

# Arizona Fact Book on Men's Health

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## Acknowledgements

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I am appreciative of the contributions of Mr. Rudy Navarro, who researched, compiled, and developed this volume. In addition, Ms. Nicole Kruse of the College of Human Services contributed to the development of this book. Mr. Geoffrey Boyarsky provided design, production, and layout preparation.

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## Introduction

This fact book is about the health and wellness of men in Arizona and the United States. Health is a difficult and complicated condition to describe and measure and no one statistic can adequately represent a population's overall wellbeing. This volume conceptualizes men's health as a combination of multiple domains related to physical, behavioral, and psychological functioning. Using this approach, information is presented on a variety of indicators or markers of health such as mortality, disease, and behaviors or conditions that have been found to contribute to illness.

Chapters are organized around health topics such as mortality, cancer, or mental health. Data on various aspects of the chapter topics are displayed in tables. All information has come directly from existing sources and has been modified only to accommodate the layout of the fact book. In some cases, percentages have been computed to better illustrate change over time or differences between statistics and certain information may be highlighted. The significance of a chapter topic may also be discussed. These computations and statements are meant to provide a context for the reader; attempts to interpret data to argue a point or position have been avoided.

In general, data is presented in the form of percentages or rates so that comparisons can be made between time periods or population groups. When possible, statistics for both Arizona and the United States are provided. While this book is about the status of men's health, data on female health is often displayed as well. Again, this is provided for comparison purposes so that the significance of the data becomes more apparent.

It is important that the data in this fact book be perceived as credible and accurate. Most of the information was taken from government agencies that collect this data on a regular basis or articles published in scientific, peer-reviewed journals. Brief citations for the source of the data are provided at the bottom of each table and are interspersed throughout the narrative. When available, Internet addresses that correspond to these citations will be found in the References section at the end of the fact book. The reader is encouraged to investigate the Internet resources for additional information. Data in some tables come from a variety of sources that were combined by another organization into a single table. The source cited in the fact book is the publication from which the table was taken. Readers may access the cited publication on-line to see what other sources may have been used to obtain the data presented in the table.

Two terms are frequently used in the fact book and should be defined. *Prevalence* refers to the occurrence of a condition in a population at a given point in time. *Incidence* refers to the number of new cases of a condition in a population in a period of time, usually one year.

# 1. Mortality

The causes of death and the age at which people die are important measures of a community’s health. These data are also some of the most regularly collected and accurate information available about the overall health of a population.

This section reports mortality rates for various populations, leading causes of death among people in Arizona and the U.S., and mortality rate trends for selected diseases. Mortality information specific to cardiovascular disease and cancer will be found in subsequent sections.

According to Table 1.1, over the past two years, mortality rates for both men and women have increased with men experiencing a smaller increase (9.1 percent) than women (9.7 percent). Still, the mortality rate for men in 2000 was 941.1 per 100,000 persons compared to 654.6 per 100,000 persons for women. This represents a mortality rate for men that is 43.7 percent higher than the mortality rate for women.

Table 1.1: Age-Adjusted Mortality Rates (Number of Deaths per 100,000 Persons Adjusted to the 2000 Standard U.S. Population) for All Causes by Gender and Year, Arizona, 1990-2000.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Male	1056.7	1028.9	1054.7	1075.2	1049.8	966.0	958.8	916.7	860.3	896.9	941.1
Female	666.4	661.0	656.3	691.4	681.7	659.1	652.8	641.2	596.2	624.8	654.6
Both	839.9	825.5	834.3	865.0	850.1	804.8	796.4	771.8	720.9	752.8	785.6

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000.*

The leading causes of death in the U.S. for men by racial and ethnic origin are presented in Table 1.2. In 1999, diseases of the heart and stroke and cancer were the leading causes of death for all groups. Chronic lower respiratory diseases such as emphysema and chronic bronchitis were the third leading cause of death for White and Asian/Pacific Islander males. It is interesting to note that homicides were a leading cause of death for Black and Hispanic men while HIV/AIDS was a leading cause of death for Black males.

Table 1.2: Leading Cause of Death for Males by Race/Ethnicity, U.S., 1999.

	White	Black	Hispanic	Asian/Pacific Islander	American Indian/Alaska Native
Diseases of the heart and stroke	36.1	31.2	28.2	36.2	25.2
Cancer	24.6	22.5	18.4	25.3	15.6
Chronic Lower Respiratory Disease	5.7			3.9	
Accidents	5.3	6.0	11.3	5.3	14.6
Diabetes Mellitus	2.5		4.0	2.9	5.3
Assault (homicide)		4.3	4.1		
HIV (AIDS)		3.8			
Chronic liver disease and cirrhosis					4.9

Source: American Heart Association, 2001. *2002 Heart and Stroke Statistical Update.*

Table 1.3 presents mortality rate trends for leading causes of death in Arizona. Note that cardiovascular disease includes diseases of the heart as well as diseases that affect the veins and other vessels that transport fluids in the body. Diseases of the heart refer to conditions that affect the heart itself. Similar to national statistics, heart disease, stroke (cerebrovascular disease), and cancer (malignant neoplasms) are the leading causes of death for Arizonans accounting for 54.8 percent of total deaths in 2000 (Arizona Department of Health Services, 2001). In 2000, the risk of death from heart disease for males was 59.5 percent greater than the risk of death from heart disease for females. A man's risk of dying from cancer in 2000 was 40 percent greater than a Men's risk. A man's risk of dying from stroke was 2.3 percent less than the risk of dying from stroke for females in 2000.

Male death rates for accidents, suicide, and homicide have decreased over the four to five years since 1994 and are lower than 1990 levels. In 2000, males were 2.3 times as likely to die from accidents as females, 4.7 times more likely than females to kill themselves, and 2.9 times more likely to die as a result of a homicide.

Mortality rates for leading causes of death for different age groups are presented in Tables 1.4 through 1.6. While the causes of death were similar among middle age men (45-64) and older men (65+), causes of death were noticeably different for younger men (22-44). Younger men were more likely to die from accidents, suicides, homicides, and HIV disease.

According to Table 1.4, mortality rates for all the leading causes of death for young men decreased from 1990 to 2000. Still, men were much more likely than women to die from accidents, suicides, heart disease, and homicide. HIV disease, a leading cause of death for men, was not one of the five leading causes of death for women. HIV disease also dropped from the 5<sup>th</sup> leading cause of death in 1996 to the 6<sup>th</sup> leading cause in 1997 and 7<sup>th</sup> leading cause in 1998, 1999, and 2000 (Arizona Department of Health Services, 2001). Men were 3.3 times as likely to die from a violent cause of death (accidents, suicides, and homicides) than women.

For middle aged men, three of the leading causes of death in 2000 were lower than 1990 as shown in Table 1.5. Deaths from heart disease decreased by 30.1 percent, deaths from chronic lower respiratory disease decreased by 26.1 percent, and cancer deaths decreased by 24.4 percent. Middle aged men experienced an overall decrease in mortality of 5.3 percent compared to 11.6 percent experienced by women.

As shown in Table 1.6, rates of death due to heart disease and cancer decreased for older men from 1990 to 2000 although not as much as the decrease seen in middle aged men during this same period of time. Cerebrovascular disease and influenza and pneumonia become leading causes of death in this older population. Older men continue to have higher mortality rates than women among all leading causes of death with the exception of stroke. In the decade between 1990 and 2000, older men saw a decrease of 11.9 percent in cerebrovascular disease while older women experienced an increase of 10.6 percent.

According to Table 1.7, several differences exist in mortality for urban and rural men. The rural accident rate for men is 74.6 per 100,000 males compared to 54.9 per 100,000 males for urban

men. Motor vehicle death rates are also higher for men in rural areas (37.6 per 100,000 males) than urban areas (21.7 per 100,000 males). Men in rural areas are more likely to commit suicide (34.1 per 100,000 males) than their urban counterparts (22.5 per 100,000 males). The rural mortality rate for alcohol induced deaths is 24.4 per 100,000 males which is higher than the mortality rate of 11.2 per 100,000 males for urban men.

Table 1.3: Age-Adjusted Mortality Rates by Gender and Year for Selected Leading Causes of Death, Arizona, 1990-2000.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<b>Total, all causes</b>											
Total	839.9	825.5	834.3	865.0	850.1	804.8	796.4	771.8	720.9	752.8	785.6
Male	1056.7	1028.9	1054.7	1075.2	1049.8	966.0	958.8	916.7	860.3	896.9	941.1
Female	666.4	661.0	656.3	691.4	681.7	659.1	652.8	641.2	596.2	624.8	654.6
<b>Cardiovascular disease</b>											
Total	338.6	324.5	327.0	338.3	323.3	299.5	289.6	277.5	255.7	262.7	276.1
Male	410.6	389.8	396.9	404.0	384.1	347.9	342.6	320.3	302.4	311.0	333.1
Female	280.7	269.1	269.5	282.4	270.2	255.3	242.6	238.2	214.1	219.8	230.0
<b>Diseases of heart</b>											
Total	263.8	251.2	255.5	263.9	247.7	229.3	218.0	207.6	189.4	194.6	206.1
Male	330.7	313.9	319.7	329.4	305.4	278.1	269.9	251.0	235.1	241.0	259.3
Female	210.3	199.3	202.8	209.6	198.6	185.9	173.3	169.0	149.3	154.2	163.6
<b>Malignant neoplasms</b>											
Total	190.4	193.3	190.5	191.9	190.7	177.5	178.0	172.9	158.2	166.4	170.4
Male	238.8	240.4	239.5	238.7	236.6	211.6	216.5	206.3	187.2	196.4	204.0
Female	156.2	160.1	155.3	158.7	157.8	151.2	148.2	146.9	135.5	142.9	145.8
<b>Cerebrovascular disease</b>											
Total	54.6	52.8	51.5	54.6	54.6	50.3	51.3	50.7	44.7	43.5	51.7
Male	54.6	52.5	54.1	50.9	54.9	47.3	50.6	47.0	42.9	43.6	50.8
Female	54.1	51.8	49.5	56.0	53.3	51.8	50.7	52.6	45.6	42.9	51.8
<b>Chronic lower respiratory diseases</b>											
Total	44.4	45.1	43.1	47.7	44.3	44.6	44.9	47.3	43.3	45.7	47.4
Male	58.2	61.5	56.4	62.2	57.7	52.5	51.8	56.5	51.2	52.8	56.2
Female	35.0	34.2	34.1	37.4	35.6	38.4	39.8	40.4	37.4	40.6	41.3
<b>Accidents (unintentional injuries)</b>											
Total	42.6	38.3	40.9	43.3	46.5	45.7	46.5	45.0	44.7	44.1	41.1
Male	61.4	53.3	59.9	62.9	66.9	65.2	66.6	64.1	62.6	61.9	58.0
Female	24.5	24.1	23.3	24.8	27.0	26.4	27.1	26.3	26.9	26.6	24.9
<b>Motor vehicle accidents</b>											
Total	23.6	20.4	20.5	20.4	22.0	23.7	23.3	20.9	20.8	19.9	17.5
Male	33.1	27.8	29.3	28.4	31.3	32.7	32.7	28.7	18.0	17.9	24.4
Female	14.3	13.2	12.3	12.7	13.0	14.7	14.2	13.0	13.6	11.9	10.6
<b>Influenza and pneumonia</b>											
Total	39.3	36.6	31.5	35.4	21.7	19.1	19.8	18.7	19.1	23.0	24.4
Male	49.2	45.4	39.3	45.2	26.3	22.6	23.8	20.8	21.9	27.8	29.2
Female	32.6	30.9	25.9	28.9	18.5	16.4	16.6	16.9	17.0	19.2	21.1

Table 1.3 (cont.): Age-Adjusted Mortality Rates by Gender and Year for Selected Leading Causes of Death, Arizona, 1990-2000.

Alzheimer's disease											
Total	6.2	6.8	7.9	9.2	14.4	13.7	16.0	14.3	14.1	16.0	21.8
Male	6.5	5.9	7.9	7.4	14.3	13.0	12.4	11.5	11.0	13.5	17.5
Female	6.0	7.3	7.8	10.3	14.4	13.8	18.0	16.2	15.8	17.9	24.2
Diabetes											
Total	15.6	16.2	17.4	16.6	18.7	18.3	19.5	19.7	18.8	20.0	19.0
Male	16.9	18.5	18.8	16.8	19.4	18.6	20.5	20.6	21.3	23.3	21.0
Female	14.2	14.5	16.2	16.5	17.8	18.0	18.9	18.8	16.5	17.3	17.2
Intentional self harm (suicide)											
Total	19.0	17.9	17.4	19.1	20.2	19.8	17.2	17.7	17.7	15.8	14.6
Male	32.6	30.5	29.1	32.4	33.5	31.5	28.7	29.5	28.6	25.7	24.7
Female	6.5	6.4	6.6	7.0	7.6	8.8	6.4	6.4	7.1	6.5	5.2
Chronic liver disease and cirrhosis											
Total	12.4	13.4	12.0	13.6	14.2	13.6	12.5	13.7	12.0	12.0	12.8
Male	17.3	18.0	16.2	18.7	19.6	18.3	16.5	19.0	17.2	16.9	17.7
Female	8.3	9.3	8.5	9.0	9.3	9.3	8.7	8.9	7.4	7.5	8.3
Nephritis, nephrotic syndrome and nephrosis											
Total	8.7	8.8	10.5	9.4	10.3	8.3	8.6	8.5	8.5	9.7	11.7
Male	11.0	11.4	14.7	11.9	12.6	8.9	9.4	10.0	10.0	12.2	13.9
Female	6.9	7.1	7.6	7.7	8.9	7.8	8.1	7.4	7.4	8.0	10.4
Septicemia											
Total	6.1	6.7	7.0	7.1	6.7	6.7	7.2	7.9	6.6	7.5	6.7
Male	7.6	8.1	8.3	8.4	7.3	8.1	7.9	8.8	7.5	8.8	7.3
Female	4.9	5.8	6.3	6.3	6.2	5.4	6.6	6.9	5.9	6.2	6.1
Assault (homicide)											
Total	8.1	8.6	8.9	9.5	11.5	12.1	10.2	9.6	9.5	8.7	7.6
Male	12.2	13.0	14.2	14.2	18.5	19.6	16.9	15.8	15.4	13.6	11.1
Female	4.0	4.5	4.3	5.0	4.7	5.2	4.1	4.2	4.3	4.7	3.8

Adjusted to the 2000 standard U.S. population. The cause-of-death titles are according to the Tenth Revision of the International Classification of Diseases (ICD-10). The causes of death for 1994 through 2000 are classified by ICD-10. The causes of death for 1990-1993 are classified by the Ninth Revision (ICD-9). Rates for Influenza and Pneumonia; Alzheimer's Disease; Nephritis, Nephrotic Syndrome, and Nephrosis; and Septicemia from 1990 through 1993 should not be compared to rates from 1994 through 2000 because of the different classification systems. The rates are per 100,000 persons in specified gender group.

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000*.

Table 1.4: Mortality Rates <sup>1</sup> for the Five Leading Causes <sup>2</sup> of Death among Young Adults (20-44 Years) by Gender, Arizona, 1990-2000.												
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	% change from 1990
<b>Male</b>												
Accidents (unintentional injuries)	70.8	59.9	67.5	68.8	80.0	87.6	81.9	78.7	78.9	70.5	57.3	-19.1
Intentional self-harm (suicide)	40.3	32.6	34.0	40.0	46.6	45.4	36.9	39.1	38.6	30.4	28.3	-29.8
HIV disease	23.8	28.3	33.9	39.0	43.3	45.2	29.7	14.8	*9.7	*9.2	*7.3	-69.3
Assault (homicide)	20.2	21.8	22.5	24.4	31.1	34.0	28.8	28.6	28.4	24.7	20.0	-1.0
Diseases of heart	16.8	20.9	21.5	23.0	21.0	22.5	24.3	20.1	21.6	19.1	16.2	-3.6
ALL CAUSES	229.1	233.9	250.8	273.2	303.6	318.6	284.4	258.8	253.5	221.9	213.0	-7.0
<b>Female</b>												
Malignant neoplasm	21.7	20.7	19.1	258.9	22.4	23.1	22.9	22.8	24.4	23.4	16.7	-17.3
Accidents (unintentional injuries)	20.2	18.5	17.8	20.3	22.9	23.0	24.7	22.4	24.4	23.4	16.7	-17.3
Intentional self-harm (suicide)	7.2	7.4	7.5	8.6	9.0	11.8	9.6	8.7	9.7	7.8	7.2	0.0
Diseases of heart	5.8	8.0	6.0	7.4	9.0	9.2	8.7	8.4	8.2	7.5	6.2	6.9
Assault (homicide)	6.0	6.2	5.7	7.4	6.8	8.0	5.6	6.6	7.1	7.3	4.5	-25.0
ALL CAUSES	87.0	88.6	88.7	108.7	110.6	121.4	113.2	107.6	113.6	99.5	96.3	10.7
<b>Total</b>												
Accidents (unintentional injuries)	45.9	39.5	43.0	45.0	51.9	55.9	53.7	51.0	52.1	47.5	37.7	-17.9
Intentional self-harm (suicide)	24.0	20.2	20.9	24.5	28.1	28.9	23.4	24.1	24.4	19.4	18.1	-24.6
Diseases of heart	11.2	14.6	13.9	15.3	15.1	16.0	16.6	14.4	15.0	13.4	11.4	1.8
Malignant neoplasm	20.0	20.1	17.6	22.8	19.9	20.5	22.0	20.7	22.9	19.8	18.3	-8.5
Assault (homicide)	13.2	14.1	14.2	16.0	19.1	21.3	17.3	17.8	18.0	16.2	12.5	-5.3
ALL CAUSES	159.1	162.3	170.9	192.3	208.7	221.7	199.9	184.4	184.8	162.0	156.5	-1.6

\* The fifth leading cause based on the combined number of deaths during 1990-2000, but not among the five leading causes of death in 1998, 1999, and 2000.

<sup>1</sup> Rates are presented per 100,000 persons 20-44 years old.

<sup>2</sup> The five causes with the greatest number of deaths over the 1990-2000 period.

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000*.

Table 1.5: Mortality Rates <sup>1</sup> or the Five Leading Causes <sup>2</sup> of Death among Middle-Aged Adults (45-64 years) by Gender, Arizona, 1990-2000.												
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	% change from 1990
Male												
Diseases of heart	288.8	289.1	287.4	303.9	281.3	266.0	253.0	239.0	240.9	225.3	202.0	-30.1
Malignant neoplasm	281.7	278.8	285.9	279.5	282.4	252.7	250.0	225.0	236.7	229.0	212.9	-24.4
Accidents (unintentional injuries)	58.7	50.3	50.6	60.6	68.8	60.0	64.4	65.4	66.3	74.0	65.8	12.1
Chronic lower respiratory diseases	37.9	37.2	34.1	36.4	32.8	34.2	32.5	37.2	33.3	41.7	28.0	-26.1
Chronic liver disease and cirrhosis	37.2	38.8	38.1	42.8	46.6	42.0	38.1	40.0	43.0	42.3	41.9	12.6
ALL CAUSES	953.7	942.9	964.4	1000.3	983.5	912.5	894.5	856.7	863.9	866.1	808.6	-5.3
Female												
Malignant neoplasm	216.4	247.7	222.4	223.0	223.7	211.5	192.1	195.8	190.7	192.5	181.5	-16.1
Diseases of heart	104.6	95.5	103.6	107.7	100.7	102.6	87.6	89.1	85.2	81.7	79.5	-24.0
Chronic lower respiratory diseases	30.5	31.2	29.0	28.4	24.9	25.7	23.7	27.8	22.3	23.5	20.6	-32.5
Cerebrovascular disease	22.5	19.3	22.2	23.2	20.4	21.3	18.7	20.0	19.4	19.5	21.7	-3.6
Accidents (unintentional injuries)	24.0	18.8	20.6	15.8	21.7	21.6	19.2	21.5	23.4	22.7	21.0	-12.5
ALL CAUSES	531.7	548.4	531.8	546.2	544.1	527.1	492.4	490.4	489.0	500.9	470.0	-11.6
Total												
Malignant neoplasm	247.8	262.6	262.6	250.3	252.1	231.3	220.1	209.9	212.9	210.1	196.7	-20.6
Diseases of heart	193.1	188.5	188.5	202.7	188.3	181.3	167.5	161.5	160.4	151.0	138.8	-28.1
Accidents (unintentional injuries)	40.7	33.9	33.9	37.5	44.5	40.1	41.0	42.7	44.1	47.4	42.7	4.9
Chronic lower respiratory diseases	34.5	34.1	34.1	32.3	28.7	29.8	28.0	32.4	27.6	27.2	24.2	-29.9
Chronic liver disease and cirrhosis	29.0	28.6	27.5	29.9	31.4	29.3	27.5	27.9	28.7	28.7	29.1	0.3
ALL CAUSES	734.3	737.8	737.8	766.1	757.2	712.8	686.8	667.3	669.9	677.1	633.9	-13.7

<sup>1</sup> Rates are presented per 100,000 persons 45-64 years old.

<sup>2</sup> The five causes with the greatest number of deaths over the 1990-2000 period.

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000*.

Table 1.6: Mortality Rates <sup>1</sup> or the Five Leading Causes <sup>2</sup> of Death among Elderly (65 Years and Older) by Gender, Arizona, 1990-2000.												
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	% change from 1990
<b>Male</b>												
Diseases of heart	1759.5	1675.0	1755.2	1861.0	1810.0	1640.9	1515.7	1430.8	1449.3	1406.8	1475.7	-16.1
Malignant neoplasm	1277.2	1323.0	1348.5	1357.0	1401.5	1242.9	1204.3	988.8	1114.2	1118.4	1171.9	-8.2
Chronic lower respiratory diseases	308.8	385.5	364.4	422.0	390.2	357.51	340.6	368.2	364.4	354.1	369.3	19.6
Cerebrovascular disease	351.8	297.9	312.1	306.4	339.9	300.4	304.6	295.5	285.9	297.3	309.9	-11.9
Influenza and pneumonia	253.2	228.3	208.8	244.3	208.0	194.1	199.2	172.3	210.5	238.8	161.7	*-3.0
	(NA)	(NA)	(NA)	(NA)	(145.2)	(135.5)	(139.1)	(120.3)	(147.0)	(166.7)		
<b>ALL CAUSES</b>	4981.7	4944.5	5167.8	5360.8	5352.4	4846.0	4671.4	4593.8	4603.3	4618.9	4761.6	-4.4
<b>Female</b>												
Diseases of heart	1319.9	1275.8	1333.0	1396.7	1366.0	1270.1	1199.8	1191.1	1154.1	1117.9	1165.3	-11.7
Malignant neoplasm	811.5	794.7	823.9	836.3	854.7	794.7	803.2	788.3	765.5	771.2	814.6	0.4
Cerebrovascular disease	339.9	337.9	320.4	376.7	370.3	360.3	362.8	378.9	353.2	312.5	376.0	10.6
Chronic lower respiratory diseases	223.3	216.9	224.0	254.7	247.8	260.3	272.9	278.8	282.7	293.7	300.6	34.6
Influenza and pneumonia	197.2	189.2	169.5	192.7	178.2	157.3	163.5	164.9	181.0	193.5	147.5	*9.2
	(NA)	(NA)	(NA)	(NA)	(124.4)	(109.8)	(114.2)	(115.1)	(126.4)	(135.1)		
<b>ALL CAUSES</b>	3673.9	3661.6	3768.8	4006.8	4036.7	3831.8	3883.2	3889.0	3862.6	3870.0	4095.0	11.5
<b>Total</b>												
Diseases of heart	1509.9	1448.4	1515.5	1594.7	1554.8	1427.5	1339.8	1297.4	1285.1	1246.5	1303.0	-13.7
Malignant neoplasm	1012.8	1023.0	1050.7	1058.7	1087.1	989.0	981.0	877.2	920.2	925.7	973.1	-3.9
Cerebrovascular disease	326.5	320.6	316.8	346.7	357.4	334.3	337.1	341.9	323.3	297.3	346.6	6.2
Chronic lower respiratory diseases	278.8	289.3	284.7	326.0	308.3	302.4	302.9	318.4	319.0	320.5	331.1	18.8
Influenza and pneumonia	221.4	206.1	186.5	217.7	190.9	173.2	179.3	168.1	194.1	213.6	153.8	*3.2
	(NA)	(NA)	(NA)	(NA)	(133.3)	(120.9)	(152.2)	(117.4)	(135.5)	(149.1)		
<b>ALL CAUSES</b>	4239.2	4216.1	4373.5	4584.2	4596.1	4271.5	4232.5	4201.6	4191.1	4203.4	4390.7	3.6

<sup>1</sup> Rates are presented per 100,000 persons 65 years and older.

<sup>2</sup> The five causes with the greatest number of deaths over the 1990-2000 period.

\*Percent change from 1999.

Note: the cause-of-death titles are according to the Tenth Revision of the International Classification of Diseases (ICD-10). The causes of death for 2000 are classified by ICD-10, replacing the Ninth Revision (ICD-9) used during 1979-1999. The numbers in parentheses present comparability modified data: the annual number of deaths for 1994-1999 that would have been classified as influenza and pneumonia, had the ICD-10 classification system and coding rules been in place.

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000*.

Table 1.7: Age-Adjusted\* Mortality Rates for Selected Causes of Death by Urban/Rural Area and Gender, Arizona, 2000.

	Arizona			Urban			Rural		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total, all causes	785.6	941.1	654.6	778.3	933.0	649.9	818.2	978.1	675.6
Cardiovascular disease	276.1	333.1	230.0	275.5	332.2	230.5	276.4	334.7	226.4
Disease of heart	206.1	259.3	163.6	205.8	259.7	163.5	205.7	255.5	162.6
Malignant neoplasm	170.4	204.0	145.8	170.5	204.6	145.8	170.3	201.8	145.6
Colorectal cancer	17.0	20.5	14.1	17.1	20.2	14.6	16.4	21.7	11.8
Lung cancer	46.1	59.2	35.8	46.3	59.8	35.9	45.4	56.4	35.7
Prostate cancer	NA	28.4	NA	NA	28.5	NA	NA	27.9	NA
Female breast cancer	NA	NA	25.4	NA	NA	25.7	NA	NA	24.2
Cerebrovascular disease	51.7	50.8	51.8	51.5	50.3	51.7	52.1	52.8	51.7
Chronic lower respiratory disease	47.4	56.2	41.3	48.2	56.6	42.6	43.8	54.6	35.5
Accidents (unintentional injuries)	41.1	58.0	24.9	38.3	54.9	22.6	55.2	74.6	36.2
Motor vehicle accidents	17.5	24.4	10.6	15.3	21.7	8.8	28.5	37.6	19.5
Falls	7.6	9.8	5.9	7.5	10.1	5.6	7.8	8.9	6.7
Accidental drowning	1.7	2.5	.9	1.7	2.5	1.0	1.8	2.9	.6
Accidental poisoning	5.0	8.0	2.1	5.2	8.1	2.3	4.1	7.4	.8
Influenza and pneumonia	24.4	29.2	21.1	23.9	29.2	20.4	27.0	29.1	25.0
Alzheimer's disease	21.8	17.5	24.2	22.6	17.4	25.4	18.0	17.7	18.3
Diabetes	19.0	21.0	17.2	18.5	21.2	16.3	21.0	20.3	21.1
Intentional self-harm (suicide)	14.6	24.7	5.2	13.1	22.5	4.4	21.2	34.1	9.0
Chronic liver disease and cirrhosis	12.8	17.7	8.3	12.1	16.6	8.0	16.3	23.4	9.6
Nephritis	11.7	13.9	10.4	11.1	13.2	9.9	14.4	16.9	12.4
Septicemia	6.7	7.3	6.1	6.2	6.9	5.6	8.7	9.0	8.2
Assault (homicide)	7.6	11.1	3.8	7.9	11.7	3.8	5.9	8.0	3.7
Parkinson's disease	6.8	10.1	4.7	7.1	10.8	4.9	5.2	7.3	3.7
Essential (primary) hypertension	5.6	6.2	5.1	5.8	6.2	5.5	4.6	6.3	3.3
Aortic aneurysm	5.0	8.0	2.7	4.7	7.4	2.7	6.4	10.6	2.8
Congenital malformations	3.6	3.6	3.6	3.5	3.5	3.6	3.9	4.3	3.6
HIV disease	3.2	5.5	1.0	3.3	5.7	.9	2.9	4.4	1.5
Injury by firearms	15.3	26.9	4.3	14.4	25.8	3.5	19.1	30.8	8.1
Drug-induced deaths	6.8	9.4	4.1	7.2	9.9	4.4	4.8	7.2	2.3
Alcohol-induced deaths	8.7	13.5	4.3	7.4	11.2	3.8	15.2	24.4	6.5

\*Adjusted to the 2000 standard U.S. population. The causes of death for 2000 are classified by the Tenth Revision of the International Classification of Diseases (ICD-10). The rate for breast cancer is per 100,000 females. The rate for prostate cancer is per 100,000 males.

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000*.

Table 1.8 presents mortality trends by gender and age group. Between 1990 and 2000, young men (20-44 years old) improved their survival chances with death rates in 2000 7 percent lower than those in 1990. The female mortality rate during the same time period was 10.7 percent higher. Older adults (ages 45-64) experienced larger improvements with mortality rates improving for men by 15.2 percent from 1990 to 2000 and 11.6 percent for women in the same time period.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
20-44 years old											
Male	229.1	233.9	250.8	273.2	303.6	318.6	284.4	258.8	253.5	221.9	213.0
Female	87.0	88.6	88.7	108.7	110.6	121.4	113.2	107.6	113.6	99.5	96.3
45-64 years old											
Male	953.7	94.9	964.4	1000.3	983.5	912.5	894.5	856.7	863.9	866.1	808.6
Female	531.7	548.4	531.8	546.2	544.1	527.1	492.4	490.4	489.0	500.9	470.0

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000.*

Tables 1.9 through 1.11 address mortality rates for chronic lower respiratory diseases, influenza and pneumonia, and Alzheimer's disease. Chronic lower respiratory disease was the 4<sup>th</sup> leading cause of death for men in 2000 (Table 1.3). As shown in Table 1.9, rates of death from chronic lower respiratory diseases decreased 3.8 percent for men from 1990 to 2000 and rose 16.4 percent for women. Men were still 35.6 percent more likely to die from chronic lower respiratory diseases than women (Arizona Department of Health Services, 2001).

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Male	58.2	61.5	56.4	62.2	57.7	52.5	51.8	56.5	51.2	52.8	56.2
Female	35.0	34.2	34.1	37.4	35.6	38.4	39.8	40.4	37.4	40.6	41.3

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000.*

Influenza and pneumonia were the 6<sup>th</sup> leading cause of death for all men in 2000 (Table 1.3) and the 5<sup>th</sup> leading cause of death for elderly men ages 65 and older (Table 1.6). According to the data in Table 1.10, mortality rates for influenza and pneumonia increased for both men and women between 1994 and 2000. Men experienced an 11 percent increase and women experienced a 14.1 percent increase.

	1994	1995	1996	1997	1998	1999	2000
Male	26.3	22.6	23.8	20.8	21.9	27.8	29.2
Female	18.5	16.4	16.6	16.9	17.0	19.2	21.1

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000.*

In 2000, Alzheimer's disease was the 9<sup>th</sup> leading cause of death for men (Table 1.3). Mortality rates increased 22.4 percent for men and 68.1 percent for women between 1994 and 2000 (Table 1.11).

Table 1.11: Age-Adjusted Mortality Rates for Alzheimer's Disease by Gender and Year, Arizona, 1994-2000.

	1994	1995	1996	1997	1998	1999	2000
Male	14.3	13.0	12.4	11.5	11.0	13.5	17.5
Female	14.4	13.8	18.0	16.2	15.8	17.9	24.2

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000*.

Table 1.12 presents information about the average age of death for racial and ethnic groups over time. All groups experienced an increase in age at death from 1990 to 2000. American Indian males experienced the largest percent increase (6 percent) followed by White, non-Hispanic males (4 percent), Black males (2.3 percent), Hispanic males (2.2 percent), and Asian males (1.7 percent). Still, in 2000, White non-Hispanic males' average age of death exceeded the average age of death for Asian males by 9.3 years, Black males by 14.1 years, Hispanic males by 15.1 years, and American Indian males by 19.3 years.

Table 1.12: Average Age at Death from All Causes by Gender and Ethnicity, Arizona, 1990-2000.

	All ethnic groups*	White, non-Hispanic	Hispanic	Black	American Indian	Asian
1990						
Total	68.4	70.6	58.5	58/1	51.4	NA
Male	65.4	67.9	54.6	55.5	48.7	NA
Female	72.2	73.9	64.1	61.6	56.1	NA
1991						
Total	68.5	70.8	57.6	58.8	52.3	NA
Male	65.6	68.1	54.7	54.4	50.4	NA
Female	71.9	73.7	61.5	64.4	54.8	NA
1992						
Total	68.7	71.1	58.3	57.8	52.8	NA
Male	65.8	68.5	54.8	54.7	49.0	NA
Female	72.4	74.2	63.7	62.3	58.7	NA
1993						
Total	68.6	71.1	57.9	56.2	51.9	NA
Male	65.6	68.3	54.7	54.1	49.3	NA
Female	72.2	74.3	62.7	59.2	55.8	NA
1994						
Total	68.4	71.0	56.6	56.8	52.0	NA
Male	65.2	68.2	52.5	54.5	48.7	NA
Female	72.2	74.2	62.3	60.6	57.2	NA
1995						
Total	68.5	71.0	57.4	57.4	52.2	NA
Male	65.2	68.2	53.1	53.7	48.2	NA
Female	72.4	74.2	63.6	62.9	57.8	NA

Table 1.12 (cont.): Average Age at Death from All Causes by Gender and Ethnicity, Arizona, 1990-2000.

1996						
Total	69.6	72.4	56.5	57.8	52.9	62.1
Male	66.1	69.2	52.6	54.9	49.9	60.6
Female	73.6	75.9	62.4	61.3	57.2	63.9
1997						
Total	71.0	73.1	61.3	61.9	55.4	64.2
Male	67.5	70.1	57.2	57.6	51.2	61.4
Female	74.9	76.3	67.4	67.7	61.4	68.0
1998						
Total	71.2	73.4	61.8	62.5	56.5	62.7
Male	67.9	70.5	57.4	59.4	53.2	60.8
Female	74.9	76.5	68.0	66.3	61.2	62.7
1999						
Total	71.7	74.1	59.2	60.5	55.7	63.9
Male	68.8	71.5	56.2	57.8	51.8	62.3
Female	74.9	77.0	63.3	63.9	60.6	65.5
2000						
Total	71.6	73.9	59.2	60.8	55.4	62.3
Male	68.7	70.9	55.8	56.8	51.6	61.6
Female	74.9	77.0	63.7	65.8	60.4	63.0

\* May include records with other/unknown ethnic groups.

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000*.

In contrast to increases in average age of years lived for all groups, the proportion of males within ethnic groups, other than White, non-Hispanic males, living beyond life expectancy decreased (Table 1.13). In other words, ethnic groups were living longer but were more likely to die before average life expectancy was reached. In 2000, 70 percent or more of deaths among Hispanic, Black, American Indian, and Asian males were premature.

Table 1.13: Percent of Deaths before Expected Years of Life Reached<sup>1</sup> by Gender and Ethnicity, Arizona, 1990-2000.

	All ethnic groups <sup>2</sup>	White, non-Hispanic	Hispanic	Black	American Indian	Asian
1990						
Total	53.1	50.1	66.1	68.8	75.4	NA
Male	60.0	57.0	73.8	74.3	78.4	NA
Female	44.5	42.0	54.7	61.1	70.4	NA
1991						
Total	55.6	52.6	70.4	70.5	76.0	NA
Male	63.0	60.1	75.6	78.4	78.7	NA
Female	46.7	43.7	62.7	59.7	72.1	NA
1992						
Total	54.6	51.3	69.5	71.5	75.9	NA
Male	61.9	58.6	75.3	77.5	80.2	NA
Female	45.6	42.6	60.5	62.8	69.2	NA

Table 1.13 (cont.): Percent of Deaths before Expected Years of Life Reached<sup>1</sup> by Gender and Ethnicity, Arizona, 1990-2000.

1993						
Total	54.2	50.7	68.9	74.7	77.8	NA
Male	61.5	58.2	73.6	79.7	81.3	NA
Female	45.6	42.0	62.2	67.8	72.7	NA
1994						
Total	54.5	50.6	72.0	72.2	79.3	NA
Male	62.5	58.6	78.9	78.3	84.7	NA
Female	44.8	41.3	62.2	62.8	70.8	NA
1995						
Total	54.0	50.2	70.5	72.0	78.6	NA
Male	61.7	57.8	77.3	77.6	84.9	NA
Female	44.9	41.6	90.7	63.9	69.6	NA
1996						
Total	52.0	47.7	70.9	72.9	78.0	65.1
Male	59.8	55.6	77.3	78.5	81.1	67.5
Female	42.9	39.0	61.5	64.7	73.8	62.3
1997						
Total	53.6	49.9	69.6	71.2	79.9	68.5
Male	61.6	57.8	75.6	79.3	84.5	74.3
Female	44.7	41.5	60.6	60.6	73.3	60.5
1998						
Total	52.5	48.7	69.8	68.9	77.2	67.3
Male	60.2	56.7	78.0	76.3	81.4	68.2
Female	43.8	40.7	62.4	63.6	73.5	68.1
1999						
Total	51.8	47.4	71.7	70.7	76.9	67.0
Male	59.3	54.8	78.0	76.6	83.4	63.9
Female	43.3	39.3	62.6	63.1	69.0	70.1
2000						
Total	51.6	47.3	70.5	69.3	78.7	69.6
Male	59.6	55.4	76.7	75.7	83.1	70.6
Female	42.9	38.7	62.2	61.2	72.9	68.6

<sup>1</sup> Based on expected years of life at birth for all U.S. residents

<sup>2</sup> May include records with other/unknown ethnic groups.

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000.*

## 2. Chronic Diseases

According to the Centers for Disease Control and Prevention, chronic diseases are those “illnesses that are prolonged, do not resolve spontaneously, and are rarely cured completely” (1999). The impact of these diseases on the health and well-being of both men and women is significant. Chronic diseases are a leading cause of death with five chronic diseases, heart disease, cancer, stroke, chronic obstructive pulmonary disease, and diabetes, responsible for over 65 percent of all deaths in the United States (Centers for Disease Control and Prevention, 2002c). Two chronic diseases, heart disease and cancer, account for over half of all deaths. In 1999, the five leading chronic disease killers accounted for 65 percent of all deaths in Arizona. In addition, over 75 percent of the nation’s health care costs can be attributed to chronic disease care.

Chronic diseases that will be discussed in this chapter are cardiovascular disease, diabetes, cerebrovascular disease, and arthritis. Cancer is also considered a chronic disease but will be discussed in its own chapter.

The label, cardiovascular disease, includes a wide variety of illnesses and conditions of the heart, veins, and lymphatic vessels. Cardiovascular diseases include high blood pressure, stroke, and heart disease. Heart disease or diseases of the heart is a subset of cardiovascular disease related specifically to the heart and includes conditions such as coronary heart disease and congestive heart failure.

Table 2.1 shows national trends in deaths caused by cardiovascular diseases. The numbers represent deaths in thousands. Approximately the same number of men were killed by cardiovascular disease between 1990 and 1999. Women however saw an increase in deaths.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Male	440	440	440	450	450	450	450	450	440	440
Female	470	470	470	500	490	500	500	500	500	510

Source: American Heart Association, 2002. *Biostatistical Fact Sheet*.

Cardiovascular mortality rates for men and women in Arizona are presented in Table 2.2. Men and women experienced similar decreases in cardiovascular disease death rates between 1990 and 2000. Men saw a decrease of 19 percent and women experienced a decrease of 18 percent. Still, male mortality from cardiovascular disease was 45 percent greater than female mortality from cardiovascular disease.

Table 2.2: Cardiovascular Disease Mortality Trends, Arizona, 1990-2000.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Total	338.6	324.5	327.0	338.3	323.3	299.5	289.6	277.5	255.7	262.7	276.1
Male	410.6	389.8	396.9	404.0	384.1	347.9	342.6	320.3	302.4	311.0	333.1
Female	280.7	269.1	269.5	282.4	270.2	255.3	242.6	238.2	214.1	219.8	230.0

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000*.

In addition to death caused by cardiovascular disease, the prevalence, or the proportion of the population that experiences the illness, is useful for measuring the disease's impact. Table 2.3 displays the percentage of the population by age group that suffer from cardiovascular disease. Risk of cardiovascular disease for men doubles between the ages of 35-44 and 45-54 and again between the ages 45-54 and 65-74.

Table 2.3: Prevalence of Cardiovascular Diseases by Age and Sex, U.S., 1988-94.

	20-24	25-34	35-44	45-54	55-64	65-74	75+
Male	5.5	10.4	17.4	34.2	51.0	65.2	70.7
Female	4.6	4.2	13.6	28.9	48.1	65.2	79.0

Source: American Heart Association, 2001. *2002 Heart and Stroke Statistical Update*.

In 2000, heart disease was the most common cause of death for Arizona citizens. As shown in Table 2.4, heart disease mortality for men decreased by 22 percent between 1990 and 2000. A man's risk for dying from heart disease in 2000 was 59.5 percent greater than a woman's risk.

Table 2.4: Age-Adjusted Mortality Rates for Diseases of Heart by Gender and Year, Arizona, 1990-2000

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Male	330.7	313.9	319.7	329.4	305.4	278.1	269.9	251.0	235.1	241.0	259.3
Female	210.3	199.3	202.8	209.6	198.6	185.9	173.3	169.0	149.3	154.2	163.6

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000*.

Ischemic or coronary heart disease, the restriction of blood through the vessels in the heart, accounted for the largest proportion of deaths attributable to heart disease (Table 2.8). Coronary heart disease increases with age (Table 2.5). A man's risk of coronary heart disease triples between the ages of 25-44 and 45-54 and doubles between the ages 45-54 and 55-64.

Table 2.5: Prevalence of Coronary Heart Disease by Age and Sex, U.S., 1988-94.

	25-44	45-54	55-64	65-74	75+
Male	2.0	6.7	13.1	17.7	18.6
Female	2.8	5.5	8.4	11.1	16.1

Source: American Heart Association, 2001. *2002 Heart and Stroke Statistical Update*.

Congestive heart failure or the inability of the heart to pump enough blood to other parts of the body also increases with age as shown in Table 2.6.

	20-24	25-34	35-44	45-54	55-64	65-74	75+
Male	0.1	0.1	0.7	1.8	6.2	6.8	9.8
Female	0.1	0.1	0.5	1.3	3.4	6.6	9.7

Source: American Heart Association, 2001. *2002 Heart and Stroke Statistical Update*

As seen in Table 2.7, men are much more likely than women to experience heart attack, the death of heart tissue due to a restriction in the tissue's blood supply. Between the ages of 29 and 44, men are three and a half times more likely to experience heart attack than women and three times more likely than women to have a heart attack between the ages of 45 and 64. Like other forms of cardiovascular disease, the risk of heart attack increases with age.

	29-44	45-64	65+
Male	32,000	218,000	418,000
Female	9,000	74,000	356,000

Source: American Heart Association, 2001. *2002 Heart and Stroke Statistical Update*.

Table 2.8 presents the number of deaths from various forms of heart disease from 1990 through 2000.

		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Table 2.8: Number of Deaths from Diseases of the Heart by Category, Gender and Year, Arizona, 1990-2000.												
All forms of heart disease	Total	8,666	8,619	9,185	9,955	9,851	10,104	9,995	10,002	10,276	10,355	10,430
	Male	4,676	4,658	4,948	5,343	5,248	5,389	5,400	5,276	5,542	5,580	5,594
	Female	3,990	3,961	4,237	4,612	4,603	4,715	4,595	4,726	4,734	4,775	4,836
Acute rheumatic fever and chronic rheumatic heart disease	Total	94	63	68	61	81	64	55	65	52	51	32
	Male	19	25	21	18	26	18	20	25	14	19	13
	Female	75	38	47	43	55	46	35	40	38	32	19
Hypertensive heart and renal disease	Total	7	11	8	8	10	10	3	7	4	3	*30
	Male	3	2	4	3	6	6	3	2	2	1	13
	Female	4	9	4	5	4	4	0	5	2	2	17
Ischemic heart disease	Total	6,220	6,054	6,217	6,455	6,404	6,671	6,373	6,303	6,367	6,383	7,949
	Male	3,490	3,419	3,473	3,622	3,509	3,689	3,543	3,427	3,562	3,537	4,386
	Female	2,730	2,635	2,744	2,833	8,895	2,982	2,830	2,876	2,805	2,846	3,563
Hypertensive heart disease	Total	115	142	167	156	139	142	185	265	233	229	261
	Male	43	53	69	46	46	43	71	116	99	99	136
	Female	72	89	98	110	93	99	114	149	134	130	125
All other forms of heart disease	Total	2,230	2,349	2,725	3,275	3,217	3,217	3,379	3,362	3,620	3,689	2,158
	Male	1,121	1,159	1,381	1,654	1,661	1,633	1,763	1,706	1,865	1,924	1,046
	Female	1,109	1,190	1,349	1,621	1,556	1,584	1,616	1,656	1,755	1,765	1,112

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000*.

High blood pressure or hypertension accounted for 42,997 deaths in the U.S. in 1999. (American Heart Association, 2001). One in four American adults have high blood pressure (American Heart Association, 2001). According to Table 2.9, until the age of 54, men have a higher prevalence of high blood pressure than women.

Table 2.9: Prevalence (Percent of Population) of High Blood Pressure in Americans Age 20 and Older by Age and Sex, U.S., 1988-94.

	20-34	35-44	45-54	55-64	65-74	75+
Male	8.6	20.9	34.1	42.9	57.3	64.2
Female	3.4	12.7	25.1	44.2	60.8	77.3

Source: American Heart Association, 2002. *Biostatistical Fact Sheet*.

Prevalence rates for high blood pressure decreased for all racial and ethnic categories between 1976-80 and 1988-94 as shown in Table 2.10. High blood pressure in Non-Hispanic White males decreased the most (26 percent), followed by Hispanic males (21 percent), and non-Hispanic Black males (18 percent).

Table 2.10: Age-Adjusted Prevalence (Percent of Population) Trends for High Blood Pressure, Ages 20-74 by Race/Ethnicity, Sex and Survey Year, U.S., 1976-80 and 1988-94.

	Non-Hispanic White men	Non-Hispanic White women	Non-Hispanic Black men	Non-Hispanic Black women	Hispanic men	Hispanic women
1976-80	34.2	25.9	44.8	46.7	31.0	31.4
1988-94	25.2	20.5	36.7	36.6	24.2	22.4

Source: American Heart Association, 2002. *Biostatistical Fact Sheet*.

Table 2.11 compares high blood pressure prevalence rates for White males and females with rates for Black males and females. In all age groups, Black males are more likely than White males to have high blood pressure.

Table 2.11: Prevalence (Percent of Population) of High Blood Pressure by Age, Sex, and Race, U.S., 1988-94.

	25-34	35-44	45-54	55-64	65-74	75+
White Male	8.1	14.3	29.1	43.0	54.9	59.0
Black Male	10.6	29.5	44.3	58.0	65.2	71.3
White Female	1.6	8.5	22.6	41.1	61.7	76.1
Black Female	6.2	22.9	48.8	63.0	75.6	77.9

Source: American Heart Association, 2001. *2002 Heart and Stroke Statistical Update*.

Stroke is the disruption of blood to the brain leading to injury or death of brain tissue. In the U.S. and Arizona, stroke or cerebrovascular disease is the third leading cause of death. In 2000, stroke was the fifth leading cause of death for men in Arizona. In addition to being a leading cause of death, it is also a leading cause of serious, long-term disability with more than 1,100,000 Americans reporting difficulties with activities of daily living in 1999 as a result of stroke (American Heart Association, 2001). As reported in Table 2.12, up to the age 74, more men than women experience stroke but women are more likely than men to die from stroke (Table 2.13)

Table 2.12: Prevalence (Percent of Population) of Stroke by Age and Sex, U.S., 1988-94.

	20-24	25-34	35-44	45-54	55-64	65-74	75+
Male	0.1	0.5	0.5	2.2	4.0	5.9	12.5
Female	0.3	0.0	0.4	1.0	2.7	5.8	10.7

Source: American Heart Association, 2001. *2002 Heart and Stroke Statistical Update*.

Table 2.13 shows mortality rates for cerebrovascular disease in the ten-year period between 1990 and 2000. Rates of death decreased for both men and women during this time.

Table 2.13: Age-Adjusted Mortality Rates for Cerebrovascular Disease by Gender and Year, Arizona, 1990-2000.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Male	54.6	52.5	54.1	50.9	54.9	47.3	50.6	47.0	42.9	43.6	50.8
Female	54.1	51.8	49.5	56.0	53.3	51.8	50.7	52.6	45.6	42.9	51.8

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000*.

Diabetes, the inability of the body to properly regulate sugar, is a serious disease that causes complications such as heart disease, kidney failure, amputations, and blindness. These complications can in turn lead to death and disability. In 1999, diabetes was the sixth leading cause of death in the United States (Centers for Disease Control and Prevention, 2002c). In 2000, diabetes was the eighth leading cause of death for men in Arizona.

Between 1990 and 2000, diabetes mortality rates for men have increased by 24 percent (Table 2.14). This is slightly higher than the 21 percent increase in death rates experienced by women over the same time period.

Table 2.14: Age-Adjusted Mortality Rates for Diabetes by Gender and Year, Arizona, 1990-2000.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Male	16.9	18.5	18.8	16.8	19.4	18.6	20.5	20.6	21.3	23.3	21.0
Female	14.2	14.5	16.2	16.5	17.8	18.0	18.9	18.8	16.5	17.3	17.2

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000*.

A more significant variation is seen when comparing diabetes death rates among men by racial and ethnic groups (Table 2.15). Black men experienced a 549 percent increase in deaths attributable to diabetes in the 20 year period between 1980 and 2000, followed by

Hispanic men with an increase of 157 percent, White, non-Hispanic men with a 34 percent increase and American Indian men with a 27 percent increase. Asian men had a 35 percent decrease in mortality from diabetes. American Indian men had the highest mortality rate, two and a half times greater than the rate for all groups.

	All men	White, non-Hispanic men	Hispanic men	Black men	American Indian men	Asian men
1980	14.4	13.0	16.3	6.3	58.4	16.7
1990	16.9	13.2	32.2	20.2	86.1	7.2
2000	21.0	17.4	41.9	40.9	74.1	10.9

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000.*

Tables 2.16 and 2.17 show trends for diabetes prevalence and incidence in the U.S. Prevalence and incidence rates have increased since 1990 for both men and women. Prevalence and incidence rates are also related to age with older adults more likely to be diagnosed with diabetes.

	Age Group				Total	Age-adjusted
	0-44	45-64	65-74	75+		
1990						
Male	6.2	56.4	91.3	85.1	23.9	25.4
Female	8.7	53.6	104.0	86.2	29.9	27.5
1991						
Male	6.4	52.4	105.7	92.7	24.6	26.0
Female	8.7	55.9	106.5	92.5	31.0	28.4
1992						
Male	7.4	57.9	104.1	98.0	26.8	28.0
Female	9.1	58.2	107.1	103.2	32.7	29.5
1993						
Male	7.3	59.8	106.4	104.9	27.7	28.7
Female	8.7	60.2	104.7	102.5	32.7	29.5
1994						
Male	7.4	63.0	110.9	109.2	29.0	29.9
Female	9.0	62.4	111.4	107.5	34.4	30.8
1995						
Male	6.5	60.3	118.6	117.2	29.0	29.6
Female	9.2	62.5	105.4	99.4	33.7	30.2
1996						
Male	6.1	59.2	126.0	117.6	29.2	29.7
Female	9.3	62.4	109.4	104.0	34.6	30.8

Source: Centers for Disease Control and Prevention, 2002a. *1999 Diabetes Surveillance Report.*

Table 2.17: Incidence of Diabetes per 1000 Population by Sex and Age, U.S. 1990-1996.

	Age Group			Total	Age-adjusted
	0-44	45-64	65+-		
1990					
Male	0.53	6.84	4.04	2.04	2.16
Female	1.96	4.72	5.44	2.99	2.89
1991					
Male	0.53	5.07	6.13	1.94	2.05
Female	1.59	3.74	7.63	2.88	2.70
1992					
Male	0.91	6.34	8.00	2.67	2.78
Female	1.62	4.03	8.16	3.04	2.83
1993					
Male	0.99	6.44	8.80	2.85	2.94
Female	1.78	5.40	9.17	3.58	3.33
1994					
Male	0.92	6.93	9.77	3.02	3.10
Female	1.79	6.06	10.34	3.90	3.60
1995					
Male	0.68	7.10	7.05	2.62	2.66
Female	1.82	5.89	9.37	3.76	3.47
1996					
Male	0.50	7.29	7.30	2.59	2.60
Female	1.53	4.86	8.52	3.24	2.97

Source: Centers for Disease Control and Prevention, 2002a. *1999 Diabetes Surveillance Report*.

Arthritis and other rheumatic conditions that affect the joints, tissues around the joints, and other connective tissue, are experienced by one of every six people in the U.S. (Centers for Disease Control and Prevention, 1999). Arthritis is the leading cause of disability for Americans. In 2000, 22.7 percent of men in Arizona reported arthritis (Table 2.18)

Table 2.18: Number and Percentage of Adults Who Reported Arthritis by Sex, Arizona, 2000.

	Women		Men	
	Number	Percent	Number	Percent
	586,000	32.1	394,000	22.7

Source: Centers for Disease Control and Prevention, 2002c. *The Burden of Chronic Diseases and Their Risk Factors: National and State Perspectives 2002*.

### 3. Cancer

Cancer is the label for a variety of diseases characterized by uncontrolled growth and spread of abnormal cells (American Cancer Society, 2001). If unchecked, the spread and growth of these cells can result in illness and death. Cancer is the second leading cause of death for Americans and Arizonans. It is estimated that 22,100 new cases of cancer will be diagnosed in Arizona in 2002 and 9,600 Arizonans will die from cancer in 2002 (Centers for Disease Control and Prevention, 2002c). In the U.S., one of every four deaths is a result of cancer (American Cancer Society, 2001). Note that in the following tables, cancer is often referred to as malignant neoplasms.

As shown in Table 3.1, cancer mortality rates for men have decreased by 15 percent from 1990 to 2000. In 2000, men in Arizona had a 40 percent greater risk than women of dying from cancer.

Table 3.1: Age-Adjusted Mortality Rates for Malignant Neoplasms (Cancer) by Gender and Year, Arizona, 1990-2000

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Male	238.8	240.4	239.5	238.7	236.6	211.6	216.5	206.3	187.2	196.4	204.0
Female	156.2	160.1	155.3	158.7	157.8	151.2	148.2	146.9	135.5	142.9	145.8

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000*.

According to Table 3.2, cancer death rates increased for men in all ethnic and racial groups except White males. Asian men experienced the largest increase, 54 percent, in cancer death rates, followed by an increase of 17 percent for American Indian men, 15 percent for Hispanic men, and less than one percent for Black men. In all three time periods, Black males had the highest cancer mortality rates followed by White, non-Hispanic males.

Table 3.2: Age-Adjusted Mortality Rates for Cancer by Race/Ethnicity, Arizona, 1980, 1990, 2000.

	All men	White, non-Hispanic men	Hispanic men	Black men	American Indian men	Asian men
1980	242.3	253.8	175.0	272.3	122.0	67.4
1990	238.8	245.9	185.3	360.7	123.1	132.4
2000	204.0	208.1	201.5	274.7	142.7	103.6

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000*

The risk of dying from cancer increases with age. As shown in Table 3.3, the risk triples every ten years beginning at age 29 and ending at age 59. The risk continues to increase after age 59 though not as dramatically.

Table 3.3: Age-Specific Malignant Neoplasm Mortality Rates (per 100,000 persons), All Causes by Age Group and Sex, Arizona, 1997.

Age group	Male	Female	Total
0-19 years	6.1	7.2	6.6
20-29 years	8.7	5.4	7.1
30-39 years	17.1	22.0	20.0
40-49 years	60.4	69.4	64.9
50-59 years	234.2	191.8	212.3
60-69 years	612.5	456.2	529.6
70-79 years	1183.0	727.8	939.2
80+ years	1764.4	1149.1	1393.7
Total	196.6	170.2	183.4

Source: Arizona Department of Health Services, 1999. *Cancer in Arizona: Cancer Incidence and Mortality in 1997*.

Similarly, incidence rates also increase with age as shown in Table 3.4. The term, “all sites” refers to the location in the body where the cancer occurs.

Table 3.4: Age-Specific Incidence Rates (per 100,000 persons), All Sites by Age Group and Sex, Arizona, 1997.

Age group	Male	Female	Total
0-9 years	14.43	13.41	13.94
10-19 years	10.47	12.72	11.53
20-29 years	34.27	44.64	39.23
30-39 years	75.53	128.05	101.68
40-49 years	171.75	313.66	244.03
50-59 years	619.85	652.97	636.99
60-69 years	1760.09	1106.90	1413.85
70-79 years	2413.77	1564.30	1948.28
80+ years	2350.32	1700.90	1959.06
Total	434.74	408.24	421.51

Source: Arizona Department of Health Services, 1999. *Cancer in Arizona: Cancer Incidence and Mortality in 1997*.

The next two tables present information on cancer mortality and incidence by county. In 1997, men in several counties including Cochise, Gila, Mohave, Navajo, Pima, Pinal, and Santa Cruz had cancer mortality rates higher than the state rate of 134.7 per 100,000 persons (Table 3.5). Men in several counties including Cochise, Coconino, Gila, La Paz, Maricopa, Mohave, Navajo, Pima, and Santa Cruz experienced a cancer incidence rate higher than the state rate (Table 3.6)

Table 3.5: Age-Adjusted Incidence Malignant Neoplasm Mortality Rates (per 100,000 persons), All Causes by County of Residence and Sex, Arizona, 1997.

County	Male	Female	Total
Apache	86.4	62.4	73.2
Cochise	137.0	112.6	123.9
Coconino	86.6	96.3	91.6
Gila	151.0	81.5	114.2
Graham	125.3	76.1	99.3
Greenlee	-	-	113.0
La Paz	102.1	161.2	128.9
Maricopa	132.0	103.0	115.7
Mohave	169.6	120.6	144.3
Navajo	160.0	95.9	125.8
Pima	138.1	95.2	113.8
Pinal	142.5	99.9	120.8
Santa Cruz	179.3	90.4	129.9
Yavapai	130.2	112.5	120.3
Yuma	116.5	92.1	103.9
Arizona	134.7	101.6	116.5

- Insufficient cases for an adjusted rate calculation.

Source: Arizona Department of Health Services, 1999. *Cancer in Arizona: Cancer Incidence and Mortality in 1997*.

Table 3.6: Age-Adjusted Incidence Rates for Invasive Cancer, All Sites, by County of Residence and Sex, Arizona, 1997.

County	Male	Female	Total
Apache	289.48	184.73	232.17
Cochise	409.48	331.0	366.13
Coconino	416.71	363.30	385.65
Gila	414.27	298.48	353.75
Graham	295.94	302.51	293.45
Greenlee	244.01	371.25	288.26
La Paz	414.65	386.91	395.07
Maricopa	392.21	314.60	347.92
Mohave	444.41	374.18	408.10
Navajo	471.15	287.34	370.98
Pima	397.29	320.92	352.88
Pinal	354.40	318.72	334.01
Santa Cruz	411.42	275.34	337.47
Yavapai	356.79	348.60	351.16
Yuma	320.23	288.20	303.97
Arizona	389.56	317.56	348.96

Source: Arizona Department of Health Services, 1999. *Cancer in Arizona: Cancer Incidence and Mortality in 1997*.

The rest of the tables in this chapter address different types of cancer. According to Table 3.7, cancers associated with the lungs, trachea, and bronchus were the leading causes of cancer related deaths for Arizonan men in 2000. Lung cancer itself accounts for 28 percent of all cancer deaths in the United States (Centers for Disease Control and Prevention, 2002c). The next leading cause of cancer-related death for men in Arizona is prostate cancer followed by colon and rectum cancers.

Table 3.7: Death Rates for the Five Leading Causes of Cancer Related Deaths, Arizona, 2000.

	Total	Male	Female
Malignant neoplasm	175.3	185.7	164.9
Malignant neoplasm of trachea, bronchus and lung	48.5	55.8	41.3
Malignant neoplasm of prostate	11.7	23.4	0.0
Malignant neoplasm of colon, rectum, and anus	17.3	18.3	16.3
Malignant neoplasm of lymphoid, hematopoietic and related tissue	16.9	18.1	15.7
Malignant neoplasm of pancreas	9.2	9.4	9.0

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000.*

Table 3.8 presents cancer related mortality rates for various cancers by race and ethnicity. Black men have the highest mortality rates for all forms of cancer reported in the table and have a prostate cancer mortality rate that is two and a half times higher than the next highest group, Hispanic men. Asian men have the lowest death rates for colorectal and prostate cancers. American Indian men have the lowest death rates from lung cancer.

Table 3.8: Age-Adjusted Mortality Rates for Selected Cancer Related Causes of Death by Race/Ethnicity, Arizona, 2000.

	All men	White, non-Hispanic men	Hispanic men	Black men	American Indian men	Asian men
Malignant neoplasm	204.0	208.1	201.5	274.7	142.7	103.6
Lung cancer	59.2	61.9	49.6	79.8	13.1	29.0
Colorectal cancer	20.5	20.7	20.5	26.3	15.1	12.9
Prostate cancer	28.4	28.0	30.0	74.8	27.1	8.9

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000.*

Table 3.9 shows national incidence and mortality rates for various types of cancer by race, ethnicity, and gender. Like Arizona, Black men in the U.S. have the highest mortality resulting from cancer of all racial and ethnic groups and are more likely to develop cancer. Black men die at a rate 50 percent greater than White males which have the second highest cancer rate. Like Arizona, prostate cancer death rates for Black males are 2.3 times higher than death rates for White males.

Cancer incidence and mortality rates for Arizona and the United States are compared in Tables 3.10 and 3.11. With the exception of urinary bladder cancer incidence rates, Arizona is lower than the national death and incidence rates for all forms of cancer reported. The cancer death rate for all forms of cancer for males in Arizona is 11 percent lower than the national mortality rate.

Table 3.9: Incidence and Mortality Rates<sup>1</sup> by Site, Race, and Ethnicity, U.S., 1990-1997.

<b>Incidence</b>	<b>White</b>	<b>Black</b>	<b>Asian/Pacific Islander</b>	<b>American Indian</b>	<b>Hispanic<sup>2</sup></b>
All sites					
Males	476.3	597.9	323.3	175.9	323.2
Females	352.4	337.4	246.9	137.3	240.9
Total	402.1	444.6	279.3	152.8	272.9
Colon & Rectum					
Males	52.7	58.3	47.2	20.4	35.7
Females	36.6	45.2	30.9	13.1	23.6
Total	43.6	50.7	38.1	16.3	28.8
Lung & bronchus					
Males	71.9	111.1	51.9	25.1	38.0
Females	43.3	45.8	22.5	13.3	19.4
Total	55.4	73.3	35.5	18.4	27.1
Prostate	145.8	225.0	80.4	45.8	101.6
<b>Mortality</b>	<b>White</b>	<b>Black</b>	<b>Asian/Pacific Islander</b>	<b>American Indian</b>	<b>Hispanic<sup>2</sup></b>
All sites					
Males	207.0	305.5	127.2	124.6	130.6
Females	139.1	167.7	83.0	90.0	85.6
Total	166.5	221.9	102.3	104.5	104.0
Colon & rectum					
Males	21.3	27.7	13.1	11.6	13.1
Females	14.3	19.9	8.9	8.9	8.3
Total	17.2	23.0	10.8	10.1	10.3
Lung & bronchus					
Males	69.5	99.5	34.2	40.9	31.6
Females	34.0	33.0	14.9	19.8	11.0
Total	49.1	60.1	23.4	29.0	19.8
Prostate	23.3	54.1	10.4	14.2	16.2

<sup>1</sup> Per 100,000 age-adjusted to the 1970 U.S. standard population.

<sup>2</sup> Hispanic is not mutually exclusive from white, black, Asian/Pacific Islanders, and American Indian.

Source: American Cancer Society, 2001. *Cancer Facts & Figures 2001*.

Table 3.10: Cancer Death Rates by Site, Arizona, U.S., 1993-1997\*.

	All sites		Colon & Rectum		Lung & Bronchus		Non-Hodgkin's Lymphoma		Pancreas		Prostate
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Arizona	186.0	127.3	17.6	12.2	59.2	31.7	8.0	5.4	9.1	6.6	22.3
U.S.	209.7	139.8	21.0	14.4	69.4	34.0	8.5	5.6	9.7	7.2	27.7

\* Per 100,000, age adjusted to the 1970 U.S. standard population.

Source: American Cancer Society, 2001. *Cancer Facts & Figures 2001*.

Table 3.11: Cancer Incidence Rates by Site, Arizona, U.S., 1993-1997\*.

	All sites		Colon & Rectum		Lung & Bronchus		Non-Hodgkin's Lymphoma		Prostate	Urinary Bladder	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Male	Female
Arizona	397.4	305.1	43.9	31.2	66.1	39.8	15.4	11.1	115.9	29.0	7.8
U.S.	475.5	347.8	52.4	37.2	73.7	43.0	19.8	12.7	147.0	28.7	7.6

\* Per 100,000, age adjusted to the 1970 U.S. standard population.

Source: American Cancer Society, 2001. *Cancer Facts & Figures 2001*.

Trends in mortality and incidence rates for the top five cancers for men are shown in Tables 3.12 and 3.13. From 1990 to 1997, lung cancer was the leading cause of cancer related death for men followed by prostate cancer and then colorectal cancer. With the exception of lymphoma, mortality rates for all forms of cancer reported in the tables decreased slightly. It is interesting to note that while death rates declined in this seven-year period, the number of new cases reported annually increased.

Table 3.12: Age-Adjusted Mortality Rates for the Top Five Cancers for Men, Arizona, 1990-1997.

	1990	1991	1992	1993	1994	1995	1996	1997
Lung	47.41	49.57	49.24	49.69	47.11	44.77	45.78	42.92
Prostate	16.75	17.23	16.37	16.92	16.47	17.20	15.66	14.96
Colorectal	12.69	13.40	14.67	14.17	13.60	12.41	14.02	12.63
Pancreas	8.34	6.70	7.52	6.96	7.23	6.92	7.07	7.31
Lymphoma	6.68	6.09	6.39	6.91	6.38	6.29	7.27	6.84

Source: Arizona Department of Health Services, 2000. *Prostate Cancer Incidence and Mortality in Arizona, 1990-1997.*

Table 3.13: Age-Adjusted Incidence Rates for the Top Five Cancers for Men, Arizona, 1990-1997.

	1990	1991	1992	1993	1994	1995	1996	1997
Prostate	85.33	114.60	164.49	116.06	95.53	119.09	123.82	122.67
Lung	52.41	61.74	71.56	61.68	57.81	75.48	72.23	63.19
Colorectal	36.79	39.16	48.03	41.20	39.88	47.02	46.00	44.78
Bladder	22.57	25.34	28.26	25.92	28.85	28.93	31.03	29.87
Lymphoma	14.16	15.52	18.48	16.17	16.45	16.67	19.20	18.31

Source: Arizona Department of Health Services, 2000. *Prostate Cancer Incidence and Mortality in Arizona, 1990-1997.*

The most common types of cancer for men and women are shown in Tables 3.14 and 3.15. While more deaths are attributed to lung and bronchus cancer types, the most common form of cancer is prostate cancer for men and breast cancer for women.

Table 3.14: Ten Most Common Invasive Cancer Types (Crude Rate per 100,000 Males)

Prostate	133.9
Lung & bronchus	69.94
Colorectal	49.63
Bladder	34.18
Lymphoma	20.41
Skin melanoma	19.43
Oral cavity & pharynx	12.39
Leukemias	9.83
Pancreas	9.34
Stomach	8.94

Source: Arizona Department of Health Services, 1999. *Cancer in Arizona: Cancer Incidence and Mortality in 1997.*

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Table 3.15: Ten Most Common Invasive Cancer Types (Crude Rate per 100,000 Females)

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Breast	132.62
Lung & bronchus	55.99
Colorectal	46.24
Corpus Uteri	20.42
Lymphoma	17.24
Ovary	16.67
Skin melanoma	12.23
Bladder	10.84
Endocrine system	9.66
Pancreas	9.66

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Source: Arizona Department of Health Services, 1999. *Cancer in Arizona: Cancer Incidence and Mortality in 1997*.

Information about the occurrence of specific forms of cancer in Arizonans in 1997 is presented in Table 3.16.

Statistics on the likelihood of developing cancer are presented in Table 3.17. The risk for cancer increases with age with men having about a 1 in 2 lifetime chance of developing cancer and women having a 1 in 3 chance. According to the American Cancer Society (2001), 80 percent of cancers will be diagnosed after the age of 55.

As mentioned previously, prostate cancer is the most common cancer for men and the second deadliest. Prostate cancer more than any other cancer increases in incidence with age. Incidence and mortality rates for prostate cancer in Arizona's counties are presented in Tables 3.18 and 3.19. Four counties, Navajo, Pima, Maricopa, and Coconino have higher incidence rates than the state in general. Men are more likely to die from prostate cancer in Graham, Cochise, Santa Cruz, and Coconino counties.

Table 3.16: Frequency of Invasive Cancer Cases by Site and Sex, Arizona, 1997.

	Male	Female	Total		Male	Female	Total
All sites	9985	9387	19384	<b>Respiratory system</b>	1760	1328	3088
<b>Oral cavity &amp; pharynx</b>	280	126	406	Nose, nasal cavity, & middle ear	7	8	15
Lip	22	7	29	Larynx	147	23	170
Tongue	76	33	109	Lung & bronchus	1573	1286	2859
Salivary gland	32	13	45	Pleura	27	8	35
Floor of mouth	19	10	29	Trachea & other respiratory organs	6	3	9
Gum & other oral cavity	33	25	58	<b>Bone &amp; joints</b>	21	14	35
Nasopharynx	17	3	20	<b>Soft tissue (including heart)</b>	75	62	137
Tonsil	25	9	34	<b>Skin (excluding basal &amp; squamous)</b>	491	304	795
Oropharynx	20	8	28	Melanomas of the skin	439	281	720
Hypopharynx	23	10	33	Other non-epithelial skin	52	23	75
Other oral cavity & pharynx	13	8	21	<b>Male genital system</b>	3187	NA	3187
<b>Digestive system</b>	1920	1652	3572	Prostate	3024	NA	3024
Esophagus	152	39	191	Testis	139	NA	139
Stomach	202	120	322	Penis	23	NA	23
Small intestine	30	20	50	Other male genital system	1	NA	1
Colon	779	779	1558	<b>Urinary system</b>	1109	441	1550
Rectum	342	283	625	Urinary bladder	772	249	1021
Anus, anal canal & anorectum	19	33	52	Ureter	22	10	32
Liver	93	43	136	Other urinary system	3	2	5
Intrahepatic bile duct	18	8	26	<b>Eye and orbit</b>	19	20	39
Gallbladder	20	37	57	<b>Brain &amp; nervous system</b>	134	128	262
Other biliary	39	35	74	Brain	119	118	237
Pancreas	211	222	433	Cranial nerves & other nervous system	15	10	25
Retroperitoneum & peritoneum	8	25	33	<b>Lymphomas</b>	461	396	857
Other digestive system	7	8	15	Hodgkin's disease	60	49	109
<b>Leukemias</b>	223	175	398	Non-Hodgkin's lymphomas	401	347	748
Lymphocytic	95	67	162	<b>Multiple myeloma</b>	117	84	201
Myeloid	91	79	170	<b>Ill-defined &amp; unspecified</b>	330	304	634
Monocytic	1	1	2	<b>Endocrine system</b>	78	222	300
Other	36	28	64	Thyroid	70	216	286
				Other endocrine system	8	6	14

Source: Arizona Department of Health Services, 1999. *Cancer in Arizona: Cancer Incidence and Mortality in 1997*

		Birth to 39 (%)	40 to 59 (%)	60 to 79 (%)	Birth to death (%)
All sites	Male	1.56 ( 1 in 64)	8.25 (1 in 12)	33.13 (1 in 3)	43.48 (1 in 2)
	Female	1.97 (1 in 51)	9.37 (1 in 11)	22.39 (1 in 4)	38.34 (1 in 3)
Bladder	Male	0.03 (1 in 3,437)	0.44 (1 in 226)	2.39 (1 in 42)	3.40 (1 in 29)
	Female	Less than 1 in 10,000	0.14 (1 in 699)	0.68 (1 in 146)	1.18 (1 in 85)
Colon & Rectum	Male	0.07 (1 in 1,531)	0.87 ( 1 in 115)	4.00 (1 in 25)	5.78 (1 in 17)
	Female	0.05 (1 in 1,855)	0.69 (1 in 146)	3.04 (1 in 33)	5.55 (1 in 18)
Leukemia	Male	0.15 (1 in 654)	0.21 (1 in 467)	0.84 (1 in 119)	1.42 (1 in 70)
	Female	0.11 (1 in 900)	0.15 (1 in 671)	0.50 (1 in 199)	1.05 (1 in 95)
Lung & Bronchus	Male	0.04 (1 in 2,499)	1.24 (1 in 80)	6.29 (1 in 16)	8.09 (1 in 12)
	Female	0.03 (1 in 2,977)	0.92 (1 in 108)	4.04 (1 in 25)	5.78 (1 in 17)
Melanoma of the skin	Male	0.13 (1 in 744)	0.53 (1 in 190)	0.94 (1 in 106)	1.68 (1 in 60)
	Female	0.22 (1 in 453)	0.40 (1 in 249)	0.48 (1 in 207)	1.25 (1 in 80)
Non-Hodgkin's Lymphoma	Male	0.19 (1 in 513)	0.50 (1 in 198)	1.21 (1 in 83)	2.11 (1 in 47)
	Female	0.08 (1 in 1,296)	0.32 (1 in 312)	0.97 (1 in 103)	1.74 (1 in 57)
Prostate	Male	Less than 1 in 10,000	2.06 (1 in 49)	13.42 (1 in 7)	15.89 (1 in 6)

\* For those free of cancer at beginning of age interval.

Source: American Cancer Society, 2001. *Cancer Facts & Figures 2001*.

Table 3.18: Annualized Incidence Rates\* of Prostate Cancer by County, 1995-1997.

Navajo	136
Pima	134
Maricopa	128
Coconino	125
Pinal	122
AZ	122
Cochise	117
Graham	117
Santa Cruz	112
Mohave	110
Yavapai	101
Greenlee	99
La Paz	93
Gila	80
Yuma	72
Apache	60

\* Age-adjusted to the 1970 U.S. census population with rates per 100,000.

Source: Arizona Department of Health Services, 2000.

*Prostate Cancer Incidence and Mortality in Arizona, 1990-1997.*

Table 3.19: Annualized Mortality Rates<sup>1</sup> of Prostate Cancer by County, 1995-1997.

Graham	26
Cochise	23
Santa Cruz	22
Coconino	19
Pima	16
Maricopa	16
AZ	16
Navajo	16
Yavapai	15
Mohave	14
Pinal	14
Yuma	13
Gila	12
La Paz	10
Apache	9
Greenlee <sup>2</sup>	-

<sup>1</sup> Age-adjusted to 1940 U.S. census population with rates per 100,000.

<sup>2</sup> The number of prostate cancer deaths were less than 5 cases in the three year period.

Source: Arizona Department of Health Services, 2000.

*Prostate Cancer Incidence and Mortality in Arizona, 1990-1997.*

## 4. Injury

In 2000, accidents, often referred to as unintentional injuries, were the fifth leading cause of death for Arizonans but the third leading cause of death for men. Accidents include motor vehicle accidents, falls, accidental poisoning, and accidental drowning. As shown in Table 4.1 death rates from 1990 to 2000 associated with accidents decreased for men but slightly increased for women. In 2000 men were 2.3 times more likely to die from accidents than women.

Table 4.1: Age-Adjusted Mortality Rates\* for Accidents (unintentional injuries) by Gender and Year, Arizona, 1990-2000.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Male	61.4	53.3	59.9	62.9	66.9	65.2	66.6	64.1	62.6	61.9	58.0
Female	24.5	24.1	23.3	24.8	27.0	26.4	27.1	26.3	26.9	26.6	24.9

\* Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

Source: Arizona Department of Health Service, 2001. *Arizona Health Status and Vital Statistics, 2000*.

The statistics reported in Table 4.2 reflect deaths from accidental injuries, suicides, and injury inflicted by another person as in the case of homicide. Mortality rates for men increased to a high of 122.8 deaths per 100,000 persons in the age-adjusted population in 1994 but have decreased by 11.8 percent in the period from 1990 to 2000. Men were 2.7 times more likely to die from injury than females in 2000.

Table 4.2: Age-Adjusted\* Mortality Rates for Total Injury Deaths by Gender and Year, Arizona, 1990-2000.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Male	108.8	99.8	99.0	106.7	122.8	115.9	114.6	112.8	109.5	103.4	96.0
Female	36.1	36.2	40.3	43.8	40.6	45.3	38.5	38.3	39.9	39.1	35.1
Both	71.4	67.0	69.2	74.5	81.0	79.8	76.0	75.2	74.5	71.0	64.9

\*Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

Source: Arizona Department of Health Services, 2002. *Injury Mortality Among Arizona Residents, 1990-2000*.

Mortality trends for suicide or what is sometimes referred to as intentional self-harm are shown in Table 4.3. Suicide was the eighth leading cause of death for men in 2000 (Table 1.3). In the ten-year period from 1990 to 2000, men have consistently had a higher suicide rate than women. In 2000, men were 4.8 times more likely to die from suicide than women were. The suicide death rate for men declined 24.2 percent between 1990 and 2000.

Table 4.3: Age-Adjusted\* Mortality Rates for Intentional Self-Harm (Suicide) by Gender and Year, Arizona, 1990-2000.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Male	32.6	30.5	29.1	32.4	33.5	31.5	28.7	29.5	28.6	25.7	24.7
Female	6.5	6.4	6.6	7.0	7.6	8.8	6.4	6.4	7.1	6.5	5.2
Both	19.0	17.9	17.4	19.1	20.2	19.8	17.2	17.7	17.7	15.8	14.6

\*Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

Source: Arizona Department of Health Services, 2002. *Injury Mortality Among Arizona Residents, 1990-2000*.

Suicide death rates have decreased for men in all racial and ethnic groups with the exception of Asian men who saw an increase in 2000 of 21 percent over 1990 levels (Table 4.4). The largest decrease in suicide mortality was among Black men who experienced a decline of 29.1 percent since 1990. In 2000, American Indian males had the highest suicide mortality rate.

Table 4.4: Age-Adjusted Mortality Rates\* for Suicide by Race/Ethnicity Group and Gender, Arizona, 1990 and 2000.

	All Arizonans	White non-Hispanic	American Indian	Black	Hispanic	Asian
Male						
1990	32.6	36.1	39.1	17.2	16.6	10.2
2000	24.7	27.6	29.7	12.2	12.7	12.3
Female						
1990	6.5	7.2	2.6	7.7	2.8	4.6
2000	5.2	6.8	3.7	0.0	1.4	0.0

\* Number of deaths per 100,000 population in specified group age-adjusted to the 2000 U.S. standard.

Source: Arizona Department of Health Services, 2002. *Injury Mortality Among Arizona Residents, 1990-2000*.

Suicide rates vary with age groups. According to Table 4.5, older Arizona men (65 and older) have the highest suicide mortality rates with 45.6 men dying per 100,000 men in this age group. Young adults between the ages of 20 and 24 have the next highest rate of 39.8.

Table 4.5: Suicide Mortality Rates (per 100,000 Population in the Specified Group) by Age Group and Gender, Arizona, 2000.

	<15	15-19	20-24	25-34	35-44	45-54	55-64	65+
Male	2.6	18.9	39.8	22.5	28.6	32.8	25.2	45.6
Female	0.5	2.8	4.1	6.7	8.9	10.0	3.4	5.9

Source: Arizona Department of Health Services, 2002. *Injury Mortality Among Arizona Residents, 1990-2000*.

In 2000, firearm related deaths were the seventh leading cause of death for men in Arizona. Like suicide and accidents, firearms are much more likely to cause death among men than they are among women. Trends in firearm mortality are presented in Table 4.6. In 2000, men were 6.1 times more likely to die as a result of a firearm

inflicted wound than women. In 2000, firearm mortality for men had decreased 36.1 percent from a mortality rate high in 1995 of 41.3.

Table 4.6: Rates of Firearm-Related Fatalities by Gender and Year, Arizona, 1990-2000.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Male	32.7	31.5	32.6	35.7	39.9	41.3	33.7	33.7	33.5	28.4	26.4
Female	5.3	5.3	6.1	6.7	7.0	7.4	6.0	5.5	6.0	6.2	4.3

Source: Arizona Department of Health Services, 2002. *Injury Mortality Among Arizona Residents, 1990-2000*.

Black men are much more likely to die from firearms than any other racial or ethnic group (Table 4.7). Firearm death rates for Black men are 58 percent higher than the firearm death rate for Hispanic men and 75 percent higher than the rate for White, non-Hispanic men.

Table 4.7: Firearm-Related Death Rates by Gender and Race/Ethnicity, Arizona, 2000.

	White non-Hispanic	Hispanic	Black	American Indian	Asian
Male	25.2	27.9	44.2	21.6	15.0
Female	4.5	3.2	8.0	3.1	7.7

Source: Arizona Department of Health Services, 2002. *Injury Mortality Among Arizona Residents, 1990-2000*.

As show in Table 4.8, men who are 65 years old and older are the most likely to die from firearms followed by men in the 20-44 year age group.

Table 4.8: Firearm-Related Death Rates by Age Group and Gender, Arizona, 2000.

	<15	15-19	20-44	45-64	65+
Male	1.2	33.6	35.2	26.6	41.9
Female	0.2	4.5	5.6	5.6	5.1

Source: Arizona Department of Health Services, 2002. *Injury Mortality Among Arizona Residents, 1990-2000*.

Death rates as a result of assault, also know as homicide, increased to 18.5 deaths per 100,000 persons in 1994 and declined over the subsequent years to 11.1 in 2000 (Table 4.9). This represents a decline of 41 percent. Homicide rates for men have been consistently higher than the rate for women with men almost three times as likely to die from assault than women in 2000.

Trend information on numbers of homicides from 1990 to 2000 are presented in Table 4.10. The largest number of deaths occurs in the 20-44 year old age group.

Table 4.9: Age-Adjusted\* Mortality Rates for Assault (Homicide) by Gender and Year, Arizona, 1990-2000.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Male	12.2	13.0	14.2	14.2	18.5	16.9	16.9	15.8	15.4	13.6	11.1
Female	4.0	4.5	4.3	5.0	4.7	5.2	4.1	4.2	4.3	4.7	3.8
Both	8.1	8.6	8.9	9.5	11.5	12.1	10.2	9.6	9.5	8.7	7.6

\*Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard.

Source: Arizona Department of Health Services, 2002. *Injury Mortality Among Arizona Residents, 1990-2000.*

Table 4.10: Number of Homicide Deaths by Gender, Age Group and Year, Arizona, 1990-2000.

		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Total, all groups		302	334	351	387	477	530	459	443	447	430	394
	<1	7	6	11	4	7	8	4	6	4	6	6
	1-14	16	9	25	23	22	26	26	13	24	11	9
	15-19	28	50	50	61	72	89	72	56	55	51	53
	20-44	181	204	200	238	292	324	279	290	299	273	234
	45-64	45	43	50	36	53	58	59	56	48	66	65
	65+	21	22	12	23	27	19	17	21	13	21	26
	Unknown	4	0	3	2	4	6	2	1	4	2	1
Male	Total	226	248	268	286	378	417	368	352	348	315	295
	<1	2	2	5	1	4	4	3	4	4	3	4
	1-14	11	2	19	14	11	18	13	8	14	5	6
	15-19	24	41	44	49	62	77	65	46	42	42	43
	20-44	140	159	159	183	240	262	233	236	238	208	193
	45-64	34	28	33	23	41	43	45	46	38	41	39
	65+	12	16	6	14	17	9	7	11	9	14	9
	Unknown	3	0	2	2	3	4	2	1	3	2	1
Female	Total	76	86	83	101	99	113	91	91	99	115	99
	<1	5	4	6	3	3	4	1	2	0	3	2
	1-14	5	7	6	9	11	8	13	5	10	6	3
	15-19	4	9	6	12	10	12	7	10	13	9	10
	20-44	41	45	41	55	52	62	46	54	61	65	41
	45-64	11	15	17	13	12	15	14	10	10	25	26
	65+	9	6	6	9	10	10	10	10	4	7	17
	Unknown	1	0	1	0	1	2	0	0	1	0	0

Source: Arizona Department of Health Services, 2002. *Injury Mortality Among Arizona Residents, 1990-2000.*

## 5. Mental Health and Substance Abuse

Approximately one in five Americans have a diagnosable mental illness in any given year (National Institute of Mental Health, 2001). Such mental disorders are accompanied by a variety of limitations and disabilities that may equal or exceed those resulting from chronic physical conditions (Center for Mental Health Services, 1998). For example, symptoms of depression are reported to produce greater limitations in physical and social functioning than such illnesses as diabetes, arthritis, and back problems (Center for Mental Health Services, 1998). In fact, major depression, bipolar disorder, schizophrenia, and obsessive-compulsive disorder are four of the ten leading causes of disability in the U.S. and other industrialized countries (National Institute of Mental Health, 2001).

Information presented in this fact book on the prevalence of mental disorders, including substance abuse, in the U.S. comes from three sources. The first is the National Health Interview Survey that is conducted annually by the National Center for Health Statistics. Data in Table 5.1 comes from the 1994 survey that included a supplement that looked at the occurrence of mental health disorders in the general population. The second source is the National Household Survey on Drug Abuse that is conducted annually for the Substance Abuse and Mental Health Services Administration and collects data on a variety of issues related to the use of drugs including tobacco and alcohol. Tables 5.2 and 5.3 report on data collected by this survey. The third source is the 1997 Client/Patient Sample Survey conducted by the Center for Mental Health Services. This survey collected information on the characteristics of people in mental health treatment. Data in Tables 5.4 through 5.10 come from this study.

In Table 5.1, a mental or emotional disorder was determined to be present if the person being interviewed stated they had a specific mental/emotional disorder at some point in the prior 12 months that persisted for at least two weeks, reported specific mental health symptoms, or stated they has used a prescription medication for an ongoing mental/emotional disorder at some time during the prior 12 months. A smaller percentage of men (38.2 percent) reported mental/emotional problems than women (61.8 percent) but a larger percentage of men (70.0 percent) stated they had a substance abuse problem compared with women (29.1 percent).

Table 5.1: Estimated Number and Percent Distribution of Prevalence of 12-Month Mental Health and Substance Abuse Problem by Gender (U.S. Civilian Noninstitutionalized Population Aged 18 to 69 Years).

	Household population		Selected M/E problem		Substance abuse disorder	
	(000)	%	(000)	%	(000)	%
Male	82,090	48.8	3,144	38.2	873	70.9
Female	86,150	51.2	5,095	61.8	358	29.1

Source: Center for Mental Health Services, 1998. *Mental Health, United States, 1998*.

Another measure of the prevalence of mental disorders is the number of people who report having utilized mental health services. Table 5.2 reports that men were less likely

than women to receive inpatient and outpatient mental health treatment or counseling and use prescription medications for mental health disorders.

Table 5.2: Percentages of Persons Aged 18 or Older Who Reported Receiving Mental Health Services in the Past Year, U.S., 2000.

	Received mental health treatment or counseling <sup>1</sup>	Inpatient treatment/counseling	Type of mental health service	
			Outpatient treatment/counseling	Prescription medication
Total	9.9	0.7	5.6	7.8
Male	7.0	0.6	3.9	5.1
Female	12.6	0.8	7.1	10.3

<sup>1</sup>Mental health treatment/counseling is defined as having received inpatient care, outpatient care, or using prescription medication for mental or emotional problems.

Source: Substance Abuse and Mental Health Services Administration, 2001. *Summary of Findings from the National Household Survey on Drug Abuse, 2000.*

Table 5.3 compares the percentage of people who have used illicit drugs or alcohol with the percentage of people who have used treatment services or perceive a need for these services.

Table 5.3: Percentages Reporting Past Month Use of Any Illicit Drug and Alcohol Among Persons Aged 18 or Older, by Receipt of and Perceived Need for Mental Health Treatment/Counseling, U.S., 2000.

	Total <sup>1</sup>	Mental health treatment/counseling in the past year <sup>2</sup>			
		Received		Not received	
		Unmet need	No unmet need	Unmet need	No unmet need
<b>Illicit Drugs</b>					
Total	5.9	20.8	8.3	18.9	5.0
Male	7.4	24.9	11.4	27.2	6.6
Female	4.5	19.0	6.7	14.5	3.4
<b>Alcohol</b>					
Total	50.2	58.8	49.6	60.0	49.8
Male	58.3	63.7	54.5	66.2	58.4
Female	42.7	56.5	47.0	56.8	41.4

<sup>1</sup> Estimates in the total column represent past month use for all persons aged 18 or older, including those with unknown mental health treatment/counseling information.

<sup>2</sup> Mental health treatment/counseling is defined as having received inpatient care, outpatient care, or using prescription medication for mental or emotional problems. Unmet treatment/counseling need is defined as a perceived need for treatment that was not received.

Source: Substance Abuse and Mental Health Services Administration, 2001. *Summary of Findings from the National Household Survey on Drug Abuse, 2000.*

Tables 5.4 through 5.9 report on new admissions and persons currently under care in less than 24-hour care programs, residential care programs, and inpatient psychiatric care programs for 1997. For all types of care, men had higher rates than women for admissions and current care. African American males had the highest admission and under care rates of all other ethnic and racial groups for residential and in-patient care programs. American Indian and Alaskan Native males had the highest admission and under care rates for less than 24-hour care programs. Asian or Pacific Islander males had the lowest rates for admissions and care.

Table 5.4: Rate per 100,000 U.S. Civilian Population<sup>1</sup> of Admissions, by Race/Ethnicity, Gender, and Type of Less than 24-Hour Care Program, U.S., 1997.

	Total, all less than 24-hour care programs	State/County mental hospitals	Private psychiatric hospitals	Non-federal general hospital	VA medical centers	Multi-service mental health organizations
Total	1,252.9	12.9	78.6	224.5	51.1	513.4
Male	1,270.8	14.6	72.5	203.4	96.4	513.1
Female	1,235.9	11.2	84.3	244.5	8.2	513.6
American Indian or Alaska Native	4,425.1	-	*	427.7	*	2,402.9
Male	2,031.1	-	*	*	*	717.5
Female	2,394.0	-	-	*	-	1,685.4
Asian or Pacific Islander	1,115.0	*	39.6	105.7	40.1	500.2
Male	490.0	*	*	73.7	*	185.3
Female	625.1	*	*	32.0	*	314.9
Black or African American	3,539.6	45.8	150.7	538.2	152.9	1,587.7
Male	1,941.2	26.9	95.1	283.3	136.8	829.2
Female	1,598.4	18.9	55.5	255.0	16.1	758.5
White	2,412.9	22.1	178.1	426.7	105.0	970.9
Male	1,209	13.2	76.5	191.4	98.2	486.6
Female	1,203.6	8.9	101.6	235.3	6.8	484.4
Hispanic or Latino	2,326.9	28.9	66.1	608.8	62.6	859.6
Male	1,167.8	11.5	34.2	238.3	53.3	446.3
Female	1,159.1	17.4	31.9	370.5	9.3	413.4

<sup>1</sup> U.S. Bureau of the Census population estimates for May 1997 are used as denominators for rate computations.

\* Estimate is based on five or fewer sample cases or estimate has a relative standard error 50% or higher.

Source: Center for Mental Health Services, 2000. *Mental Health, United States, 2000*.

Table 5.5: Rate per 100,000 U.S. Civilian Population<sup>1</sup> of Persons under Care, by Race/Ethnicity, Gender, and Type of Less than 24-Hour Care Program, U.S., 1997.

	Total, all less than 24-hour care programs	State/County mental hospitals	Private psychiatric hospitals	Non-federal general hospital	VA medical centers	Multi-service mental health organizations
Total	808.4	15.7	20.4	113.0	56.2	332.5
Male	842.5	16.1	20.2	100.5	107.8	322.5
Female	776.0	15.4	20.6	124.9	7.3	342.0
American Indian or Alaska Native	2,784.3	*	*	*	307.7	1,195.9
Male	1,701.3	-	-	*	307.7	792.9
Female	1,083.1	*	*	*	-	403.0
Asian or Pacific Islander	472.5	*	*	43.4	*	106.1
Male	348.5	*	*	*	*	65.8
Female	124.0	*	*	*	-	*
Black or African American	2,630.9	73.2	46.6	290.2	230.0	1,127.8
Male	1,465.5	*	22.1	108.2	215.2	567.8
Female	1,165.4	30.5	24.5	182.0	14.8	560.0
White	1,494.6	18.6	42.2	201.6	104.6	631.0
Male	748.3	8.6	20.5	83.8	97.2	299.7
Female	746.3	10.0	21.8	117.7	7.4	331.2
Hispanic or Latino	1,628.4	*	38.1	380.0	72.3	522.4
Male	904.9	*	*	228.5	71.1	264.6
Female	723.5	*	14.6	151.5	*	257.8

<sup>1</sup> U.S. Bureau of the Census population estimates for May 1997 are used as denominators for rate computations.

\* Estimate is based on five or fewer sample cases or estimate has a relative standard error 50% or higher.

Source: Center for Mental Health Services, 2000. *Mental Health, United States, 2000*.

Table 5.6: Rate per 100,000 U.S. Civilian Population<sup>1</sup> of Admissions by Race/Ethnicity, Gender, and Type of Residential Care Program, U.S., 1997.

	Total, all residential care programs	RTC's for emotionally disturbed children	All other organizations <sup>2</sup>
Total	64.4	16.3	48.1
Male	83.9	21.5	62.5
Female	45.9	11.4	34.5
American Indian or Alaska Native	*	*	*
Male	86.2	*	*
Female	*	*	-
Asian or Pacific Islander	43.0	*	30.7
Male	15.6	*	*
Female	*	*	*
Black or African American	214.3	78.5	135.8
Male	138.3	47.8	90.5
Female	76.0	30.7	45.3
White	122.3	24.7	97.6
Male	80.0	16.9	63.1
Female	42.4	7.8	34.6
Hispanic or Latino	113.1	37.1	76.0
Male	74.4	25.8	48.6
Female	38.8	11.4	27.4

<sup>1</sup> U.S. Bureau of the Census population estimates for May 1997 are used as denominators for rate computations.

<sup>2</sup> Includes the residential care programs of State and County mental hospitals, private psychiatric hospitals, non-Federal general hospitals, VA medical centers, and multiservice mental health organizations.

\* Estimate is based on five or fewer sample cases or estimate has a relative standard error 50% or higher. The estimate is not shown because it does not meet standards of reliability.

Source: Center for Mental Health Services, 2000. *Mental Health, United States, 2000*.

Table 5.7: Rate per 100,000 U.S. Civilian Population<sup>1</sup> of Persons under Care by Race/Ethnicity, Gender, and Type of Residential Care Program, U.S. 1997.

	Total, all residential care programs	RTC's for emotionally disturbed children	All other organizations <sup>2</sup>
Total	31.2	10.4	20.8
Male	40.9	15.2	25.7
Female	22.0	5.9	16.1
American Indian or Alaska Native	116.7	85.5	*
Male	82.8	54.9	*
Female	*	*	*
Asian or Pacific Islander	15.5	*	12.9
Male	*	*	*
Female	*	*	*
Black or African American	137.3	54.9	82.4
Male	91.8	39.0	52.8
Female	45.5	15.9	29.6
White	53.8	15.9	37.9
Male	35.5	11.6	23.8
Female	18.4	4.3	14.1
Hispanic or Latino	53.9	20.1	33.8
Male	30.8	14.9	15.9
Female	23.2	5.2	17.9

<sup>1</sup> U.S. Bureau of the Census population estimates for May 1997 are used as denominators for rate computations.

<sup>2</sup> Includes the residential care programs of State and County mental hospitals, private psychiatric hospitals, non-Federal general hospitals, VA medical centers, and multiservice mental health organizations.

\* Estimate is based on five or fewer sample cases or estimate has a relative standard error 50% or higher. The estimate is not shown because it does not meet standards of reliability.

Source: Center for Mental Health Services, 2000. *Mental Health, United States, 2000*.

Table 5.8: Rate per 100,000 U.S. Civilian Population <sup>1</sup> of Admissions, by Race/Ethnicity, Gender, and Type of Inpatient Psychiatric Care Program, U.S., 1997.					
	Total, all inpatient programs <sup>2</sup>	State/County mental hospitals	Private psychiatric hospitals	Non-federal general hospital	VA medical centers
Total	764.9	71.5	187.1	389.1	38.2
Male	847.5	89.0	201.0	398.8	73.3
Female	686.7	54.9	173.8	379.9	5.0
American Indian or Alaska Native	2,399.8	184.0	*	*	*
Male	1,326.0	*	*	*	*
Female	1,073.8	*	*	*	-
Asian or Pacific Islander	477.4	26.3	*	263.7	*
Male	161.9	*	*	*	*
Female	315.5	*	*	195.1	-
Black or African American	2,400.4	293.8	503.7	1,151.6	223.0
Male	1,497.7	188.8	253.4	692.8	204.8
Female	902.7	104.9	250.2	458.8	18.2
White	1,478.7	131.1	347.1	781.0	64.9
Male	798.2	80.3	191.3	389.1	61.3
Female	680.5	50.8	155.7	391.9	3.6
Hispanic or Latino	1,249.4	100.7	525.9	454.4	40.8
Male	674.8	68.6	260.8	213.8	39.6
Female	574.6	32.1	265.1	240.6	*

<sup>1</sup> U.S. Bureau of the Census population estimates for May 1997 are used as denominators for rate computations.

<sup>2</sup> Multiservice mental health organizations are included in the total column but are not detailed separately.

\* Estimate is based on five or fewer sample cases or estimate has a relative standard error 50% or higher.

Source: Center for Mental Health Services, 2000. *Mental Health, United States, 2000*.

Table 5.9: Rate per 100,000 U.S. Civilian Population <sup>1</sup> of Admissions, by Race/Ethnicity, Gender, and Type of Inpatient Psychiatric Care Program, U.S., 1997.					
	Total, all inpatient programs <sup>2</sup>	State/County mental hospitals	Private psychiatric hospitals	Non-federal general hospital	VA medical centers
Total	43.7	20.3	6.6	10.9	2.5
Male	55.5	29.2	6.6	10.5	4.9
Female	32.4	11.9	6.5	11.2	0.3
American Indian or Alaska Native	99.0	61.1	10.5	*	*
Male	78.3	*	*	*	-
Female	20.7	*	*	*	-
Asian or Pacific Islander	23.1	14.2	*	*	-
Male	13.3	*	*	*	-
Female	9.8	*	*	*	-
Black or African American	171.1	90.1	20.1	39.3	14.4
Male	123.2	66.5	12.1	23.4	14.3
Female	47.9	23.6	8.0	15.9	*
White	80.7	34.7	12.9	21.1	4.2
Male	48.0	24.0	6.1	9.3	3.9
Female	32.6	10.6	6.8	11.8	0.3
Hispanic or Latino	67.3	38.0	10.7	12.9	2.9
Male	46.0	28.3	6.1	8.2	2.6
Female	21.4	9.7	4.6	4.7	*

<sup>1</sup> U.S. Bureau of the Census population estimates for May 1997 are used as denominators for rate computations.

<sup>2</sup> Multiservice mental health organizations are included in the total column but are not detailed separately.

\* Estimate is based on five or fewer sample cases or estimate has a relative standard error 50% or higher.

Source: Center for Mental Health Services, 2000. *Mental Health, United States, 2000*.

Substance abuse results in more deaths, illnesses, and disabilities than any other preventable condition (Robert Wood Johnson Foundation, 2001). Approximately one in four deaths are attributable to substance abuse with alcohol related deaths accounting for 100,000 deaths and illicit drugs accounting for 16,000 deaths each year.

Tobacco use is the most preventable cause of death and illness in the U.S. (Centers for Disease Control and Prevention, 2002c). It is responsible for 87 percent of lung cancers and is associated with other cancers of the mouth, pharynx, larynx, esophagus, pancreas, uterine cervix, kidney, and bladder (American Cancer Society, 2001). People who use tobacco are also at increased risk for cardiovascular and respiratory illnesses. The Centers for Disease Control and Prevention estimate that approximately 440,000 people die as a result of cigarette smoking each year (Centers for Disease Control and Prevention, 2002c).

Between 1990 and 2000, the percentage of current male smokers remained relatively stable in the U.S. (Table 5.10). The percentage of men in Arizona that currently smoked during the same time period fluctuated between 18.3 and 27.1 percent. Men are more likely than women to smoke.

Table 5.10: Percentage Current Smokers\*, U.S. and Arizona, 1990-2000.

	Males		Females	
	U.S.	Arizona	U.S.	Arizona
1990	24.9	22.7	21.3	18.6
1991	25.1	26.3	21.3	21.4
1992	24.2	21.7	21.0	17.0
1993	24.0	22.0	21.1	19.9
1994	23.9	21.2	21.6	24.7
1995	24.8	26.8	20.9	19.2
1996	25.5	27.1	21.9	20.5
1997	25.4	22.0	21.1	20.2
1998	25.3	24.6	20.9	19.2
1999	24.2	23.6	20.8	16.7
2000	24.4	18.3	21.2	19.0

\* All respondents 18 and older who have ever smoked 100 cigarettes in their lifetime and reported smoking every day or some days.

Source: Centers for Disease Control and Prevention, 2002b. *Behavioral Risk Factor Surveillance System*.

Results of cigarette and tobacco use questions from the National Household Survey on Drug Abuse (NHSDA) are presented in Table 5.11. Over three-quarters of the male population in the U.S. has smoked cigarettes at some point in their lifetime. Based on estimates provided in Tables 5.10 and 5.11, between 24.4 and 28.7 percent of men in the U.S. were current smokers in 2000.

Table 5.11: Percentages Reporting Lifetime, Past Year, and Past Month Use of Cigarettes Among Persons Aged 18 or Older, U.S., 1999 and 2000.

	Lifetime		Time period		Past month	
	1999	2000	1999	2000	1999	2000
Total	71.8	70.2	30.9	30.1	27.0	26.3
Male	78.2	76.6	34.3	33.0	30.0	28.7
Female	66.0	64.3	27.8	27.4	24.3	24.0

Source: Substance Abuse and Mental Health Services Administration, 2001. *Summary of Findings from the National Household Survey on Drug Abuse, 2000.*

Data from 1999 and 2000 reporting the use of any form of tobacco product is shown in Table 5.12. Again, men are more likely than women to have used a tobacco product during their lifetime, in the past year, or in the past month.

Table 5.12: Percentages Reporting Lifetime, Past Year, and Past Month Use of Any Tobacco Product Among Persons Aged 18 or Older, U.S., 1999 and 2000.

	Lifetime		Time period		Past month	
	1999	2000	1999	2000	1999	2000
Total	75.6	74.4	37.1	36.3	31.7	30.9
Male	84.5	83.6	45.6	44.3	38.8	37.5
Female	67.5	65.9	29.4	29.0	25.2	24.9

Source: Substance Abuse and Mental Health Services Administration, 2001. *Summary of Findings from the National Household Survey on Drug Abuse, 2000.*

The prevalence of illicit drug use and alcohol is presented in the following tables. Men are more likely than women to have used illicit drugs in their lifetime, in the past year, or in the past month (Table 5.13). This includes marijuana, cocaine, hallucinogens, and nonmedical use of prescription drugs.

As with illicit drugs, a larger percentage of men than women report using alcohol (Table 5.14). In 2000, men were more than twice as likely as women to binge drink (having five or more drinks on the same occasion on at least 1 day in the past 30 days) and more than three times as likely to drink heavily (drinking five or more drinks on the same occasion on each of five or more days in the past 30 days).

Table 5.13: Percentages Reporting Lifetime, Past Year, and Past Month Use of Various Drugs Among Persons Aged 18 and Older, U.S. 1999 and 2000.

	Lifetime		Past year		Past month	
	1999	2000	1999	2000	1999	2000
Any illicit drug						
Total	41.1	40.3	10.5	10.1	5.8	5.9
Male	45.6	45.6	13.1	12.2	7.8	7.4
Female	37.0	35.6	8.2	8.1	4.0	4.5
Marijuana						
Total	36.4	36.0	8.0	7.7	4.4	4.5
Male	41.1	41.3	10.6	10.0	6.4	6.0
Female	32.1	31.3	5.6	5.7	2.7	3.2
Cocaine						
Total	12.6	12.2	1.7	1.5	0.7	0.5
Male	15.5	15.1	2.2	1.9	1.0	0.7
Female	9.9	9.5	1.2	1.0	0.5	0.4
Hallucinogens						
Total	12.0	12.4	1.2	1.3	0.3	0.4
Male	14.9	15.5	1.6	1.7	0.5	0.5
Female	9.3	9.6	0.8	0.9	0.2	0.3
Nonmedical use of prescription type psychotherapeutic						
Total	15.9	15.0	3.8	3.6	1.7	1.6
Male	17.6	16.5	4.0	3.6	1.8	1.7
Female	14.5	13.5	3.6	3.5	1.5	1.5

Source: Substance Abuse and Mental Health Services Administration, 2001. *Summary of Findings from the National Household Survey on Drug Abuse, 2000.*

Table 5.14: Percentages Reporting Lifetime, Past Month Alcohol Use, Past Month “Binge” Alcohol Use, and Past Month Heavy Alcohol Use Among Persons Aged 18 or Older, U.S., 1999 and 2000.

	Type of alcohol use					
	Any alcohol use		“Binge” alcohol use		Heavy alcohol use	
	1999	2000	1999	2000	1999	2000
Total	50.0	50.2	21.4	21.8	6.1	6.0
Male	57.8	58.3	30.2	30.5	10.0	9.4
Female	42.8	42.7	13.4	13.9	2.5	2.8

Note: “Binge” alcohol use is defined as drinking five or more drinks on the same occasion on at least 1 day in the past 30 days. By “occasion” is meant at the same time or within a couple hours of each other. Heavy alcohol use is defined as drinking five or more drinks on the same occasion on each of 5 or more days in the past 30 days; all heavy alcohol users are also binge alcohol users.

Source: Substance Abuse and Mental Health Services Administration, 2001. *Summary of Findings from the National Household Survey on Drug Abuse, 2000.*

Table 5.15 presents data from 1990 through 1999 on the percentage of people in the U.S. and Arizona who would be considered chronic drinkers (2 or more drinks per day). In 1999, men were 22 times more likely than women to be considered chronic drinkers.

	Males		Females	
	U.S.	Arizona	U.S.	Arizona
1990	5.8	6.4	0.8	0.9
1991	6.2	6.5	0.9	0.7
1992	5.2	3.0	0.8	0.8
1993	5.5	4.0	0.9	0.9
1994	No data	5.1	No data	0.9
1995	5.0	4.4	0.8	0.6
1996	No data	8.2	No data	2.0
1997	5.3	4.1	0.8	1.1
1998	No data	No data	No data	No data
1999	6.4	8.8	0.9	0.4
2000	No data	No data	No data	No data

\* All respondents 18 and older who report an average of two or more drinks per day i.e., 60 or more alcoholic drinks a month.

Source: Centers for Disease Control and Prevention, 2002b. *Behavioral Risk Factor Surveillance System*.

As might be expected since men report higher rates of using drugs and alcohol than women, men are also more likely to drive under the influence of drugs and alcohol (Table 5.16).

	Drove under the influence in past year					
	Any illicit drug		Alcohol		Any illicit drug or alcohol	
	1999	2000	1999	2000	1999	2000
Total	3.5	3.1	11.8	10.8	12.5	11.5
Male	5.1	4.4	17.0	15.3	17.9	16.1
Female	2.0	1.9	7.0	6.7	7.5	7.2

Source: Substance Abuse and Mental Health Services Administration, 2001. *Summary Findings from the National Household Survey on Drug Abuse, 2000*.

Tables 5.17 and 5.18 display mortality rates for drug related deaths in Arizona. Men have a death rate from drugs (8.9 deaths per 100,000 persons) that is more than twice as high as that for women (4.0 deaths per 100,000 persons). Female death rates for suicide by drugs (1.4 deaths per 100,000 persons) are higher than the suicide by drugs rate for men (0.8 deaths per 100,000 persons). Narcotics and hallucinogens are the most common drugs that cause death for men (Table 5.18).

Table 5.17: Drug-Related Death Rates (per 100,000 Persons in Specified Group) by Mortality Category and Gender, Arizona, 2000.

	Abuse of psychoactive substances	Suicide by drugs	Accidents in the use of drugs	All drug-related deaths
Male	0.4	0.8	7.2	8.9
Female	0.3	1.4	1.8	4.0

Source: Arizona Department of Health Services, 2002. *Injury Mortality among Arizona Residents, 1990-2000*.

Table 5.18: Drug-Related Death Rates (per 100,000 Persons in Specified Group) by Type of Drug and Gender, Arizona, 2000.

	Nonopioid analgesics, antipyretics, antirheumatics	Antiepileptic, sedative-hypnotic, psychotropic	Narcotics, psychodysleptics (hallucinogens)	Other and unspecified
Male	0.1	0.4	5.3	3.1
Female	0.3	0.3	1.3	2.1

Source: Arizona Department of Health Services, 2002. *Injury Mortality among Arizona Residents, 1990-2000*.

Table 5.19 shows the cause of drug-related death from 1990 through 2000. The number of people dying as a result of drugs increased from 1990 to 1999. Drug-related deaths decreased in 2000. For both men and women, accidental poisoning is the most common cause for drug-related deaths followed by self-poisoning.

Table 5.19: Drug-Related Mortality by Gender and Year, Arizona, 1990-2000.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<b>Total</b>	174	185	283	310	357	397	404	408	508	543	331
Abuse of psychoactive substances	16	25	57	42	25	42	49	10	16	14	19
Accidental poisoning by drugs	81	77	125	153	224	221	268	289	362	383	230
Intentional self-poisoning by drugs	66	61	78	85	81	108	56	73	87	101	58
Assault by drugs	0	1	0	1	0	0	1	2	1	1	0
Undetermined intent of poisoning by drugs	9	20	17	20	18	18	21	27	37	41	21
Drugs causing adverse effects in therapeutic use	2	1	6	9	9	8	9	7	5	3	3
<b>Male</b>											
Total	125	119	205	218	247	277	300	301	359	396	229
Abuse of psychoactive substances	14	21	50	32	22	36	36	8	13	13	11
Accidental poisoning by drugs	64	60	97	122	171	181	220	237	287	304	184
Intentional self-poisoning by drugs	39	26	44	42	43	46	26	35	41	56	21
Assault by drugs	0	0	0	0	0	0	1	0	0	0	0
Undetermined intent of poisoning by drugs	6	11	10	16	8	10	12	17	17	21	12
Drugs causing adverse effects in therapeutic use	2	1	4	6	3	4	5	4	1	2	1
<b>Female</b>											
Total	49	66	78	92	110	120	104	107	149	147	102
Abuse of psychoactive substances	2	4	7	10	3	6	13	2	3	1	8
Accidental poisoning by drugs	17	17	28	31	53	40	48	52	75	79	46
Intentional self-poisoning by drugs	27	35	34	43	38	62	30	38	46	45	37
Assault by drugs	0	1	0	1	0	0	0	2	1	1	0
Undetermined intent of poisoning by drugs	3	9	7	4	10	8	9	10	20	20	9
Drugs causing adverse effects in therapeutic use	0	0	2	3	6	4	4	3	4	1	2

Source: Arizona Department of Health Services, 2002. *Injury Mortality among Arizona Residents, 1990-2000*.

## 6. Sexually Transmitted Diseases

According to the Centers for Disease Control and Prevention (2000), there are more than 25 diseases that are spread through sexual contact resulting in 15 million new sexually transmitted disease cases each year. With the exception of HIV disease, most people are not aware of the extent of the problem caused by sexually transmitted diseases even though these diseases have significant consequences on the physical, public, and financial health of the country. The most common sexually transmitted diseases are gonorrhea, chlamydia, syphilis, genital herpes, human papillomavirus, hepatitis B, trichomoniasis, and bacterial vaginosis.

Arizona and U.S. rates for three of the most common sexually transmitted diseases are compared in Table 6.1. Chlamydia and gonorrhea rates for men in Arizona and the U.S. have increased in the five-year period between 1996 and 2000. Rates for syphilis infection have decreased for men in Arizona but have increased for men in the U.S. Men in Arizona have higher rates of gonorrhea and syphilis than women. Women are 3.8 times more likely to contract chlamydia than men are.

Table 6.1: Reported Rates (per 100,000) of Chlamydia, Gonorrhea, and Syphilis, Arizona and U.S., 1996-2000.

		1996	1997	1998	1999	2000
Chlamydia						
Men	AZ	93.6	96.8	107.1	110.6	109.2
	US	59.8	70.5	82.4	93.8	102.8
Women	AZ	385.9	374.3	382.0	393.4	414.6
	US	319.5	337.1	377.6	400.8	404.0
Gonorrhea						
Men	AZ	91.9	96.4	107.5	107.1	100.5
	US	127.4	124.9	132.7	134.7	134.6
Women	AZ	75.5	70.8	73.3	72.9	72.7
	US	119.0	119.0	130.0	128.7	128.3
Primary and Secondary Syphilis						
Men	AZ	2.7	4.2	5.1	6.2	4.6
	US	4.6	3.6	3.0	2.9	2.7
Women	AZ	1.9	1.6	2.8	2.7	3.3
	US	4.0	2.9	2.2	2.0	1.8

Source: Centers for Disease Control and Prevention, 2001b. *Sexually Transmitted Disease Surveillance 2000*.

Year 2000 rates among different age groups for four of the most common sexually transmitted diseases are presented in Table 6.2. The highest gonorrhea, chlamydia, and genital herpes infection rates for men occur between the ages of 20-24. Men between the ages of 30-34 are more likely to contract syphilis than other age groups.

Table 6.2: Rates (per 100,000) of Reported Cases of Gonorrhea, Chlamydia, Early Syphilis and Genital Herpes by Age and Gender, Arizona, 2000.

	Gonorrhea			Chlamydia			Early syphilis			Genital herpes		
	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total
0-4	3.6	0.5	2.1	7.1	6.4	6.8	0	0	0	1.0	0.5	0.8
5-9	0	1.6	0.8	0	1.6	0.8	0	0	0	0.5	0	.03
10-14	4.6	17.4	10.9	8.8	112.5	59.3	0	1.0	0.5	0.5	3.3	1.9
15-19	197.3	319.2	256.0	301.1	2104.5	1168.8	5.2	12.4	8.7	10.5	66.7	37.5
20-24	319.9	288.4	305.0	482.7	2042.4	1221.8	17.8	22.7	20.1	44.0	126.7	81.0
25-29	229.2	150.3	191.4	257.4	805.6	519.7	20.0	20.7	20.3	38.0	73.7	55.1
30-34	178.1	97.7	139.6	133.3	337.3	231.2	21.4	21.5	21.4	31.3	61.0	45.5
35-39	111.5	53.9	83.2	77.5	134.7	105.6	12.0	17.6	14.8	22.0	32.1	27.0
40-44	83.1	33.2	58.3	34.4	54.6	44.4	12.2	13.9	13.0	19.6	26.7	23.1
45-54	47.6	8.1	27.4	16.3	20.3	18.6	11.7	4.4	8.0	6.2	15.6	11.0
55-64	13.8	3.5	8.3	5.7	5.2	5.4	5.7	0.9	3.2	3.8	6.0	5.0
65-over	5.4	0.3	2.6	1.0	0.8	0.9	1.4	0	0.6	1.4	3.8	2.3
Total	92.3	67.7	80.0	100.5	386.8	243.9	8.7	8.3	8.5	13.8	29.7	21.8

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000*.

As of the year 2000, men continue to make up the majority of new HIV infections with 70 percent of new infections occurring among men (Centers for Disease Control and Prevention, undated). In Arizona, 86 percent of the AIDS cases reported in 2000 were among men (Table 6.3). Tables 6.4 and 6.5 provide data about AIDS cases and HIV infection cases in the U.S. by gender. Men comprise seventy five percent of AIDS cases in the U.S. reported between July 2000 and June 2001 (Table 6.4).

Information about AIDS and HIV infection cases in the U.S. by race and gender are presented in Tables 6.6 and 6.7. HIV and AIDS disproportionately affect racial and ethnic minorities with Black, non Hispanic men accounting for 42.3 percent of AIDS cases reported from July 2000 to June 2001. White, non Hispanic men accounted for 36 percent and Hispanic men accounted for 20 percent in this same time period. A similar picture presents itself for HIV infections reported from July 2000 to June 2001 in the U.S. Black, non-Hispanic men comprise 44 percent of infections, White, non-Hispanic men make up 39 percent of infections, and Hispanic men account for 14 percent of infections.

Men are living longer with AIDS as shown in Tables 6.8 and 6.9. The number of men living with AIDS increased by 84.3 percent from 1993 to 2000. Death from AIDS decreased in the same time period by 70 percent.

Table 6.3: Reported Cases of AIDS by Year of Diagnosis and Gender, Arizona, 1990-2000.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Males	505	528	660	623	587	609	485	449	430	339	285
Females	35	36	55	64	51	71	63	59	62	48	47

Source: Arizona Department of Health Services, 2001. *Arizona Health Status and Vital Statistics, 2000.*

Table 6.4: AIDS Cases by Age Group, Exposure Category, and Sex, Reported through June 2001, U.S.

	Males				Females				Total			
	July 2000-June 2001		Cumulative total		July 2000-June 2001		Cumulative total		July 2000-June 2001		Cumulative total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Men who have sex with men	13,293	43	361,867	56	-	-	-	-	13,293	33	361,867	46
Injecting drug use	5,369	18	142,888	22	2,306	23	54,203	40	7,675	19	197,091	25
Men who have sex with men and inject drugs	1,477	5	50,066	8	-	-	-	-	1,477	4	50,066	6
Hemophilia/coagulation disorder	95	0	4,949	1	8	0	285	0	103	0	5,234	1
Heterosexual contact	2,560	8	30,956	5	3,912	39	54,782	41	6,472	16	85,738	11
Sex with injecting drug user	506		9,496		928		21,111		1,434		30,607	
Sex with bisexual male	-		-		171		3,672		171		3,672	
Sex with person with hemophilia	4		67		11		422		15		489	
Sex with transfusion recipient	22		436		25		614		47		1,050	
Sex with HIV-infected person, risk not specified	2,028		20,957		2,777		28,963		4,805		49,920	
Receipt of blood transfusion, blood components, or tissue	125	0	5,031	1	124	1	3,863	3	249	1	8,894	1
Other/risk not reported or identified	7,664	25	53,429	8	3,767	37	21,712	16	11,431	28	75,142	10
Adult/adolescent subtotal	30,583	100	649,186	100	10,117	100	134,845	100	40,700	100	784,032	100

Source: Centers for Disease Control and Prevention, 2001a. *HIV/AIDS Surveillance Report*.

Table 6.5: HIV Infection Cases\* by Age Group, Exposure Category, and Sex, Reported through June 2001, from the 36 Areas with Confidential HIV Infection Reporting, U.S.

	Males				Females				Total			
	July 2000-June 2001		Cumulative total		July 2000-June 2001		Cumulative total		July 2000-June 2001		Cumulative total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Men who have sex with men	6,671	44	47,305	46	-	-	-	-	6,671	31	47,305	33
Injecting drug use	1,275	8	13,536	13	835	12	7,717	19	2,110	10	21,254	15
Men who have sex with men and inject drugs	594	4	6,244	6	-	-	-	-	594	3	6,244	4
Hemophilia/coagulation disorder	17	0	436	0	7	0	31	0	24	0	467	0
Heterosexual contact	1,216	8	7,670	7	2,462	36	16,964	42	3,678	17	24,634	17
Sex with injecting drug user	218		1,612		426		4,232		644		5,844	
Sex with bisexual male	-	-	-	-	156		1,253		156		1,253	
Sex with person with hemophilia	2		15		13		134		15		149	
Sex with transfusion recipient	5		83		10		113		15		196	
Sex with HIV-infected person, risk not specified	991		5,960		1,857		11,232		2,848		17,192	
Receipt of blood transfusion, blood components, or tissue	53	0	416	0	39	1	440	1	92	0	856	1
Other/risk not reported or identified	5,183	35	27,346	27	3,443	51	15,433	38	8,626	40	42,787	30
Adult/adolescent subtotal	15,009	100	102,953	100	6,786	100	40,585	100	21,795	100	143,547	100

\* Includes only persons reported with HIV infection who have not developed AIDS.

Source: Centers for Disease Control and Prevention, 2001a. *HIV/AIDS Surveillance Report*.

Table 6.6: Male Adult/Adolescent AIDS Cases by Exposure Category and Race/Ethnicity, Reported through June 2001, U.S.

	White, not Hispanic				Black, not Hispanic				Hispanic			
	July 2000-June 2001		Cumulative total		July 2000-June 2001		Cumulative total		July 2000-June 2001		Cumulative total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Men who have sex with men	6,882	62	226,768	74	3,872	30	80,622	37	2,295	38	49,448	42
Injecting drug use	1,115	10	28,560	9	2,781	21	73,034	33	1,436	23	40,637	35
Men who have sex with men and inject drugs	696	6	25,435	8	521	4	16,250	7	229	4	7,847	7
Hemophilia/coagulation disorder	74	1	3,831	1	14	0	574	0	7	0	439	0
Heterosexual contact	380	3	5,798	2	1,583	12	17,966	8	558	9	6,898	6
Sex with injecting drug user	96		2,006		301		5,552		101		1,860	
Sex with person with hemophilia	1		32		2		23		1		11	
Sex with transfusion recipient with HIV infection	7		162		11		172		2		90	
Sex with HIV-infected person, risk not specified	276		3,598		1,269		12,219		454		4,937	
Receipt of blood transfusion, blood components, or tissue	54	0	3,191	1	48	0	1,100	1	17	0	606	1
Risk not reported or identified	1,844	17	12,875	4	4,125	32	28,803	13	1,570	26	10,889	9
Total	11,045	100	306,458	100	12,944	100	218,349	100	6,112	100	116,764	100

Table 6.6 (cont.): Male Adult/Adolescent AIDS Cases by Exposure Category and Race/Ethnicity, Reported through June 2001, U.S.

	Asian/Pacific Islander				American Indian/Alaska Native				Cumulative totals			
	July 2000-June 2001		Cumulative total		July 2000-June 2001		Cumulative total		July 2000-June 2001		Cumulative total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Men who have sex with men	165	54	3,653	71	63	45	1,092	56	13,293	43	361,867	56
Injecting drug use	11	4	257	5	24	17	310	16	5,369	18	142,888	22
Men who have sex with men and inject drugs	10	3	193	4	20	14	327	17	1,477	5	50,066	8
Hemophilia/coagulation disorder	0	0	70	1	0	0	30	2	95	0	4,949	1
Heterosexual contact	27	9	216	4	10	7	60	3	2,560	8	30,956	5
Sex with injecting drug user	4		55		4		18		506		9,496	
Sex with person with hemophilia	0		1		0		0		4		67	
Sex with transfusion recipient with HIV infection	2		9		0		2		22		436	
Sex with HIV-infected person, risk not specified	21		151		6		40		2,028		20,957	
Receipt of blood transfusion, blood components, or tissue	6	2	117	2	0	0	9	0	125	0	5,031	1
Risk not reported or identified	84	28	624	12	24	17	127	6	7,664	25	53,429	8
<b>Total</b>	<b>303</b>	<b>100</b>	<b>5,130</b>	<b>100</b>	<b>141</b>	<b>100</b>	<b>1,955</b>	<b>100</b>	<b>30,593</b>	<b>100</b>	<b>649,186</b>	<b>100</b>

Source: Centers for Disease Control and Prevention, 2001a. *HIV/AIDS Surveillance Report*.

Table 6.7: Male Adult/Adolescent HIV Infection Cases by Exposure Category and Race/Ethnicity, Reported through June 2001, from the 34 Areas with Confidential HIV Infection Reporting, U.S.

	White, not Hispanic				Black, not Hispanic				Hispanic			
	July 2000-June 2001		Cumulative total		July 2000-June 2001		Cumulative total		July 2000-June 2001		Cumulative total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Men who have sex with men	3,650	63	27,683	63	1,897	29	14,790	32	998	47	3,968	43
Injecting drug use	402	7	3,712	8	658	10	8,023	17	200	9	1,641	18
Men who have sex with men and inject drugs	323	6	3,480	8	188	3	2,205	5	74	3	439	5
Hemophilia/coagulation disorder	13	0	329	1	1	0	89	0	2	0	12	0
Heterosexual contact	175	3	1,332	3	865	13	5,579	12	156	7	665	7
Sex with injecting drug user	51		351		134		1,081		26		153	
Sex with person with hemophilia	0		3		2		12		0		0	
Sex with transfusion recipient with HIV infection	1		21		3		56		1		4	
Sex with HIV-infected person, risk not specified	123		957		726		4,430		129		508	
Receipt of blood transfusion, blood components, or tissue	23	0	192	0	24	0	186	0	4	0	28	0
Risk not reported or identified	1,225	21	7,507	17	3,017	45	16,029	34	693	33	2,567	28
Total	5,811	100	44,235	100	6,650	100	46,901	100	2,127	100	9,320	100

Table 6.7 (cont.): Male Adult/Adolescent HIV Infection Cases by Exposure Category and Race/Ethnicity, Reported through June 2001, from the 34 Areas with Confidential HIV Infection Reporting, U.S.

	Asian/Pacific Islander				American Indian/Alaska Native				Cumulative totals			
	July 2000-June 2001		Cumulative total		July 2000-June 2001		Cumulative total		July 2000-June 2001		Cumulative total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Men who have sex with men	42	47	233	53	40	47	346	53	6,671	44	47,305	46
Injecting drug use	5	6	23	5	7	8	81	12	1,275	8	13,536	13
Men who have sex with men and inject drugs	0	0	8	2	8	9	88	13	594	4	6,244	6
Hemophilia/coagulation disorder	0	0	2	0	0	0	1	0	17	0	436	0
Heterosexual contact	4	4	28	6	11	13	39	6	1,216	8	7,670	7
Sex with injecting drug user	0		6		4		15		218		1,612	
Sex with person with hemophilia	0		0		0		0		2		15	
Sex with transfusion recipient with HIV infection	0		2		0		0		5		83	
Sex with HIV-infected person, risk not specified	4		2		7		24		991		5,960	
Receipt of blood transfusion, blood components, or tissue	1	1	4	4	1	1	2	0	53	0	416	0
Risk not reported or identified	37	42	139	32	19	22	102	15	5,183	35	27,346	27
<b>Total</b>	<b>89</b>	<b>100</b>	<b>437</b>	<b>100</b>	<b>86</b>	<b>100</b>	<b>659</b>	<b>100</b>	<b>15,009</b>	<b>100</b>	<b>102,953</b>	<b>100</b>

Source: Centers for Disease Control and Prevention, 2001a. *HIV/AIDS Surveillance Report*.

	1993	1994	1995	1996	1997	1998	1999	2000
Men who have sex with men	86,244	94,376	100,483	109,731	121,340	131,565	141,659	152,116
Injecting drug use	34,318	39,875	44,056	48,377	53,290	57,366	61,314	65,380
Men who have sex with men and inject drugs	13,915	14,940	15,768	16,578	17,852	18,837	19,670	20,296
Hemophilia/coagulation disorder	1,619	1,699	1,726	1,735	1,783	1,815	1,844	*
Heterosexual contact	6,081	7,861	9,704	12,099	14,826	17,482	20,237	23,092
Receipt of blood transfusion, blood components, or tissue	890	918	968	1,038	1,141	1,251	1,367	*
Other/risk not reported or identified	982	933	930	965	1,013	1,065	1,127	4,582
Subtotal	144,049	160,600	173,634	190,522	211,244	229,381	247,217	265,466

Source: Centers for Disease Control and Prevention, 2001a. *HIV/AIDS Surveillance Report*.

	1993	1994	1995	1996	1997	1998	1999	2000
Men who have sex with men	23,956	25,534	25,044	16,854	8,666	7,048	6,230	5,439
Injecting drug use	9,325	10,454	10,844	8,551	5,346	4,476	4,119	3,551
Men who have sex with men and inject drugs	3,188	3,528	3,467	2,591	1,447	1,262	1,182	1,120
Hemophilia/coagulation disorder	357	346	330	246	136	117	100	*
Heterosexual contact	1,600	2,013	2,389	2,111	1,464	1,227	1,257	1,218
Receipt of blood transfusion, blood components, or tissue	314	304	259	217	108	83	73	*
Other/risk not reported or identified	168	143	102	66	44	28	29	187
Subtotal	38,908	42,322	42,434	30,636	17,212	14,241	12,991	11,514

Source: Centers for Disease Control and Prevention, 2001a. *HIV/AIDS Surveillance Report*.

## 7. Sexual Dysfunction

Impotence or erectile dysfunction refers to a man's inability to maintain an erection for the purposes of sexual intercourse. Erectile dysfunction may be a total inability to achieve erection, an inconsistent ability to achieve erection, or the ability to sustain an erection for brief periods of time (National Institutes of Health, 1995). It is believed that the condition affects 10 to 20 million men in the U.S. (National Institutes of Health, 1992). If partial erectile dysfunction is included, the number of men affected may be 30 million. The majority of men experiencing erectile dysfunction are older adults with approximately five percent of men at age 40 reporting the condition and 15 to 25 percent reporting the condition at age 65 (National Institutes of Health, 1992). Erectile dysfunction may be a result of physical conditions such as disease, surgery, or medication or a result of psychological factors such as stress, depression, or anxiety (National Institutes of Health, 1995). It is estimated that 10 to 20 percent of erectile dysfunction cases are caused by psychological factors (National Institutes of Health, 1995). Unlike other health conditions reported in this fact book, information about the extent of the problem is not collected regularly by government institutions. The information in the following tables is limited and has been taken from scientific publications.

Table 7.1 presents a review of prevalence studies conducted by Dr. Ronald Lewis and published in the journal *Urologic Clinics of North America* (2001). As can be seen in the table, a variety of populations were studied from 1986 through 1999 with varying results.

Table 7.2 reports findings from the Massachusetts Male Aging Study which is the largest study to be conducted on the prevalence and incidence of erectile dysfunction. Incidence rates for 40-49 year old men are 12.4 per 1,000 men, 29.8 per 1,000 men for 50-59 year old men, and 46.4 per 1,000 men for men between the ages of 60 and 69.

According to Table 7.3, approximately 10 percent of men over the age of 45 have sought treatment for sexual problems.

Table 7.1: Prevalence of Erectile Dysfunction in the United States.

Study	Year	Defined population	Prevalence rate
Morley, J. E.	1986	Baltimore longitudinal aging study	8%, age 55 years 25%, age 65 years 55%, age 75 years 75%, age 80 years
Spector, I. P. & Carey, M. P.	Up to 1990	English literature reported community studies	3-9%
Diokno, A.C., Brown M.B. & Herzog, A. R.	1990	Community population 60 years or older in Michigan	38.3%, married 51.2%, not married 40.3%, overall
Lauman, E. O., Gagnon, J. H., Michael R. T., et al.; Laumann, E. O., Paik, A., & Rosen, R.	1994, 1999	National Health and Social Life Survey	7%, age 18-29 years 9%, age 30-39 years 11%, age 40-45 years 18%, age 50-59 years
Feldman, H. A., Goldstein, I., Hatzichristou, D. G., et al.	1994	Massachusetts Male Aging Study	52%, erectile dysfunction of all degrees 17.2%, minimal erectile dysfunction 25.2%, moderate erectile dysfunction 9.6%, complete erectile dysfunction
Jonler, M., Moon T, Brannan, W., et al.	1995	During survey of prostate cancer in three American cities	7.7%, no erection in past 12 months 12.4%, less than one occasion in five attempts 7.3%, successful erection less than half the time when sexually stimulated

Source: Lewis, R. W., 2001.

Table 7.2: Estimated Number of New Cases of Erectile Dysfunction Annually in the U.S.; Massachusetts Male Aging Study Rates and 1990 U.S. Census Data (Men, Aged 40-69).

Age	Number of men at risk	Age-specific incidence rate for ED/1000	Expected number of new ED cases
40-49	11,928,664	12.4	147,915
50-59	7,540,415	29.8	224,704
60-69	5,282,236	46.4	245,096
Total	24,751,351		617,715

Source: McKinlay, J. B. , 2000.

Table 7.3: Percentage of Men Over 45 Years Old Who Have Sought Treatment for Sexual Problems.

Have tried or are using Viagra	5%
Have used or are using other treatments	5%
Never sought care for sexual problems	90%

Source: McKinlay, J. B., 2000.

## 8. Other Factors Affecting Health

This section reports on behaviors and conditions that may affect a person's overall health and place them at lower or higher risk for developing disabling or deadly illnesses. While there are many such risk factors, this section will focus on obesity, lack of exercise, and nutrition.

Tables 8.1 through 8.6 address weight as a risk factor for illness and death. A person is classified as being underweight, healthy weight, overweight, or obese depending on a formula that compares their weight with their height. The formula yields what is referred to as the body mass index or BMI. The formula is:

$$\text{BMI} = \frac{(\text{Weight in pounds})/2.20}{[(\text{Height in inches})/32.37]^2}$$

The classification system follows:

Table 8.1: Body Mass Index Classification.

BMI	
<18.5kg/m <sup>2</sup>	Underweight
18.5 to 24.9 kg/m <sup>2</sup>	Healthy weight
25 to 29.9 kg/m <sup>2</sup>	Overweight
Greater than or equal to 30 kg/m <sup>2</sup>	Obese

Source: American Cancer Society, 2001. *Cancer Facts & Figures, 2001*.

Obesity has been found to contribute to heart disease, high blood pressure, diabetes, arthritis-related illnesses, and some cancers (Centers for Disease Control and Prevention, 2002c). It also increases the risk of death from cardiovascular disease and cancer (American Cancer Society, 2001). It is estimated that obesity causes 300,000 premature deaths each year and according to self-reports, more than 57 percent of American adults are overweight (Centers for Disease Control and Prevention, 2002c). The percentage of obese adults aged 20-74 increased from 14.5 in 1974 to 22.5 percent in 1994 (American Cancer Society, 2001). Trends in obesity by gender are shown in Table 8.2.

Table 8.2: Trends in Obesity, Adults Aged 20-74, U.S., 1971-1974 to 1988-1994.

	NHANES I (1971-1974)	NHANES II (1976-1980)	NHANES III (1988-1994)
Males	11.8	12.2	19.9
Females	16.1	16.3	24.9

NHANES = National Health and Nutrition Examination Survey

Source: American Cancer Society, 2001. *Cancer Facts & Figures 2001*.

Additional trend data from the Behavioral Risk Factor Surveillance System (BRFSS) is provided in Table 8.3. The BRFSS is an annual survey of behaviors and conditions that have been shown to affect a person's health and well being. The survey is conducted by participating states and the Centers for Disease Control and Prevention aggregates the information to provide a national risk profile. With the exception of 1996 and 2000,

Arizona men have been below the national median for self-reported obesity. Since 1994, more men in Arizona than women have reported themselves to be obese.

Table 8.3: Percent Obese, U.S. and Arizona, 1990-2000.

	Male		Female	
	Median U.S.	Arizona	Median U.S.	Arizona
1990	11.5	11.2	11.5	10.4
1991	12.2	9.8	12.7	13.0
1992	12.3	9.6	12.7	9.7
1993	13.2	11.3	13.9	12.0
1994	14.7	14.0	14.6	11.5
1995	16.3	13.5	14.7	13.0
1996	16.3	17.1	16.8	13.1
1997	17.1	12.7	16.5	12.1
1998	18.4	13.3	18.3	12.9
1999	19.9	14.1	19.7	10.4
2000	20.6	20.7	19.8	17.7

\*All respondents 18 and older who report that their Body Mass Index is between 30.0 or more.

Source: Centers for Disease Control and Prevention (2002b). *Behavioral Risk Factor Surveillance System*.

Table 8.4 presents prevalence estimates for obesity in men in 1994 and 1998. Obesity has increased for all demographic and behavioral characteristics with the largest percentage increase occurring in the 60-69 year old age group (4.8 percent increase), separated men (4.4 percent increase), men who have never smoked (4.0 percent increase), and men who engage in irregular leisure-time activity (4.0 percent increase).

Trends in the percentage of people in the U.S. and Arizona considered overweight are presented in Table 8.5. As with obesity, the number of overweight people has increased from 1990 through 2000. More men than women have reported themselves to be overweight. The percentage of overweight men in Arizona has increased 21.8 percent in the ten-year period and has exceeded the national median since 1998.

Table 8.6 compares the percentage of people who are overweight with the percentage who are obese. Almost 50 percent of Arizonans could be considered overweight or obese.

Table 8.4: Prevalence of Male Obesity by Demographic and Behavioral Characteristics, U.S., 1994 and 1998.

	1994	Confidence Interval	1998	Confidence Interval
Overall	15.1	14.6-15.6	18.2	17.7-18.7
Age in years				
18-29	10.2	9.1-11.2	12.6	11.6-13.6
30-39	15.5	14.4-16.6	18.3	17.3-19.3
40-49	18.6	17.3-19.9	21.6	20.5-22.8
50-59	20.6	18.9-22.3	23.7	20.3-23.5
60-69	17.1	15.5-18.7	21.9	20.3-23.5
70+	10.7	9.2-12.2	12.6	11.4-13.8
Race				
White	14.8	14.2-15.4	18.1	17.5-18.6
Black	19.5	17.5-21.4	22.8	21.0-24.5
Hispanic	17.1	14.6-19.6	18.9	17.0-20.8
Other	8.6	6.9-10.4	11.0	8.8-13.3
Marital status				
Married	16.4	15.7-17.1	20.3	19.6-20.9
Divorced	14.7	13.0-16.4	17.7	16.3-19.0
Widowed	16.4	13.5-19.3	17.3	15.1-19.6
Separated	14.5	10.9-18.1	18.9	15.3-22.6
Never married	11.6	10.5-12.8	13.2	12.3-14.2
Unmarried couple	14.0	10.0-18.1	14.7	11.9-17.5
Education				
<High school degree	18.9	17.2-20.5	20.9	19.4-22.4
High school degree	16.1	15.1-17.1	19.8	18.9-20.7
Some college	15.6	14.5-16.7	19.0	18.0-19.9
College degree	11.5	10.6-12.4	14.7	14.0-15.5
Smoking status				
Never	13.8	13.1-14.6	17.8	17.1-18.5
Former	18.5	17.5-19.6	21.9	20.9-22.9
Current	13.3	12.3-14.3	14.9	14.0-15.8
Leisure-time activity				
Inactive	20.1	18.9-21.3	22.6	21.6-23.6
Irregular	14.1	13.2-15.0	18.1	17.2-18.9
Regular	12.6	11.9-13.3	15.7	15.0-16.4

Source: American Cancer Society, 2001. *Cancer Facts & Figures 2001*.

Table 8.5: Percent Overweight, U.S. and Arizona, 1990-2000.

	Male		Female	
	Median U.S.	Arizona	Median U.S.	Arizona
1990	42.6	37.7	24.4	22.1
1991	43.1	38.4	24.9	21.7
1992	44.1	36.4	25.1	23.5
1993	44.2	36.5	26.3	20.2
1994	44.2	39.9	27.1	24.5
1995	44.3	44.6	27.2	26.7
1996	43.9	41.4	27.1	25.7
1997	45.1	41.0	27.8	28.7
1998	44.8	49.5	27.4	23.5
1999	45.2	54.2	28.9	24.7
2000	45.1	45.9	28.5	27.7

\*All respondents 18 and older who report that their Body Mass Index is between 25.0 and 29.9.

Source: Centers for Disease Control and Prevention, 2002b. *Behavioral Risk Factor Surveillance System*.

Table 8.6: Overweight Prevalence by Gender, Adults, U.S., 1998.

	Total	% Overweight <sup>1</sup>		Total	% Obese <sup>2</sup>	
		Men	Women		Men	Women
U.S.	36.0	44.0	27.0	18.0	18.0	18.0
Arizona	36.0	49.0	23.0	13.0	13.0	12.0

<sup>1</sup> Body mass index of 25-29 kg/m<sup>2</sup>.

<sup>2</sup> Body mass index greater than or equal to 30 kg/m<sup>2</sup>.

Source: American Cancer Society, 2001. *Cancer Facts & Figures, 2001*.

Physical activity has many health benefits including reducing the risk of dying from heart disease; developing colon cancer, diabetes and high blood pressure; and contributing to healthy bones, muscles, and joints (Centers for Disease Control and Prevention, 2002c). Exercise can also reduce symptoms of anxiety and depression and decrease the need for health care services such as hospitalizations, physician visits, and medications.

Tables 8.7 through 8.9 show the percentage of adults reporting no participation in leisure time physical activity, participation in sustained physical activity (5+ times per week for 30+ minutes per occasion), and participation in vigorous physical activity (3+ times per week for 20+ minutes per occasion at 50+ percent of estimated age- and sex-specific maximum cardiorespiratory capacity). Data is gathered from three surveys, the National Health Interview Survey, the third National Health and Nutrition Examination Survey, and the Behavioral Risk Factor Surveillance System.

While the percentage of males reporting no leisure time physical activity varied by survey, men were more likely to be active than women (Table 8.7). Between 21 and 26 percent of males reported sustained physical activity (Table 8.8) and between 12.9 and 18.1 percent reported vigorous activity (Table 8.9). Small differences in physical activity levels can be found between ethnic and racial groups. Depending on the survey, Black, non-Hispanic males or Hispanic males reported the least amount of physical activity. White males reported the highest levels of vigorous physical activity.

The tables also show that inactivity increases with age. Data on sustained physical activity differs between surveys with males between the ages of 18 and 29 having the lowest levels of physical activity in the National Health Interview Survey and the highest in Behavioral Risk Factor Surveillance System. Unexpectedly, the percentage of men engaging in vigorous activity increases with age. This is partly explained by the increased leisure time of older adults and by the increase in the kinds of activities that might be considered vigorous for older age groups. For example, walking might not be considered vigorous activity for men between the ages of 18 to 29 but for adults over the age of 65, walking might be a strenuous form of activity.

Table 8.7: Percentage of Adults Aged 18+ years reporting no Participation in Leisure-Time Physical Activity, by Various Demographic Characteristics, National Health Interview Survey (NHIS), third National Health and Nutrition Examination Survey (NHANES III), and Behavioral Risk Factor Surveillance System (BRFSS) U.S.

	1991 NHIS	1988-1991 NHANES III	1992 BRFSS
Overall	24.3	21.7	28.7
Sex			
Males	21.4	15.8	26.5
Females	26.9	27.1	30.7
Race/Ethnicity			
White, non Hispanic	22.5	18.2	26.8
Males	20.3	12.9	25.3
Females	24.6	23.1	28.2
Black, non Hispanic	28.4	30.4	38.5
Males	22.5	20.6	33.1
Females	33.2	38.1	42.7
Hispanic	33.6	36.0	34.8
Males	29.6	29.1	30.2
Females	37.4	43.8	39.0
Other	26.7	-	31.4
Males	22.8	-	27.6
Females	30.8	-	35.8
Age (years)			
Males			
18-29	17.6	12.5	18.9
30-44	21.1	14.5	25.0
45-64	23.9	16.9	33.2
65-74	27.8	32.5	36.6
75+	37.9	54.3	50.5
Females			
18-29	25.0	17.4	25.4
30-44	25.2	24.9	26.9
45-64	27.4	29.4	32.1
65-74	27.8	32.5	36.6
75+	37.9	54.3	50.5

Source: Centers for Disease Control and Prevention, 1996. *Physical Activity and Health: A Report of the Surgeon General*.

Table 8.8: Percentage of Adults Aged 18+ years Reporting Participation in Regular, Sustained Physical Activity (5+ Times per Week for 30+ Minutes per Occasion) by Various Demographic Characteristics, National Health Interview Survey (NHIS) and Behavioral Risk Factor Surveillance System (BRFSS), U.S.

	1991 NHIS	1992 BRFSS
Overall	23.5	20.1
Sex		
Males	26.6	21.5
Females	20.7	18.9
Race/Ethnicity		
White, non Hispanic	24.0	20.8
Males	26.7	21.9
Females	21.5	19.8
Black, non Hispanic	22.9	15.2
Males	28.9	18.5
Females	28.9	18.5
Hispanic	20.0	20.1
Males	23.7	21.4
Females	16.5	18.9
Other	23.4	17.3
Males	25.5	19.7
Females	21.1	14.5
Age (years)		
Males		
18-29	23.0	26.8
30-44	24.1	17.4
45-64	24.2	18.9
65-74	29.2	26.8
75+	24.6	23.2
Females		
18-29	23.2	19.9
30-44	20.4	18.5
45-64	20.6	19.4
65-74	21.3	19.0
75+	13.8	15.0

Source: Centers for Disease Control and Prevention, 1996. *Physical Activity and Health: A Report of the Surgeon General*.

Table 8.9: Percentage of Adults Aged 18+ years Participating in Regular, Vigorous Physical Activity (3+ Times per Week for 20+ Minutes per Occasion at 50+ Percent of Estimated Age- and Sex-Specific Maximum Cardiorespiratory Capacity), by Various Demographic Characteristics, National Health Interview Survey (NHIS) and Behavioral Risk Factor Surveillance System (BRFSS), U.S.

	1991 NHIS	1992 BRFSS
Overall	16.4	14.4
Sex		
Males	18.1	12.9
Females	14.9	15.8
Race/Ethnicity		
White, non Hispanic	17.2	15.3
Males	18.6	13.3
Females	15.9	17.1
Black, non Hispanic	12.9	9.4
Males	16.0	9.5
Females	10.4	9.4
Hispanic	13.6	11.9
Males	15.6	12.4
Females	11.7	11.4
Other	16.8	11.8
Males	18.8	11.5
Females	14.8	12.2
Age (years)		
Males		
18-29	19.7	8.0
30-44	13.7	11.1
45-64	14.9	16.3
65-74	27.3	20.6
75+	38.3	20.6
Females		
18-29	16.0	11.4
30-44	13.3	18.0
45-64	12.1	17.7
65-74	18.5	16.5
75+	22.6	12.8

Source: Centers for Disease Control and Prevention, 1996. *Physical Activity and Health: A Report of the Surgeon General*.

A comparison of the percentage of U.S. and Arizona residents who report no physical activity is shown in Table 8.10. Through 1994, Arizona men engaged in more physical activity than the nation as a whole. From 1996 through 2000, Arizona had a larger percentage of men that reported engaging in no physical activity.

Table 8.10: Percent Reporting No Leisure Time Physical Activity, U.S. and Arizona, 1990-2000.

	Male		Female	
	Median U.S.	Arizona	Median U.S.	Arizona
1990	28.1	17.8	29.7	23.4
1991	27.3	21.4	29.9	27.1
1992	26.8	22.6	29.8	26.6
1993	No data	24.2	No data	26.8
1994	26.5	23.7	30.6	23.6
1995	No data	33.4	No data	34.2
1996	26.0	30.7	30.8	35.7
1997	No data	35.6	No data	42.2
1998	25.7	52.3	29.9	50.5
1999	No data	No data	No data	No data
2000	24.0	31.5	28.6	36.8

Source: Centers for Disease Control and Prevention, 2002b. *Behavioral Risk Factor Surveillance System*

Table 8.11 shows the prevalence of moderate or vigorous activity for various weight categories by ethnic and racial group. For all ethnic and racial groups reported, men who are classified as obese report the least activity. Activity levels are higher for overweight non-Hispanic White men and Mexican American men than they are for healthy weight or obese non-Hispanic, White men and Mexican American men.

Table 8.11: Prevalence of Moderate or Vigorous Physical Activity in Americans Age 20 and Older by Sex, Race/Ethnicity and BMI\*, U.S., 1988-1994.

	BMI <25	BMI 25-29.9	BMI 30+
Non-Hispanic White men	46.6	48.8	37.3
Non-Hispanic Black men	47.3	41.8	44.5
Mexican-American men	35.4	39.5	26.4
Non-Hispanic White women	44.2	30.6	28.8
Non-Hispanic Black women	29.4	30.3	26.8
Mexican-American women	29.5	28.7	20.0

\* BMI indicates body mass index: weight in kilograms divided by height in meters squared.

Source: American Heart Association, 2001. *2002 Heart and Stroke Statistical Update*.

Table 8.12 reports on specific activities in which survey respondents engaged. For both men and women, walking was the most common form of physical activity. Men reported engaging in more gardening or yard work, stretching exercises, jogging or running, and vigorous or contact sports. With the exception of walking, gardening or yard work, and golf, most forms of physical activity, especially weight lifting and vigorous or contact sports declined with age.

Table 8.12: Percentage of Adults Aged 18+ Years Reporting Participation in Selected Common Physical Activities in the Prior 2 Weeks, by Sex and Age, National Health Interview Survey, U.S., 1991.

	Males						Females						All ages and sexes
	18-29	30-44	45-64	65-74	75+	All	18-29	30-44	45-64	65-74	75+	All	
Walking for exercise	32.8	37.6	43.3	50.1	47.1	39.4	47.4	49.1	49.4	50.1	40.5	48.3	44.1
Gardening or yard work	22.2	36.0	39.8	42.6	38.4	34.2	15.4	28.6	29.6	28.2	21.5	25.1	29.4
Stretching exercises	32.1	27.2	20.0	15.5	15.7	25.0	32.5	27.7	21.4	21.9	17.9	26.0	25.5
Weight lifting or other exercise to increase muscle strength	33.6	21.2	12.2	6.4	4.7	20.0	14.5	10.6	5.1	2.8	1.1	8.8	14.1
Jogging or running	22.6	14.1	7.7	1.4	0.5	12.8	11.6	6.5	2.5	0.8	0.4	5.7	9.1
Aerobics or aerobic dance	3.4	3.3	2.1	1.6	1.0	2.8	19.3	12.3	6.6	4.2	1.6	11.1	7.1
Riding a bicycle or exercise bike	18.7	18.5	14.0	10.8	8.4	16.2	17.4	16.9	12.6	11.4	6.0	14.6	15.4
Stair climbing	10.5	11.4	9.6	6.0	4.0	9.9	14.6	12.8	10.3	7.3	5.6	11.6	10.8
Swimming for exercise	10.1	7.6	5.3	3.1	1.4	6.9	8.0	7.5	4.6	4.2	1.5	6.2	6.5
Tennis	5.7	3.3	2.9	1.1	0.4	3.5	3.1	2.4	1.3	0.6	0.1	2.0	2.7
Bowling	7.0	5.2	3.0	2.8	1.6	4.7	4.8	4.2	2.8	2.5	1.1	3.6	4.1
Golf	7.9	8.6	7.9	9.7	4.9	8.2	1.4	1.7	2.2	3.3	0.7	1.8	4.9
Baseball or softball	11.0	6.9	1.8	0.4	-	5.8	3.2	1.7	0.3	0.2	-	1.4	3.5
Handball, racquetball, or squash	5.2	2.8	1.5	0.3	-	2.7	1.0	0.4	0.4	0.1	-	0.5	1.6
Skiing	1.5	1.0	0.4	0.1	-	0.9	0.9	0.6	0.3	0.0	-	0.5	0.7
Cross country skiing	0.1	0.5	0.5	0.2	0.4	0.4	0.3	0.4	0.6	0.2	0.2	0.4	0.4
Water skiing	1.5	0.7	0.3	-	-	0.7	0.7	0.5	0.1	0.0	-	0.4	0.5
Basketball	24.2	10.5	2.4	0.1	0.1	10.5	3.1	1.7	0.4	-	0.2	1.5	5.8
Volleyball	6.8	3.0	1.1	0.2	0.2	3.1	4.4	1.9	0.5	0.0	0.1	1.8	2.5
Soccer	3.3	1.4	0.3	0.1	-	1.4	0.9	0.4	0.1	-	-	0.4	0.9
Football	7.6	1.8	0.4	0.2	-	2.7	0.7	0.4	0.0	-	-	0.3	1.5
Other sports	8.6	7.9	6.0	6.2	5.2	7.3	4.5	4.5	3.6	4.3	2.8	4.1	5.7

Source: Centers for Disease Control and Prevention, 1996. *Physical Activity and Health: A Report of the Surgeon General*.

Percentages of people participating in strengthening or stretching exercises are reported in Table 8.13. Men are much more likely than women to report engaging in strengthening exercises such as weight lifting. Almost the same percentage of women and men engage in stretching exercises. A higher percentage of Black, non-Hispanic men (26.2) and Hispanic men (23.4) engage in strengthening exercises compared with White men (18.8 percent). Only small differences exist in the percentage of racial and ethnic groups reporting stretching exercises. For men and women, strengthening and stretching activities decrease with age.

Table 8.13: Percentage of Adults Aged 18+ Years Reporting Participation in Any Strengthening Activities\* or Stretching Exercises in the Prior 2 Weeks, by Various Demographic Characteristics, National Health Interview Survey (NHIS), U.S., 1991.

	Strengthening activities	Stretching exercises
Overall	14.1	25.5
Sex		
Males	20.0	25.0
Females	8.8	26.0
Race/Ethnicity		
White, non Hispanic	13.7	25.9
Males	18.8	24.9
Females	9.0	26.7
Black, non Hispanic	15.5	24.2
Males	26.2	24.7
Females	6.9	23.9
Hispanic	15.8	22.4
Males	23.4	23.6
Females	8.6	21.3
Other	14.9	30.0
Males	20.3	31.4
Females	9.2	28.5
Age (years)		
Males		
18-29	33.6	32.1
30-44	21.2	27.2
45-64	12.2	20.0
65-74	6.4	15.5
75+	4.7	15.7
Females		
18-29	14.5	32.5
30-44	10.6	27.7
45-64	5.1	21.4
65-74	2.8	21.9
75+	1.1	17.9

\* Strengthening activities include weight lifting and other exercises to increase muscle strength.

Source: Centers for Disease Control and Prevention, 1996. *Physical Activity and Health: A Report of the Surgeon General*.

Very little difference over time has been noted in the percentage of people engaging in no physical activity, regular sustained activity, and regular, vigorous activity (Table 8.14).

Table 8.14: Trends in the Percentage of Adults Aged 18+ Years Reporting Participation in No Activity; Regular, Sustained Activity; and Regular, Vigorous Activity, by Sex, National Health Interview Survey (NHIS) and Behavioral Risk Factor Surveillance System (BRFSS), U.S., 1985-1994.

	1985, 1990, 1991 NHIS			1986-1994 BRFSS*		
	Males	Females	Total	Males	Females	Total
<b>No activity</b>						
1985	19.9	26.3	23.2			
1986				31.2	34.3	32.8
1987				29.6	33.9	31.8
1988				27.5	31.5	29.6
1989				28.8	33.6	31.3
1990	24.9	32.4	28.3	28.6	32.3	30.5
1991	21.4	26.9	24.3	29.0	32.8	31.0
1992				26.7	31.4	29.2
1993						
1994				28.7	33.0	30.9
<b>Regular, sustained activity</b>						
1985	27.5	22.5	24.9			
1986				19.5	18.1	18.8
1987				20.0	17.6	18.8
1988				20.5	19.6	20.0
1989				20.0	18.0	19.0
1990	29.0	22.7	25.7	20.5	18.5	19.4
1991	26.6	20.7	23.5	19.5	18.3	18.9
1992				21.0	18.4	19.7
1993						
1994				19.3	18.1	18.7
<b>Regular, vigorous activity</b>						
1985	17.2	15.1	16.1			
1986				11.2	10.3	10.7
1987				10.7	10.6	10.7
1988				11.1	12.3	11.7
1989				11.3	11.9	11.6
1990	18.9	15.9	17.3	11.0	12.9	12.0
1991	18.1	14.9	16.4	11.2	12.6	11.9
1992				11.8	12.2	12.0
1993						
1994				11.4	11.4	11.4

\* 25 States and District of Columbia.

Source: Centers for Disease Control and Prevention, 1996. *Physical Activity and Health: A Report of the Surgeon General*.

Nutrition is an important part of good health. According to the Centers for Disease Control and Prevention, improvements in diet could increase productive life spans and decrease the risk of chronic diseases such as heart disease and diabetes (2002c).

Approximately 300,000 deaths each year in the U.S. are associated with poor nutrition and lack of exercise. The Behavioral Risk Factor Surveillance System measures nutrition by asking people how many servings of fruits and vegetables they eat each day. Data from 1990 through 2000 for the U.S. and Arizona are presented in Table 8.15. Results for men have remained fairly consistent through 1997. In 1998, an eight percentage point increase was noted for men and then fell considerably over the next two years.

Table 8.15: Percentage Reporting Not Eating Enough Fruits and Vegetables, U.S. and Arizona, 1990-2000.

	Males		Females	
	U.S.	Arizona	U.S.	Arizona
1990	No data	No data	No data	No data
1991	No data	79.4	No data	75.7
1992	No data	80.3	No data	71.1
1993	No data	83.8	No data	70.9
1994	82.2	82.2	73.8	70.8
1995	No data	80.8	No data	70.8
1996	80.6	79.3	72.5	71.9
1997	No data	84.1	No data	81.3
1998	80.5	92.3	72.2	89.6
1999	No data	69.6	No data	70.0
2000	81.1	65.2	73.0	61.1

Source: Centers for Disease Control and Prevention, 2002b. *Behavioral Risk Factor Surveillance System*.

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