

Health has its science as well as disease.

Elizabeth Blackwell, 1860
First Woman Physician in the U.S.

*Thousands upon thousands of persons have studied disease.
Almost no one has studied health.*

Adele Davis, 1954
American Nutritionist

Section III: Health Trends

Ask the average American about women's health over the past century and you will probably hear an entirely upbeat assessment. The science of health has come into its own since the time of Dr. Elizabeth Blackwell, who is quoted above. Things have changed dramatically, too, since Adele Davis' time – the study of health is a preoccupation not just of doctors, but physical trainers, sports enthusiasts and the average woman who jogs or works out.

While there have been incredible advances in medical science that have had positive impact on women's health, there have also been lifestyle and cultural influences that have been detrimental to women's health. Women's health seems to be reflecting the increased stress of modern life as more and more women have entered the work force and have taken on responsibilities that have, in the past, been more typically male occupations and jobs.

And, in spite of the fitness emphases of recent decades, more and more women are losing the battle of the bulge. At the other end of the spectrum, the problems of anorexia and bulimia are yet to be conquered.

Heart Disease and Cancer: During the second half of the century, around a third of women's deaths have been from heart disease, although deaths from heart disease have declined with the lifestyle alterations – low-fat diet and increased exercise – that have become part of the culture since the 1980s. Cancer, on the other hand, has hovered at about 15-20 percent of women's deaths and while it seems to be leveling off a little in recent years, has actually crept upward since the 1980s. The areas of cancer increase are in breast cancer – which dipped in the late 1980s only to go back up and hover just under its highest rates of 90-110 cases per 100,000 women – and lung and bronchial cancer that have nearly doubled since the mid 1970s – from 20 new cases per 100,000 women to about 40 cases per 100,000 women. Colorectal and skin cancers have also increased as have lymphomas. The prevalence of pap smear testing has greatly increased early detection of cervical cancer. Death rates from breast cancer have decreased in every age bracket. After age 65, cancer is the leading cause of death for women – with lung cancer and breast cancer being the most prevalent causes.

Other Diseases: While the old communicable diseases – diphtheria, pertussis (whooping cough), polio, and measles – have been virtually eradicated, the new scourge is sexually transmitted diseases (STDs). Syphilis doubled during the late 1980s, but has since declined to the lowest level on record, thanks to modern medicines. Gonorrhea, however, skyrocketed in the 20 years of the 1960s to the 1980s and, while it has declined, it is still unacceptably high. A major STD problem for women today is chlamydia, which can cause pelvic inflammatory disease, ectopic pregnancy and infertility. Chlamydia appears to be on the increase – with a significant growth in the number of cases during the late 1990s.

HIV – Human Immunodeficiency Virus: It is quite instructive to note the relative occurrences of other diseases in comparison to the human immunodeficiency virus (HIV). From the attention it gets and the resources devoted to research of the disease, one would expect that HIV would rank among the top killers of men and women. Instead, HIV incidence is in the single digits for women and while it was in the low double digits for men in the early 1990s, it is now in the single digits for men, too.

Injuries and Other External Causes of Death: Death from external causes has remained relatively constant or declined for women during the last half of the century – injuries have decreased rather dramatically, accidents and suicides are slightly down, and homicides have slightly increased. For men, however, death from external causes is a mixed picture. Deaths from injuries and accidents have gone down, suicides have remained about the same, but homicides have increased.

Table 4.1. –Infant Death Rate and Infant and Maternal Mortality Rates by Race

	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	1998
Infant death rate per 100,000 children under 1 year											
	16,240	13,180	9,230	6,900	5,490	3,300	2,700	2,142	1,288	972	751
Infant mortality rate per 100,000 live births											
Total	—	—	8,580	6,460	4,700	2,920	2,600	2,000	1,260	920	720
White ²	—	—	8,210	6,010	4,320	2,680	2,290	1,780	1,100	760	595
Black ²	—	—	13,130 ¹	9,950	7,290	4,390	4,430	3,260	2,140	1,800	1,431
Maternal mortality rate per 100,000 live births (ICD categories 630-676)											
Total	850 ³	690 ³	799	673	376	83	37	22	9	8	7
White ²	—	—	760	609	320	61	26	14	7	5	5
Black ²	—	—	1,295 ¹	1,140 ¹	782	223	104	60	22	22	17

¹ Estimated based on the rate for non-White.

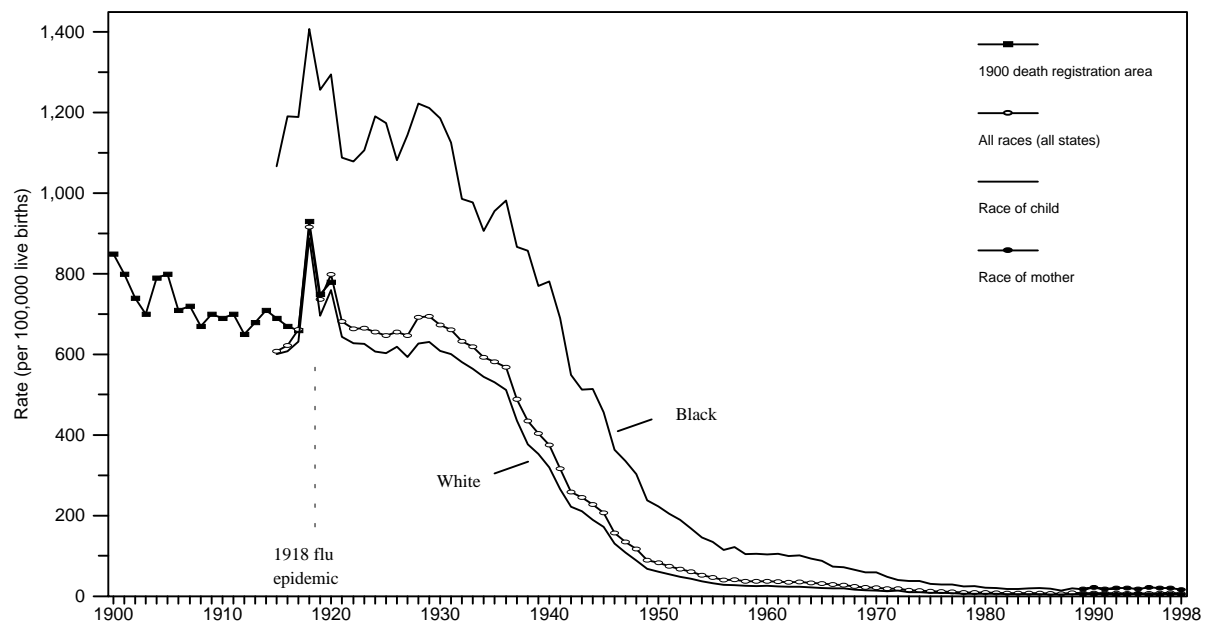
² Racial classification based on the race of the child through 1980; thereafter, it is based on the race of the mother.

³ Based on data from those states which comprised the Death Registration Area in 1900.

Source: U.S. Department of Labor, Children's Bureau Publications, R.M. Woodbury, *Maternal Mortality: the Risk of Death in Childbirth and from all the Diseases Caused by Pregnancy and Confinement*, 1926, reprinted in I. Loudon, *Death in Childbirth*, (New York, 1992); National Center for Health Statistics, *Vital Statistics of the United States*, annual and *National Vital Statistics Reports*, Vol. 48, No. 11, July 24, 2000.

- The maternal mortality rate represents the number of deaths associated with deliveries and complications of pregnancy, childbirth, and the puerperium per 100,000 live births. The decline in the maternal mortality rate is one of the great miracles of the 20th Century; it is notable that a large part of the decline occurred during one of the most difficult periods of depression and war in our national history: maternal mortality dropped from 673 in 1930, the onset of the Great Depression, down to 157 by 1946, the year following the end of World War II. The fact that this dramatic decline of nearly 77 percent began during a period of rapidly escalating poverty would seem to point unambiguously to advances in medical science as the predominant cause of the reduction of maternal deaths, not an improvement in economic conditions.

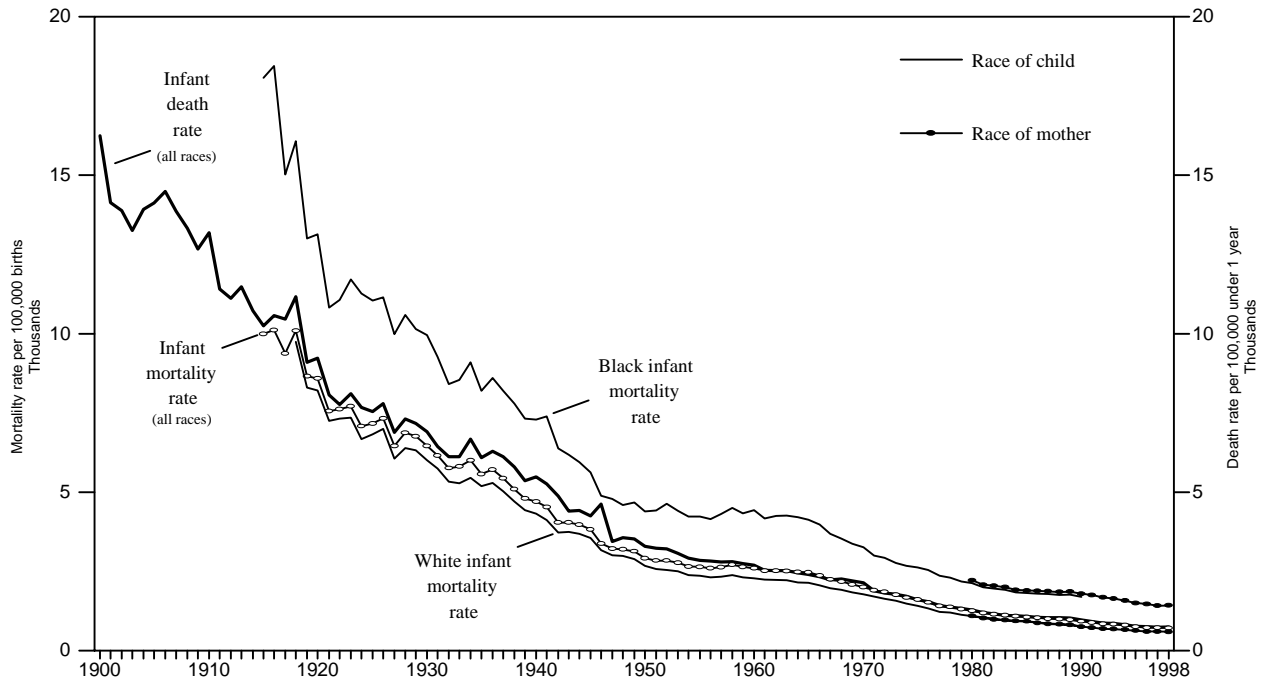
Figure 4.1. –Maternal Mortality Rates by Race: 1900 – 1998



Note: Prior to 1940, Black maternal mortality rate is estimated based on non-White rate.

Source: See Table 4 above.

Figure 4.2. – Infant Death and Mortality Rates, by Race: 1900 – 1998



Note: The Black infant mortality rate for 1915 to 1927 is estimated from the non-White rate.

Source: National Center for Health Statistics, *Vital Statistics of the United States*, annual and *National Vital Statistics Reports*, Vol. 48, No. 11, July 24, 2000.

- The infant death rate represents the number of deaths of children under 1 year of age per 100,000 children under 1 year of age as of July 1. By comparison, the infant mortality rate represents the number of deaths of children under 1 year of age (exclusive of fetal deaths) per 100,000 live births where the infant deaths occurring in the specified year are related to the number of live births occurring during that same year. The first rate relates deaths to the child population and second to the number of live births.
- The death rate of children under 1 year of age declined from 16,240 per 100,000 children in 1900 to 751 in 1998, a decrease of more than 95 percent.
- The infant mortality rate declined from 9,990 per 100,000 live births in 1915 (the first year for which data are available) to 720 in 1998, a decrease of almost 93 percent.
- From 1980 to 1998, the infant mortality rate for children under 1 year whose mother was black decreased by 790 deaths per 100,000 live births: the rate was 2,220 in 1980 and 1,431 in 1998.
- From 1980 to 1998, the infant mortality rate for children under 1 year whose mother was white decreased by 495 deaths per 1,000 live births: the rate was 1,090 in 1980 and 595 in 1998.
- Because of the larger drop in the black rate than the white, the gap between the black and white infant mortality rates has declined from 1,130 in 1980 to 836 in 1998.
- In 1960 the U.S. ranked 12th in the world for low infant-mortality rates. By 1994 the U.S. was ranked 25th. According Gopal Singh, a researcher at NCHS, "The decline in the infant mortality rate would have been greater if not for a rising number of out-of-wedlock births."

**Table 4.2. –Age-Adjusted Death Rates for Selected Causes of Death, by Sex
United States: Selected Years, 1950 – 1998**

	1950 ¹	1960 ¹	1970	1980	1985	1990	1995	1998
Female								
	Deaths per 100,000 resident population							
All causes	688.4	590.6	532.5	432.6	410.3	390.6	385.2	372.5
Natural causes	649.2	556.2	492.2	400.1	382.2	363.5	359.1	346.8
Diseases of heart	233.9	205.7	175.2	140.3	127.4	108.9	100.4	93.3
Ischemic heart disease	na	na	na	98.8	84.2	70.2	61.9	55.6
Cerebrovascular diseases	86.0	74.7	60.8	37.6	30.0	25.7	24.8	23.6
Malignant neoplasms	120.8	111.2	108.8	109.2	111.7	112.7	110.4	105.5
Trachea, bronchus, and lung	3.9	5.7	9.5	17.6	21.8	25.6	26.9	27.0
Colorectal	na	16.9	15.4	13.4	12.6	11.3	10.6	9.9
Breast	22.2	22.3	23.1	22.7	23.3	23.1	21.0	18.8
Chronic obstructive pulmonary diseases	2.9	3.5	5.4	8.9	12.5	14.7	17.1	18.1
Pneumonia and influenza	22.0	21.8	16.7	9.8	10.1	11.0	10.4	11.0
Chronic liver disease and cirrhosis	5.8	6.9	9.8	7.9	6.1	5.3	4.6	4.4
Diabetes mellitus	17.1	15.0	14.4	10.0	9.4	11.1	12.4	12.3
HIV (human immunodeficiency virus)	na	na	na	na	na	2.1	5.2	2.2
External causes	39.1	34.4	40.4	32.5	28.1	27.0	26.1	25.8
Unintentional injuries	31.7	26.8	28.2	21.8	18.7	17.9	17.5	17.8
Motor vehicle-related injuries	10.7	11.0	14.4	11.8	10.5	10.7	10.0	9.9
Suicide	4.9	5.0	6.8	5.4	4.9	4.5	4.1	4.0
Homicide and legal intervention	2.5	2.6	3.7	4.5	3.9	4.2	4.0	3.2
Male								
All causes	1,001.6	949.3	931.6	777.2	723.0	680.2	646.3	589.4
Natural causes	892.1	850.7	814.6	675.5	637.9	595.8	567.0	516.1
Diseases of heart	383.8	375.5	348.5	280.4	250.1	206.7	184.9	166.9
Ischemic heart disease	na	na	na	214.8	179.6	144.0	123.9	108.9
Cerebrovascular diseases	91.9	85.4	73.2	44.9	35.5	30.2	28.9	26.6
Malignant neoplasms	130.8	143.0	157.4	165.5	166.1	166.3	156.8	147.7
Trachea, bronchus, and lung	18.4	32.0	47.5	56.9	58.1	58.5	53.0	49.5
Colorectal	na	18.6	18.7	18.3	17.9	16.8	15.3	14.3
Prostate	13.4	13.1	13.3	14.4	14.7	16.7	15.4	13.2
Chronic obstructive pulmonary diseases	6.0	13.7	23.4	26.1	28.1	27.2	26.3	25.9
Pneumonia and influenza	30.6	35.0	28.8	17.4	18.4	18.5	16.5	16.3
Chronic liver disease and cirrhosis	11.4	14.5	20.2	17.1	13.7	12.2	11.0	10.3
Diabetes mellitus	11.4	12.0	13.5	10.2	10.0	12.3	14.4	15.2
HIV (human immunodeficiency virus)	Na	na	na	na	na	17.7	26.2	7.2
External causes	109.4	98.5	117.0	101.7	85.2	84.4	79.3	73.4
Unintentional injuries	83.7	73.9	80.7	64.0	51.8	47.7	44.1	43.0
Motor vehicle-related injuries	36.4	34.5	41.1	34.3	27.3	26.3	22.7	21.6
Suicide	17.3	16.6	17.3	18.0	18.8	19.0	18.6	17.2
Homicide and legal intervention	8.4	7.9	14.9	17.4	12.8	16.3	14.7	11.3

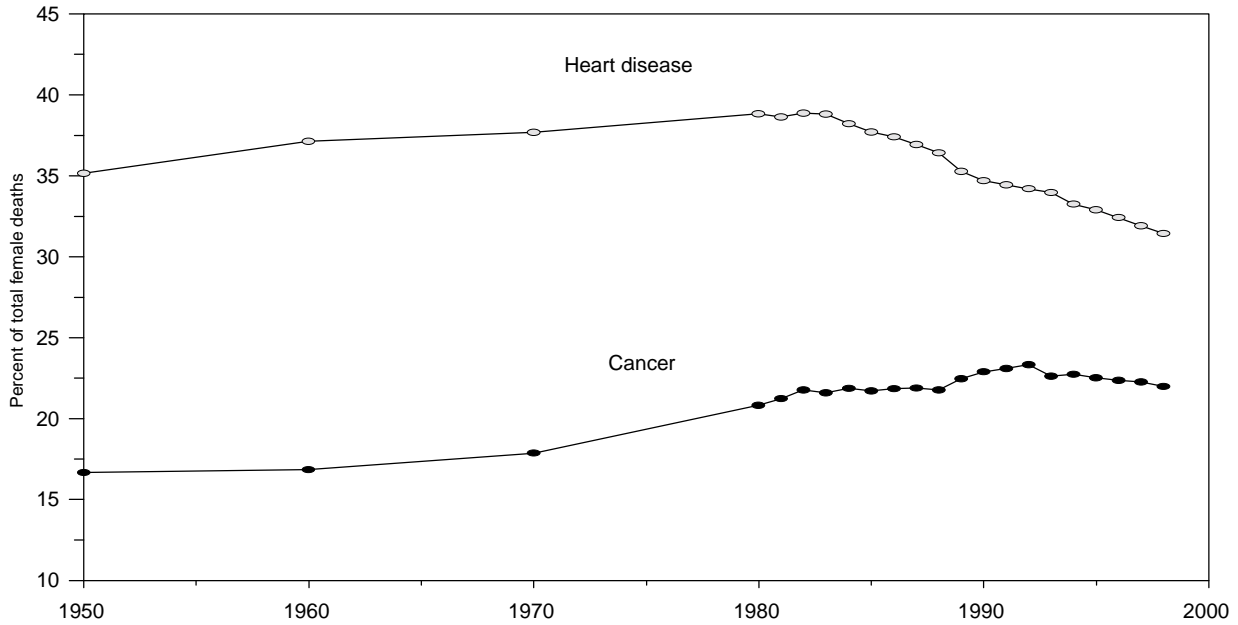
¹ Includes deaths of persons who were not residents of the 50 States and the District of Columbia.

Note: Rates are age adjusted to the 1940 U.S. standard million population.

Source: U.S. Department of Health and Human Services, *Health, United States, 2000*.

- The age-adjusted death rate for heart disease decreased by 60 percent from 1950 to 1998. Without the adjustment for the increase in the percentage of elderly in the female population, however, the crude death rate for heart disease has only declined marginally and is still the number one source of death among women – it accounted for nearly 32 percent of all female deaths in 1998. Cancer now has a larger age-adjusted death rate but is the second leading cause of female deaths; it accounted for 22 percent of all female deaths in 1998.

Figure 4.3. –Percentage of Female Deaths Due to Heart Disease and Cancer Selected Years, 1950 – 1998



Source: U.S. Department of Health and Human Services, *Health, United States*, 2000 and National Center for Health Statistics, *Vital Statistics*, annual and *National Vital Statistics Reports*, Vol. 48, No 11, July 24, 2000 and earlier reports.

- The age-adjusted death rate for heart diseases for men runs from 60 to 100 percent higher than for women.

Table 4.3. –Death Rates for Diseases of Heart, by Sex: Selected Years, 1950 – 1998

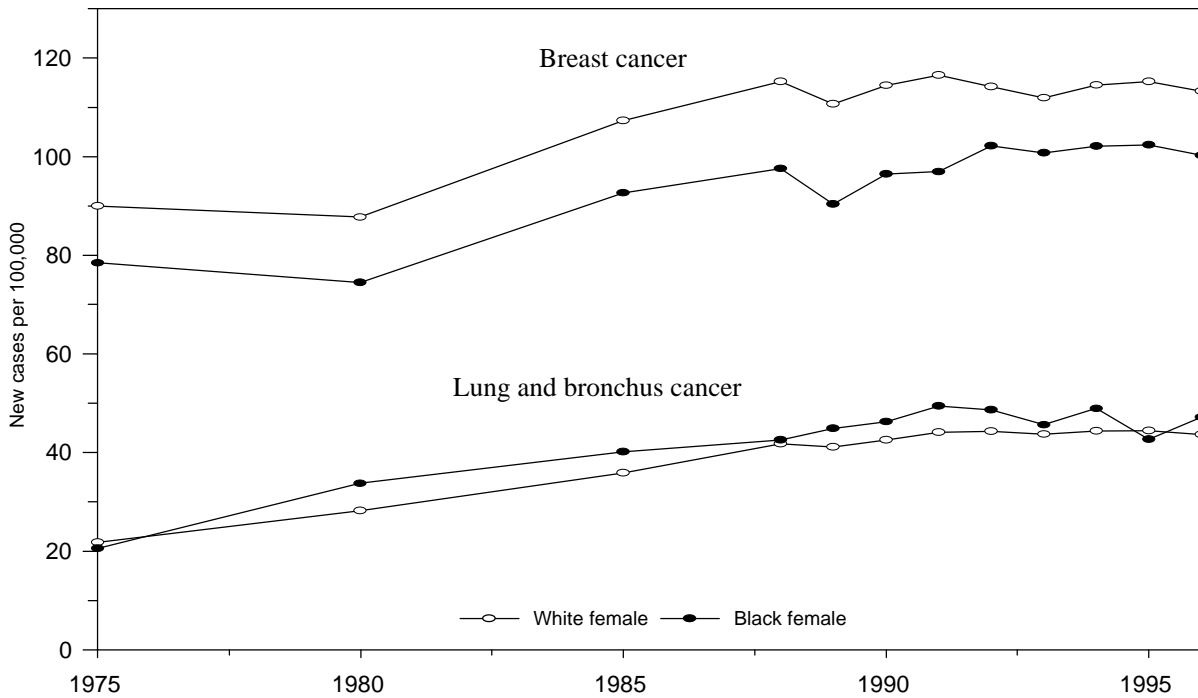
Age	1950 ¹	1960 ¹	1970	1980	1985	1990	1992	1994	1996	1998
	Deaths per 100,000 resident population									
Female										
All ages, age adjusted	233.9	205.7	175.2	140.3	127.4	108.9	103.8	101.6	98.2	93.3
All ages, crude	288.4	300.6	304.5	305.1	305.2	281.8	275.8	278.5	275.5	268.3
Under 1	2.9	5.4	10.9	20.0	22.0	18.3	17.0	16.7	15.7	16.1
1-4	1.2	1.1	1.6	2.5	2.2	1.9	1.8	1.8	1.4	1.3
5-14	2.2	1.2	0.8	0.9	1.0	0.8	0.7	0.8	0.8	0.7
15-24	6.7	3.7	2.3	2.1	2.1	1.8	1.9	2.1	2.0	2.1
25-34	16.2	11.3	7.7	5.3	5.0	5.0	5.4	6.0	5.6	5.8
35-44	55.1	38.2	32.2	21.4	18.3	15.1	16.1	17.2	16.8	17.3
45-54	177.2	127.5	109.9	84.5	74.4	61.0	58.1	57.1	56.9	52.8
55-64	510.0	429.4	351.6	272.1	252.1	215.7	204.9	195.8	189.3	173.9
65-74	1,419.3	1,261.3	1,082.7	828.6	746.1	616.8	587.8	566.3	543.8	522.6
75-84	3,872.0	3,582.7	3,120.8	2,497.0	2,220.4	1,893.8	1,776.1	1,741.3	1,674.7	1,579.5
85 and over	8,796.1	9,016.8	7,591.8	7,350.5	7,037.6	6,478.1	6,264.0	6,252.7	6,108.0	5,876.6
Male										
All ages, age adjusted	383.8	375.5	348.5	280.4	250.1	206.7	195.1	188.5	178.8	166.9
All ages, crude	423.4	439.5	422.5	368.6	344.1	297.6	287.2	284.3	277.4	268.0

¹ Includes deaths of persons who were not residents of the 50 States and the District of Columbia.

Note: Rates are age adjusted to the 1940 U.S. standard million population.

Source: U.S. Department of Health and Human Services, *Health, United States*, 2000.

Figure 4.4. –Age-Adjusted Breast Cancer and Lung and Bronchus Cancer Incidence Rates for Females, By Race



Source: U.S. Department of Health and Human Services, *Health, United States, 2000*

Table 4.4. –Female Death Rates for All Malignant Neoplasm, By Age Selected Years, 1950 – 1998

Age	Deaths per 100,000 resident population									
	1950 ¹	1960 ¹	1970	1980	1985	1990	1992	1994	1996	1998
All ages, age adjusted	120.8	111.2	108.8	109.2	111.7	112.7	111.8	111.1	108.8	105.5
All ages, crude	136.8	136.4	144.4	163.6	175.7	186.0	188.2	190.5	190.2	187.7
Under 1	7.6	6.8	5.0	2.7	3.2	2.2	2.2	1.6	2.4	1.9
1-4	10.8	9.3	6.7	3.7	3.4	3.2	3.0	3.0	2.3	2.4
5-14	6.0	6.0	5.2	3.6	3.1	2.8	2.6	2.4	2.4	2.3
15-24	7.6	6.5	6.2	4.8	4.3	4.1	4.1	3.9	3.8	3.7
25-34	22.2	20.1	16.7	14.0	13.2	12.6	12.9	12.3	12.6	11.7
35-44	79.3	70.0	65.6	53.1	49.2	48.1	46.5	44.1	42.9	42.1
45-54	194.0	183.0	181.5	171.8	165.3	155.5	147.0	143.1	135.2	128.2
55-64	368.2	337.7	343.2	361.7	381.8	375.2	369.7	360.7	349.6	331.6
65-74	612.3	560.2	557.9	607.1	645.3	677.4	686.5	694.7	685.2	675.2
75-84	1,000.7	924.1	891.9	903.1	937.8	1,010.3	1,025.6	1,057.5	1,060.0	1,048.6
85 and over	1,299.7	1,263.9	1,096.7	1,255.7	1,281.4	1,372.1	1,394.1	1,397.1	1,426.8	1,412.5

¹ Includes deaths of persons who were not residents of the 50 States and the District of Columbia.

Note: Rates are age adjusted to the 1940 U.S. standard million population.

Source: U.S. Department of Health and Human Services, *Health, United States, 2000*.

Table 4.5. –Age-Adjusted Cancer Incidence Rates for Females for Selected Cancer Sites, By Race: Selected Years, 1973 – 1995

	1973	1975	1980	1985	1990	1992	1993	1994	1995	1996
White female	Number of new cases per 100,000 resident population ¹									
All sites	295.1	310.5	311.3	343.8	356.3	356.8	349.9	354.6	351.9	347.1
Colon and rectum	41.7	42.9	44.7	45.9	40.2	38.5	37.8	37.0	36.6	35.5
Colon	30.3	30.9	32.9	34.0	30.1	28.7	28.0	27.8	27.5	25.9
Rectum	11.5	12.0	11.8	12.0	10.1	9.8	9.8	9.3	9.0	9.6
Pancreas	7.5	7.1	7.3	8.1	7.7	8.0	7.3	7.6	7.3	7.1
Lung and bronchus	17.8	21.8	28.2	35.9	42.5	44.4	43.8	44.5	44.2	43.7
Melanoma of skin	5.9	6.9	9.4	10.5	11.4	11.9	11.7	12.1	12.9	13.2
Breast	84.4	90.0	87.8	107.2	114.4	114.4	112.2	114.8	115.0	113.3
Cervix uteri	12.8	11.1	9.1	7.6	8.3	7.9	7.7	7.2	6.5	7.0
Corpus uteri	29.5	33.7	25.3	23.1	23.1	22.8	22.2	22.8	22.7	21.8
Ovary	14.6	14.4	14.0	15.1	16.1	15.8	15.7	14.9	15.2	15.3
Non-Hodgkin's lymphoma	7.6	8.5	9.2	11.4	12.9	12.9	12.8	13.5	12.6	12.7
Black female										
All sites	283.7	296.5	304.8	323.7	342.7	345.3	338.5	345.5	330.0	336.1
Colon and rectum	41.8	43.5	49.6	45.9	49.5	46.1	44.8	46.9	43.9	41.8
Colon	30.0	32.7	41.2	36.0	38.6	36.2	36.6	37.1	35.3	32.9
Rectum	11.8	10.8	8.5	9.9	10.9	9.9	8.2	9.7	8.6	8.9
Pancreas	11.6	11.6	13.0	11.3	10.3	13.0	12.1	12.0	12.3	10.8
Lung and bronchus	20.9	20.6	33.8	40.2	46.9	49.1	46.0	49.3	42.9	47.2
Breast	69.0	78.5	74.3	92.5	97.7	102.6	101.0	101.9	101.3	100.3
Cervix uteri	29.9	28.0	19.0	15.9	13.9	11.3	11.3	11.6	11.4	10.6
Corpus uteri	15.0	17.1	14.1	15.4	14.6	14.6	14.8	15.8	15.7	15.7
Ovary	10.5	10.1	10.1	10.1	10.2	10.7	11.1	12.5	9.7	8.5
Non-Hodgkin's lymphoma	5.5	4.2	6.0	7.1	9.3	8.4	8.1	7.2	9.1	9.5

¹ Age adjusted by the direct method to the 1970 U.S. population.

Source: U.S. Department of Health and Human Services, *Health, United States*, 2000.

Table 4.6. –Female Death Rates for Malignant Neoplasm of Breast, By Age Selected Years, 1950 – 1998

	1950 ¹	1960 ¹	1970	1980	1985	1990	1994	1995	1996	1998
Age	Deaths per 100,000 resident population									
All ages, age adjusted	22.2	22.3	23.1	22.7	23.3	23.1	21.3	21.0	20.2	18.8
All ages, crude	24.7	26.1	28.4	30.6	32.8	34.0	32.7	32.6	31.8	30.2
Under 25	*	*	*	*	0.0	*	*	*	0.0	*
25-34	3.8	3.8	3.9	3.3	3.0	2.9	2.7	2.7	2.7	2.6
35-44	20.8	20.2	20.4	17.9	17.5	17.8	15.2	15.0	14.2	13.4
45-54	46.9	51.4	52.6	48.1	47.1	45.4	41.6	41.4	38.8	35.8
55-64	70.4	70.8	77.6	80.5	84.2	78.6	69.8	69.8	67.4	62.2
65-74	94.0	90.0	93.8	101.1	107.8	111.7	105.6	103.3	99.1	93.3
75-84	139.8	129.9	127.4	126.4	136.2	146.3	145.9	142.0	139.8	131.4
85 and over	195.5	191.9	157.1	169.3	178.5	196.8	197.5	203.7	204.9	194.7

0.0 denotes greater than zero but less than 0.005; * denotes based on fewer than 20 deaths.

¹ Includes deaths of persons who were not residents of the 50 States and the District of Columbia.

Note: Rates are age adjusted to the 1940 U.S. standard million population.

Source: U.S. Department of Health and Human Services, *Health, United States*, 2000.

Table 4.7. –Death Rates for Malignant Neoplasm of Trachea, Bronchus, and Lung By Sex and Age: Selected Years, 1950 – 1998

Sex and Age	1950 ¹	1960 ¹	1970	1980	1985	1990	1992	1994	1996	1998
	Deaths per 100,000 resident population									
Female										
All ages, age adjusted	3.9	5.7	9.5	17.6	21.8	25.6	26.4	26.6	26.9	27.0
All ages, crude	4.5	4.7	11.9	24.3	31.7	39.4	41.8	43.2	44.6	45.7
Under 25	0.1	0.0	0.0	*	*	*	*	*	*	*
25-34	0.5	5.4	0.5	0.5	0.6	0.5	0.6	0.6	0.6	0.6
35-44	1.9	3.2	6.1	6.5	5.6	5.2	5.3	4.7	5.1	5.3
45-54	5.8	9.2	21.0	33.7	35.2	34.5	31.5	29.6	28.2	26.0
55-64	13.6	15.4	36.8	72.0	92.1	105.0	105.7	102.8	99.9	97.6
65-74	23.3	24.4	43.1	102.7	141.8	177.6	191.1	199.4	204.9	211.3
75-84	32.9	32.8	52.4	94.1	131.7	190.1	211.4	231.6	246.4	257.2
85 and over	28.2	38.8	50.0	91.9	100.2	138.1	156.0	167.4	185.6	197.8
Male										
All ages, age adjusted	18.4	32.0	47.5	56.9	58.1	58.5	56.0	54.2	51.8	49.5
All ages, crude	19.9	35.4	53.4	68.6	72.5	75.1	73.4	72.3	70.6	69.3

0.0 denotes greater than zero but less than 0.005; * denotes based on fewer than 20 deaths.

¹ Includes deaths of persons who were not residents of the 50 States and the District of Columbia.

Note: Rates are age adjusted to the 1940 U.S. standard million population.

Source: U.S. Department of Health and Human Services, *Health, United States, 2000*

- Among women 65-74, cancer is the leading cause of death accounting for a little better than one-third of all female deaths in this age group. Lung cancer was the leading causes of cancer death of women in this age group and accounted for 31 percent of cancer deaths; breast cancer was the second leading cause of cancer deaths and accounted for close to 14 percent.

Table 4.8. –Female Death Rates for Chronic Obstructive Pulmonary Diseases By Age: Selected Years, 1980 – 1998

Age	1980	1982	1984	1986	1988	1990	1992	1994	1996	1998
	Deaths per 100,000 resident population									
All ages, age adjusted	8.9	9.8	11.4	12.8	14.0	14.7	15.5	17.1	17.6	18.1
All ages, crude	15.0	16.9	20.7	23.9	27.0	29.2	31.8	35.9	38.0	40.2
Under 1	1.3	1.2	1.2	*	1.2	1.2	*	1.1	*	*
1-4	*	0.5	0.4	*	*	*	0.4	*	*	*
5-14	0.3	0.3	0.2	0.3	0.2	0.3	0.3	0.2	0.4	0.3
15-24	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.5
25-34	0.5	0.5	0.6	0.6	0.7	0.7	0.6	0.9	0.9	0.8
35-44	1.5	1.6	1.5	1.5	1.7	1.5	1.7	1.7	2.1	2.0
45-54	7.7	8.0	8.0	8.7	8.6	8.8	7.9	8.7	8.4	8.2
55-64	27.6	28.8	33.6	36.7	39.4	40.3	41.0	43.1	42.4	40.5
65-74	67.1	76.0	89.3	100.7	109.2	112.3	120.7	133.4	136.7	143.0
75-84	98.7	114.1	143.5	169.1	194.1	214.2	233.4	265.2	280.4	295.8
85 and over	138.7	146.7	187.3	214.8	251.3	286.0	317.6	368.8	406.7	444.7

* Based on fewer than 20 deaths.

Note: Rates are age adjusted to the 1940 U.S. standard million population.

Source: U.S. Department of Health and Human Services, *Health, United States, 2000*.

**Table 4.9. –Selected Notifiable Disease Rates, According to Disease
United States, Selected Years 1950 – 1998**

Disease	1950	1960	1970	1980	1985	1990	1992	1994	1996	1998
	Cases per 100,000 population									
Diphtheria	3.8	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hepatitis A	–	–	27.9	12.8	10.0	12.6	9.1	10.3	11.7	8.6
Hepatitis B	–	–	4.1	8.4	11.5	8.5	6.3	4.8	4.0	3.8
Lyme disease	–	–	–	–	–	–	3.9	5.0	6.2	6.4
Pertussis (whooping cough)	79.8	8.2	2.1	0.8	1.5	1.8	1.6	1.8	2.9	2.7
Poliomyelitis, total	22.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rubella (German measles)	–	–	27.8	1.7	0.3	0.5	0.1	0.1	0.1	0.1
Rubeola (measles)	211.0	245.4	23.2	6.0	1.2	11.2	0.9	0.4	0.2	0.0
Salmonellosis, excluding typhoid fever	–	3.9	10.8	14.9	27.4	19.5	16.0	16.6	17.2	16.2
Shigellosis	15.5	6.9	6.8	8.4	7.1	10.9	9.4	11.4	9.8	8.7
Tuberculosis ¹	–	30.8	18.3	12.3	9.3	10.3	10.5	9.4	8.0	6.8
Sexually transmitted diseases: ²										
Syphilis	146.0	68.8	45.3	30.5	28.4	54.5	44.3	31.6	20.1	14.2
Chlamydia ³	–	–	–	–	17.4	160.8	183.4	194.5	192.9	236.6
Gonorrhea ⁴	192.5	145.4	297.2	445.1	383.0	277.5	197.2	165.7	123.2	132.9
	Number of cases (thousands)									
Diphtheria	5.8	0.9	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hepatitis A	–	–	56.8	29.1	23.2	31.4	23.1	26.8	31.0	23.2
Hepatitis B	–	–	8.3	19.0	26.6	21.1	16.1	12.5	10.6	10.3
Lyme disease	–	–	–	–	–	–	9.9	13.0	16.5	16.8
Pertussis (whooping cough)	120.7	14.8	4.2	1.7	3.6	4.6	4.1	4.6	7.8	7.4
Poliomyelitis, total	33.3	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rubella (German measles)	–	–	56.6	3.9	0.6	1.1	0.2	0.2	0.2	0.4
Rubeola (measles)	319.1	441.7	47.4	13.5	2.8	27.8	2.2	1.0	0.5	0.1
Salmonellosis, excluding typhoid fever	–	6.9	22.1	33.7	65.3	48.6	40.9	43.3	45.5	43.7
Shigellosis	23.4	12.5	13.8	19.0	17.1	27.1	23.9	29.8	26.0	23.6
Tuberculosis ¹	–	55.5	37.1	27.7	22.2	25.7	26.7	24.4	21.3	18.4
Sexually transmitted diseases: ²										
Syphilis	217.6	122.5	91.4	68.8	67.6	135.0	112.9	82.3	53.2	38.0
Chlamydia ³	–	–	–	–	25.8	323.7	409.6	451.8	490.6	607.6
Gonorrhea ⁴	286.7	258.9	600.1	1,004.0	911.4	690.0	502.8	419.6	326.8	355.6

¹ Case reporting for tuberculosis began in 1953. Data prior to 1975 are not comparable with subsequent years data because of changes in reporting criteria effective in 1975.

² Newly reported civilian cases prior to 1991; includes military cases beginning in 1991. For 1950, data for Alaska and Hawaii not included.

³ Chlamydia was non-notifiable in 1994 and earlier years. For 1998, cases for New York based exclusively on those reported by New York City.

⁴ Data for 1994 do not include cases from Georgia.

Notes: The total resident population was used to calculate all rates except sexually transmitted diseases, for which the civilian resident population was used prior to 1991. For sexually transmitted diseases, 1997 population estimates were used to calculate 1998 rates.

Sources: Centers for Disease Control and Prevention. *Summary of Notifiable Diseases, United States, 1998. Morbidity and Mortality Weekly Report*; 47(53); National Center for HIV, STD, and TB Prevention. *Sexually Transmitted Disease Surveillance, 1998*.

- Since 1950, diphtheria, pertussis (whooping cough), polio, and measles have largely been eradicated through programs of vaccination. The rate of tuberculosis cases in 1998 was less than one-quarter of the rate in 1960.
- The rate of syphilis nearly doubled from 1985 to 1990 but has since declined to 14.2 cases per 100,000, the lowest level on record. Between 1960 and 1970 the rate for gonorrhea doubled and then between 1970 and 1980 it increased again by nearly 50 percent. Since then it has been reduced by about 70 percent.
- If left untreated gonorrhea and chlamydia – which became notifiable after 1994 and showed a large increase from 1996 to 1998 – can cause pelvic inflammatory disease and may result in ectopic pregnancy or infertility.