 population to 10.6. Even so, 14 times as many Oregonians were claimed by this disease in 1995 than were a decade earlier. [Table 6-3].

Nearly all (304 or 91%) of the decedents during 1995 were males, but 29 were females (up from 17 the previous year). [Table 6-6]. Most deaths (65%) occurred among Oregonians 30 to 44 years old, but the ages ranged from 22-70 years. AIDS was the second leading cause of death among Oregon men 25-44 years old. AIDS patients survived longer during 1995 than any time before with the median age at death reaching 40 years, up from 34 in 1985. [Table 6-13].

AIDS claims predominantly young to middle-aged adults and was the fifth leading cause of years of potential life lost. [Figure 6-14]. More years were lost (before age 65) due to AIDS than from



For the first time, the AIDS death rate declined, albeit marginally.

cerebrovascular disease, diabetes, arteriosclerosis, hypertension, COPD, pneumonia, and influenza combined. [Table 6-25]. Between 1985 and 1995, the number of years of potential life lost annually increased 30-fold. In addition to the 333 deaths directly due to AIDS, the human immunodeficiency virus was reported to have contributed to another 25 deaths, at least three of which were suicides. [Table 6-35].

The age-adjusted death rates in Table 6-42 illustrate that in 1994 Oregonians were 39 percent less likely to die from AIDS than were Americans as a whole. An Oregonian died from AIDS every 1.1 days in 1995.

ARTERIOSCLEROSIS

The arteriosclerosis death rate continued its long-term downward trend in 1995, falling to a record low. The rate (9.5 per 100,000 population) was 41 percent lower than it was ten years earlier. In 1985, arteriosclerosis was the seventh leading killer of Oregonians; a decade later, it had fallen to the thirteenth leading cause of death. [Table 6-23]. Nonetheless, in 1994, Oregon's age-adjusted death rate was 30 percent higher than the U.S. rate.

Women typically bear the greater risk but in 1995 their death rate was 9.6, little different from the 9.5 recorded for men. [Table 6-2]. An Oregonian died from arteriosclerosis every 29.4 hours in 1995. Note, however, that these figures do not include all deaths involving arteriosclerosis, since many have been classified under more specific manifestations of cardiac and cerebral disease. Arteriosclerosis was listed as the underlying cause of death for 298 Oregonians but contributed to the deaths of another 1,019 residents.

PARKINSON'S DISEASE

The apparently inexorable long-term upward trend of the Parkinson's disease death rate continued in 1995, reaching 7.4 per 100,000 population, a 17 percent increase over 1994's rate of 6.3. [Table 6-3]. As is usually the case, Oregon men were more likely than women to die from this disease; the rates were 8.4 and 6.4, respectively. [Table 6-2]. A small number of middle-aged residents died from Parkinson's disease, but more than four-fifths of the deaths occurred to residents 75 or older. [Table 6-6].

Oregon's 1994 age-adjusted death rate for this cause ranked third highest among the states and District of Columbia and was 53 percent higher than the national rate. The 232 deaths in 1995 represent the loss of an Oregonian every 1.6 days.

HOMICIDE

Oregonians were less frequently homicide victims during 1995 than during 1994; the death rate fell 17 percent, from 6.0 per 100,000 population to 5.0. The highest rate ever recorded occurred in 1986 (6.8). [Table 6-3]. Four of the 158 homicide deaths resulted from legal intervention. [Table 6-17].

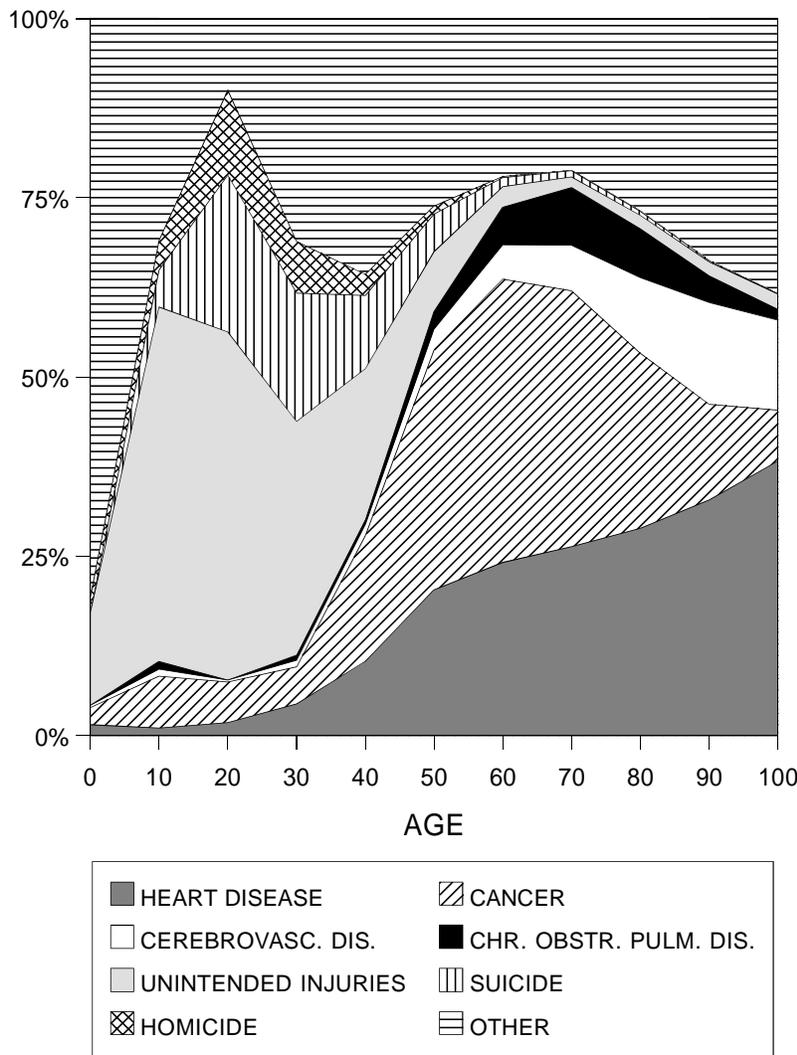
The Arteriosclerosis death rate fell to a record low.

Males were more apt to be murdered than females; their death rate was over two times higher, 7.0 compared to 3.1. [Table 6-2]. Even the youngest Oregonians were at risk: eight children under 10 years of age were murdered during 1995 and half of these were infants. The median age at death was 32 years. [Figure 6-11; Table 6-13]. Firearms were used in six of every 10 homicides; most were handguns. [Table 6-17].

Oregonians have long been at less risk of being murdered than the average U.S. resident. In 1994, Oregon's age-adjusted homicide rate was 42 percent lower than the nation's. An Oregonian was murdered every 2.3 days in 1995.

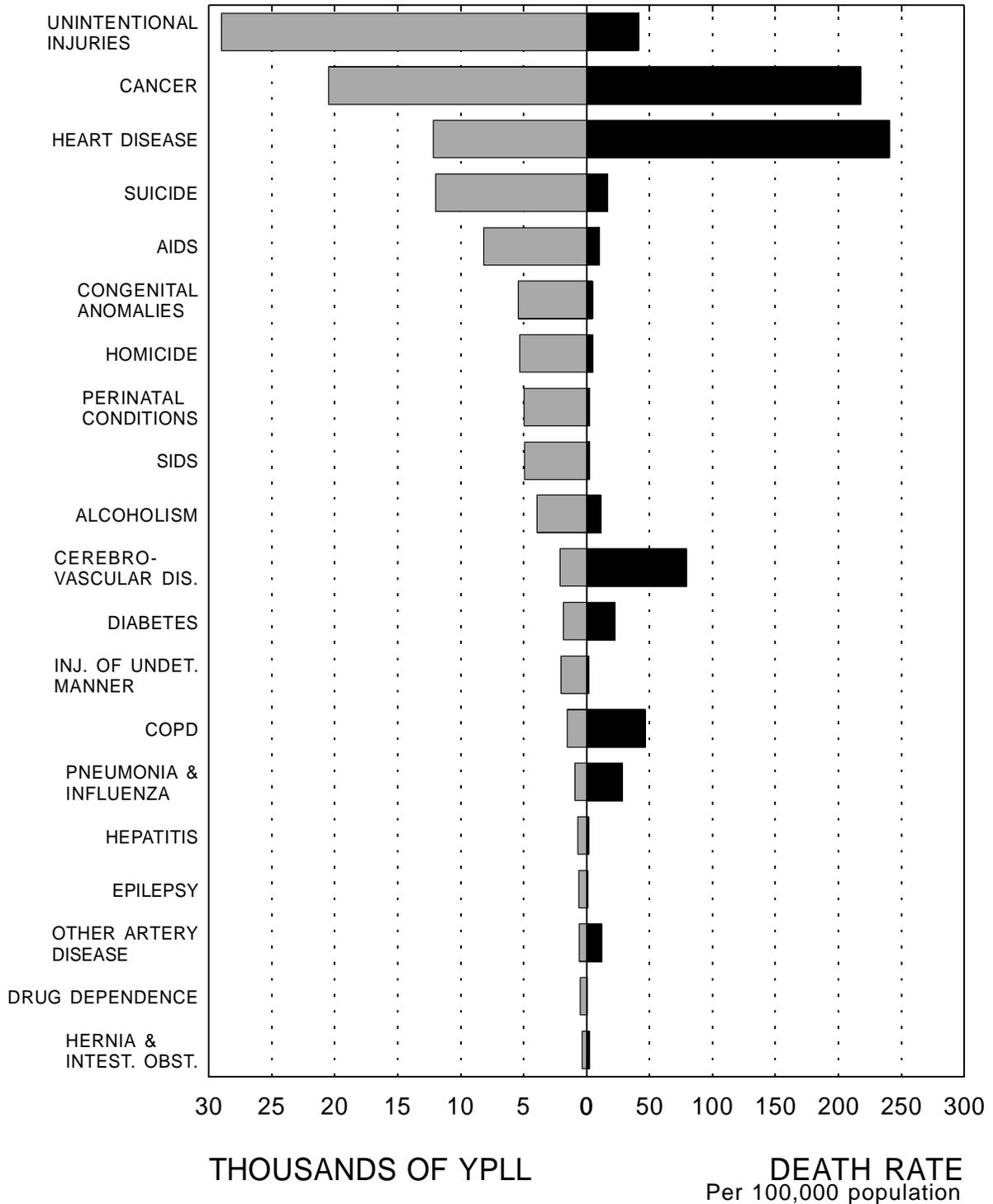
An Oregonian was far less likely to be murdered than was the average American.

FIGURE 6-13.
PERCENTAGE OF DEATHS BY CAUSE AND AGE,
OREGON RESIDENTS, 1995



The oldest Oregonians to die in 1995 were two 109-year-olds, a man and a woman.

FIGURE 6-14.
 LEADING CAUSES OF YEARS OF POTENTIAL LIFE LOST
 BEFORE AGE 65 AND CORRESPONDING DEATH RATES,
 OREGON RESIDENTS, 1995



YEARS OF POTENTIAL LIFE LOST

Mortality rates alone do not show the full impact upon society of certain causes of death. The deaths of young people are a greater “cost” to society than deaths of older people in terms of years of potential life lost (YPLL).

The YPLL yardstick quantifies premature mortality occurring in younger age groups by measuring the number of years between age at death and a set standard. With the standard set at 65 years, for example, a death at age 21 results in 44 years lost. The numbers of YPLL among all decedents are then totaled. Figure 6-14 shows the disparity between death rates and the years of potential life lost. (In all references to YPLL in this report, that standard is 65 years unless otherwise noted.)

- 1 Comparisons between Oregon and the U.S. are based on 1994 age-adjusted rates (the most recent available); see Table 6-42 and the Technical Notes for comments on age-adjusted rates. Oregon's population is older vis-a-vis the U.S. population. Rates are adjusted to the U.S. standard million. All other rates are crude rates (i.e., the number of deaths divided by the population, times 100,000.).
- 2 These and subsequent heart disease rates do not include alcoholic cardiomyopathy deaths, which are included in the alcoholism category. The totals for heart disease, including alcoholic cardiomyopathy, are given in Tables 6-6, 6-7, 6-10, and 6-32 through 6-33.
- 3 *Unintentional injuries* is preferred to the term *accidents* (ICD E800-E949) among health professionals.
- 4 Note that this figure, unlike those presented in Annual Reports prior to 1993, is based on the number of fatal injuries occurring at work [Table 6-14] rather than the National Safety Council classification system [Tables 6-15 and 6-30].
- 5 This complex of diseases includes alcoholic psychosis, alcoholic dependence syndrome, alcoholic gastritis, alcoholic cardiomyopathy, alcoholic polyneuropathy, and alcoholic liver disease.
- 6 Since at least 1979, when the ninth revision of the International Classification of Disease was first used.
- 7 This disparity may be partially explained by the death certificate query program administered by the Oregon Center for Health Statistics: When a cause suggestive of alcoholism is listed on the death certificate, the certifying physician is queried about the role of alcohol in the decedent's death. About ten percent of all death certificates are queried for additional information; the role of alcohol in a death is just one of the reasons prompting a query.