

Vision Problems in the U.S.

Prevalence of Adult Vision Impairment and Age-Related Eye Disease in America



2008 Update to the Fourth Edition



Introduction Vision impairment is one of the most feared disabilities. Although it is believed that half of all blindness can be prevented, the number of people in America who suffer from vision loss continues to increase.

The leading causes of vision impairment and blindness in the United States are primarily age-related eye diseases. The number of Americans at risk for age-related eye diseases is increasing as the baby boomer generation ages. These conditions, including age-related macular degeneration, cataract, diabetic retinopathy and glaucoma, affect more Americans than ever before. Disturbingly, the number of Americans with age-related eye disease and the vision impairment that results is expected to double within the next three decades. As of the year 2004, there were estimated to be more than 130 million people in the United States in this age group. The table on the following pages provides an overview of the U.S. population age 40 and older by race and sex.

Awareness of vision impairment and its causes is important to all of us. We must be aware of our own personal risk of vision loss and take steps to preserve and protect our precious eyesight. Our communities must be informed so they may prepare the treatment and rehabilitation services that will be needed. Most important, our nation's leaders must comprehend the scope of eye problems in our country so that adequate government resources can be devoted to research, treatment and prevention.

Vision Problems in the U.S., the 2008 Update to the Fourth Edition, provides useful estimates of the prevalence of sight-threatening eye diseases in Americans age 40 and older. This report includes information on the prevalence of blindness and vision impairment, significant refractive error, and the four leading eye diseases affecting older Americans: age-related macular degeneration, cataract, diabetic retinopathy and glaucoma.

The numbers in this 2008 Update to the Fourth Edition are slightly different from the numbers in the original fourth edition for two reasons. First, the projections in this edition use published prevalence rates (based primarily on the same studies as were used to generate the numbers for the original publication). Second, the projections in this edition use 2004 population projections rather than 2000 census data. The 2004 projections reflect the growth and changing racial, ethnic and age composition of the United States population.

U.S. Census 2004 Population

Age 40 and Older by State, Race and Sex

State	Total	Female	Male	White	Black	Hispanic	Other
Total U.S.	130,048,048	68,978,846	61,069,202	99,340,825	13,412,332	11,303,843	5,991,048
Alabama	2,071,075	1,115,005	956,070	1,571,897	451,889	22,488	24,801
Alaska	265,454	129,986	135,468	202,051	7,293	7,676	48,434
Arizona	2,405,858	1,257,539	1,148,319	1,832,191	63,499	385,184	124,984
Arkansas	1,255,239	668,756	586,483	1,060,658	152,929	24,421	17,231
California	14,727,069	7,718,106	7,008,963	8,559,134	906,735	3,267,756	1,993,444
Colorado	1,908,575	985,983	922,592	1,565,837	62,955	224,690	55,093
Connecticut	1,679,637	902,596	777,041	1,416,959	119,909	101,556	41,213
Delaware	382,017	203,450	178,567	300,475	62,013	10,369	9,160
District of Columbia	235,485	128,949	106,536	69,063	146,875	13,389	6,158
Florida	8,515,691	4,526,374	3,989,317	6,184,440	904,495	1,252,586	174,170
Georgia	3,544,731	1,883,897	1,660,834	2,466,138	876,644	111,710	90,239
Hawaii	591,052	311,724	279,328	169,049	7,408	24,174	390,421
Idaho	589,225	303,164	286,061	548,917	1,804	26,220	12,284
Illinois	5,500,934	2,935,552	2,565,382	4,174,178	700,981	422,455	203,320
Indiana	2,751,826	1,460,327	1,291,499	2,467,572	192,269	60,198	31,787
Iowa	1,397,723	739,587	658,136	1,340,549	20,143	21,598	15,433
Kansas	1,216,292	640,395	575,897	1,083,459	55,642	48,870	28,321
Kentucky	1,890,127	1,005,443	884,684	1,740,399	114,866	17,647	17,215
Louisiana	1,948,580	1,046,421	902,159	1,340,463	530,510	43,563	34,044
Maine	671,647	354,735	316,912	658,613	2,648	3,488	6,898
Maryland	2,507,094	1,347,975	1,159,119	1,684,609	627,230	79,660	115,595
Massachusetts	2,976,886	1,600,768	1,376,118	2,620,882	133,278	123,031	99,695
Michigan	4,558,748	2,413,457	2,145,291	3,839,817	531,131	91,441	96,359
Minnesota	2,281,798	1,188,617	1,093,181	2,130,562	53,756	34,962	62,518
Mississippi	1,248,788	673,835	574,953	850,345	372,712	13,185	12,546
Missouri	2,640,166	1,407,503	1,232,663	2,323,976	240,094	36,460	39,636
Montana	457,710	236,588	221,122	429,123	1,055	6,036	21,496
Nebraska	780,550	411,324	369,226	719,922	23,510	24,611	12,507
Nevada	989,474	498,162	491,312	735,196	61,182	121,292	71,804
New Hampshire	624,094	324,952	299,142	604,992	3,668	6,810	8,624
New Jersey	4,026,135	2,162,596	1,863,539	2,925,705	449,962	407,928	242,540
New Mexico	847,726	446,597	401,129	470,095	14,045	296,625	66,961
New York	8,746,820	4,735,175	4,011,645	6,038,595	1,165,442	1,007,242	535,541
North Carolina	3,725,433	1,996,481	1,728,952	2,851,491	696,496	89,198	88,248
North Dakota	300,686	157,325	143,361	287,316	884	1,923	10,563
Ohio	5,297,128	2,833,828	2,463,300	4,643,808	515,728	66,896	70,696
Oklahoma	1,584,104	839,158	744,946	1,312,747	94,672	48,422	128,263
Oregon	1,640,840	857,739	783,101	1,486,093	21,890	66,103	66,754
Pennsylvania	6,062,941	3,261,416	2,801,525	5,346,310	489,620	123,389	103,622
Rhode Island	506,313	273,698	232,615	450,199	17,925	27,324	10,865
South Carolina	1,885,379	1,013,319	872,060	1,363,136	471,068	27,856	23,319
South Dakota	353,344	184,383	168,961	330,213	1,444	3,246	18,441
Tennessee	2,681,788	1,432,133	1,249,655	2,258,401	354,901	35,414	33,072
Texas	8,871,622	4,645,473	4,226,149	5,521,246	908,697	2,140,900	300,779
Utah	795,338	410,343	384,995	712,601	5,254	50,917	26,566
Vermont	312,233	163,621	148,612	305,645	1,265	2,111	3,212
Virginia	3,333,499	1,769,536	1,563,963	2,516,265	575,215	103,377	138,642
Washington	2,767,216	1,437,187	1,330,029	2,378,415	74,757	111,173	202,871
West Virginia	913,208	484,025	429,183	876,705	25,234	4,992	6,277
Wisconsin	2,542,159	1,330,618	1,211,541	2,350,577	97,384	50,915	43,283
Wyoming	240,591	123,025	117,566	223,796	1,326	10,366	5,103

White Female	White Male	Black Female	Black Male	Hisp. Female	Hisp. Male	Other Female	Other Male	State
52,474,400	46,866,425	7,484,533	5,927,799	5,805,226	5,498,617	3,214,687	2,776,361	Total U.S.
833,702	738,195	257,251	194,638	10,456	12,032	13,596	11,205	Alabama
96,893	105,158	3,500	3,793	3,758	3,918	25,835	22,599	Alaska
961,894	870,297	31,359	32,140	195,014	190,170	69,272	55,712	Arizona
562,477	498,181	85,774	67,155	11,148	13,273	9,357	7,874	Arkansas
4,468,053	4,091,081	486,179	420,556	1,683,684	1,584,072	1,080,190	913,254	California
812,521	753,316	30,866	32,089	112,210	112,480	30,386	24,707	Colorado
759,478	657,481	67,779	52,130	54,186	47,370	21,153	20,060	Connecticut
159,056	141,419	34,506	27,507	5,019	5,350	4,869	4,291	Delaware
33,868	35,195	84,761	62,114	6,861	6,528	3,459	2,699	District of Columbia
3,270,114	2,914,326	495,800	408,695	664,895	587,691	95,565	78,605	Florida
1,294,997	1,171,141	492,482	384,162	48,932	62,778	47,486	42,753	Georgia
82,946	86,103	2,917	4,491	12,659	11,515	213,202	177,219	Hawaii
283,527	265,390	716	1,088	12,193	14,027	6,728	5,556	Idaho
2,222,201	1,951,977	400,555	300,426	205,285	217,170	107,511	95,809	Illinois
1,308,485	1,159,087	106,588	85,681	28,371	31,827	16,883	14,904	Indiana
711,066	629,483	10,050	10,093	10,141	11,457	8,330	7,103	Iowa
572,488	510,971	29,443	26,199	23,380	25,490	15,084	13,237	Kansas
925,399	815,000	63,041	51,825	7,897	9,750	9,106	8,109	Kentucky
707,518	632,945	298,770	231,740	22,505	21,058	17,628	16,416	Louisiana
348,023	310,590	1,095	1,553	1,814	1,674	3,803	3,095	Maine
890,566	794,043	354,164	273,066	41,397	38,263	61,848	53,747	Maryland
1,410,362	1,210,520	72,642	60,636	66,356	56,675	51,408	48,287	Massachusetts
2,020,424	1,819,393	298,279	232,852	44,776	46,665	49,978	46,381	Michigan
1,113,672	1,016,890	25,957	27,799	16,066	18,896	32,922	29,596	Minnesota
450,915	399,430	209,984	162,728	5,987	7,198	6,949	5,597	Mississippi
1,231,906	1,092,070	136,232	103,862	18,017	18,443	21,348	18,288	Missouri
221,362	207,761	410	645	3,175	2,861	11,641	9,855	Montana
380,519	339,403	12,473	11,037	11,426	13,185	6,906	5,601	Nebraska
368,058	367,138	31,184	29,998	58,609	62,683	40,311	31,493	Nevada
315,245	289,747	1,638	2,030	3,535	3,275	4,534	4,090	New Hampshire
1,568,499	1,357,206	254,934	195,028	213,754	194,174	125,409	117,131	New Jersey
247,963	222,132	6,622	7,423	154,759	141,866	37,253	29,708	New Mexico
3,233,606	2,804,989	676,326	489,116	550,508	456,734	274,735	260,806	New York
1,517,457	1,334,034	393,169	303,327	38,141	51,057	47,714	40,534	North Carolina
150,176	137,140	324	560	976	947	5,849	4,714	North Dakota
2,473,535	2,170,273	289,102	226,626	33,694	33,202	37,497	33,199	Ohio
695,824	616,923	51,042	43,630	22,802	25,620	69,490	58,773	Oklahoma
780,608	705,485	10,423	11,467	30,496	35,607	36,212	30,542	Oregon
2,865,709	2,480,601	278,455	211,165	63,004	60,385	54,248	49,374	Pennsylvania
243,880	206,319	9,324	8,601	14,833	12,491	5,661	5,204	Rhode Island
721,591	641,545	266,390	204,678	12,432	15,424	12,906	10,413	South Carolina
172,249	157,964	495	949	1,549	1,697	10,090	8,351	South Dakota
1,198,212	1,060,189	200,527	154,374	15,701	19,713	17,693	15,379	Tennessee
2,890,115	2,631,131	497,181	411,516	1,100,096	1,040,804	158,081	142,698	Texas
369,149	343,452	2,157	3,097	24,682	26,235	14,355	12,211	Utah
160,241	145,404	548	717	1,087	1,024	1,745	1,467	Vermont
1,322,866	1,193,399	318,120	257,095	52,428	50,949	76,122	62,520	Virginia
1,236,211	1,142,204	34,874	39,883	52,970	58,203	113,132	89,739	Washington
464,627	412,078	13,597	11,637	2,493	2,499	3,308	2,969	West Virginia
1,229,659	1,120,918	53,952	43,432	23,952	26,963	23,055	20,228	Wisconsin
114,488	109,308	576	750	5,117	5,249	2,844	2,259	Wyoming

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