

**Table 23. Cholesterol among adults aged 20 and over, by selected characteristics: United States, selected years 1988–1994 through 2015–2018**

Excel version (with more data years and standard errors when available): <https://www.cdc.gov/nchs/hus/contents2019.htm#Table-023>

[Data are based on interviews and laboratory data of a sample of the civilian noninstitutionalized population]

Sex, race and Hispanic origin <sup>1</sup> , percent of poverty level, and age	1988–1994	1999–2002	2003–2006	2007–2010	2011–2014	2015–2018
Percent of population with hypercholesterolemia (serum total cholesterol greater than or equal to 240 mg/dL or taking cholesterol-lowering medications) <sup>3</sup>						
20 years and over, age adjusted <sup>2</sup>						
Both sexes <sup>4</sup> .....	21.9	23.8	26.6	26.4	26.9	25.0
Male .....	20.4	24.3	26.9	27.0	27.6	27.1
Female .....	22.9	23.0	26.3	25.6	26.2	22.9
Not Hispanic or Latino:						
White only .....	22.1	24.8	27.6	26.9	28.0	25.0
White only, male .....	20.5	25.2	28.0	27.3	28.8	27.0
White only, female .....	23.2	24.0	27.1	26.5	27.1	23.1
Black or African American only .....	19.4	19.0	21.7	23.0	23.4	22.2
Black or African American only, male .....	17.0	17.9	21.7	22.9	22.9	22.4
Black or African American only, female .....	21.1	19.6	21.7	22.9	23.8	21.8
Asian only .....	---	---	---	---	24.4	25.6
Asian only, male .....	---	---	---	---	25.8	29.8
Asian only, female .....	---	---	---	---	23.1	22.0
Hispanic or Latino .....	---	---	---	26.4	25.2	24.5
Hispanic or Latino, male .....	---	---	---	28.2	25.6	26.6
Hispanic or Latina, female .....	---	---	---	24.3	24.6	22.1
Mexican origin .....	19.4	19.6	23.4	26.7	23.7	25.3
Mexican origin, male .....	19.4	20.6	23.4	27.8	25.7	28.2
Mexican origin, female .....	19.1	18.2	23.2	24.9	21.6	22.1
Percent of poverty level <sup>5</sup> :						
Below 100% .....	22.0	23.3	26.5	25.2	27.5	23.7
100%–199% .....	21.3	24.4	26.3	26.5	24.5	25.6
200%–399% .....	22.3	25.5	26.5	27.9	28.3	25.6
400% or more .....	20.9	22.3	27.1	25.8	27.4	25.5
20 years and over, crude						
Both sexes <sup>4</sup> .....	20.6	23.7	26.8	27.4	28.7	27.5
Male .....	18.9	24.0	26.5	27.3	28.4	28.7
Female .....	22.1	23.4	27.1	27.4	28.9	26.4
Not Hispanic or Latino:						
White only .....	21.5	25.8	29.2	29.7	32.1	30.0
White only, male .....	19.5	25.8	28.9	29.3	31.8	31.0
White only, female .....	23.4	25.8	29.5	30.2	32.3	29.1
Black or African American only .....	16.5	17.2	20.2	21.8	22.9	22.1
Black or African American only, male .....	14.7	16.6	20.0	21.4	22.0	21.4
Black or African American only, female .....	17.9	17.8	20.3	22.1	23.6	22.7
Asian only .....	---	---	---	---	23.2	24.7
Asian only, male .....	---	---	---	---	24.3	28.1
Asian only, female .....	---	---	---	---	22.3	21.8
Hispanic or Latino .....	---	---	---	21.4	20.4	21.2
Hispanic or Latino, male .....	---	---	---	22.8	20.5	23.3
Hispanic or Latina, female .....	---	---	---	19.9	20.2	19.1
Mexican origin .....	15.0	14.6	18.2	21.5	18.4	21.6
Mexican origin, male .....	15.6	16.0	18.3	22.7	20.4	24.5
Mexican origin, female .....	14.3	13.0	18.1	20.2	16.3	18.6
Percent of poverty level <sup>5</sup> :						
Below 100% .....	18.3	20.1	22.8	21.1	23.6	22.3
100%–199% .....	20.4	24.0	27.0	27.4	26.3	26.8
200%–399% .....	20.5	25.0	26.9	29.3	30.7	27.8
400% or more .....	21.0	23.3	27.9	28.5	31.3	29.9

See footnotes at end of table.

**Table 23. Cholesterol among adults aged 20 and over, by selected characteristics: United States, selected years 1988–1994 through 2015–2018—Con.**

Excel version (with more data years and standard errors when available): <https://www.cdc.gov/nchs/hus/contents2019.htm#Table-023>

[Data are based on interviews and laboratory data of a sample of the civilian noninstitutionalized population]

Sex, race and Hispanic origin <sup>1</sup> , percent of poverty level, and age	1988–1994	1999–2002	2003–2006	2007–2010	2011–2014	2015–2018
Percent of population with hypercholesterolemia (serum total cholesterol greater than or equal to 240 mg/dL or taking cholesterol-lowering medications) <sup>3</sup>						
Male						
20–44 years .....	12.6	15.2	15.6	13.3	11.8	12.0
20–34 years .....	7.8	9.7	9.5	7.9	6.4	8.5
35–44 years .....	20.4	22.1	24.4	21.4	20.3	18.2
45–64 years .....	29.4	34.9	34.9	37.8	38.2	36.1
45–54 years .....	28.8	33.0	31.7	32.9	32.1	29.6
55–64 years .....	30.1	38.0	40.6	45.1	44.5	42.4
65–74 years .....	26.2	34.7	48.4	48.0	54.7	54.6
75 years and over .....	22.9	27.6	35.9	43.8	53.3	55.7
Female						
20–44 years .....	9.3	10.7	12.1	10.0	8.6	6.5
20–34 years .....	6.8	8.5	10.0	6.4	5.8	4.9
35–44 years .....	13.0	13.6	15.0	15.0	12.7	8.9
45–64 years .....	35.2	29.9	36.1	37.5	39.1	33.5
45–54 years .....	27.3	25.6	28.7	27.6	30.1	26.5
55–64 years .....	43.9	37.1	47.6	50.1	49.2	40.2
65–74 years .....	44.8	49.3	54.0	51.3	56.7	55.4
75 years and over .....	38.4	41.7	44.1	50.2	55.9	52.6
20 years and over, age adjusted <sup>2</sup>						
Percent of population with high cholesterol (serum total cholesterol greater than or equal to 240 mg/dL) <sup>6</sup>						
Both sexes <sup>4</sup> .....	20.8	17.3	16.3	13.7	11.9	11.1
Male .....	19.0	16.4	15.1	12.6	10.8	10.5
Female .....	22.0	17.8	17.1	14.4	12.7	11.6
Not Hispanic or Latino:						
White only .....	20.8	17.5	16.9	13.9	12.4	11.2
White only, male .....	18.8	16.5	15.5	12.2	11.2	9.9
White only, female .....	22.2	18.1	18.0	15.3	13.3	12.2
Black or African American only .....	19.5	15.5	12.2	11.3	8.6	9.6
Black or African American only, male .....	16.9	12.4	10.9	10.8	7.7	9.1
Black or African American only, female .....	21.4	17.7	13.3	11.5	9.4	9.7
Asian only .....	---	---	---	---	10.9	11.5
Asian only, male .....	---	---	---	---	10.6	13.0
Asian only, female .....	---	---	---	---	11.0	10.1
Hispanic or Latino						
Hispanic or Latino, male .....	---	---	---	14.7	13.0	10.9
Hispanic or Latina, female .....	---	---	---	15.5	13.1	12.1
Hispanic or Latina, female .....	---	---	---	13.7	12.7	9.3
Mexican origin .....	18.7	15.8	16.1	14.6	11.2	11.8
Mexican origin, male .....	18.5	17.4	17.6	15.1	12.8	14.1
Mexican origin, female .....	18.7	13.8	14.4	13.6	9.3	9.2
Percent of poverty level <sup>5</sup> :						
Below 100% .....	20.6	18.3	18.1	14.4	12.3	10.4
100%–199% .....	20.6	19.1	16.7	15.0	11.3	11.4
200%–399% .....	20.8	18.9	15.8	14.4	13.0	11.5
400% or more .....	19.5	14.4	15.9	12.3	11.5	11.2

See footnotes at end of table.

**Table 23. Cholesterol among adults aged 20 and over, by selected characteristics: United States, selected years 1988–1994 through 2015–2018—Con.**

Excel version (with more data years and standard errors when available): <https://www.cdc.gov/nchs/hus/contents2019.htm#Table-023>

[Data are based on interviews and laboratory data of a sample of the civilian noninstitutionalized population]

Sex, race and Hispanic origin <sup>1</sup> , percent of poverty level, and age	1988–1994	1999–2002	2003–2006	2007–2010	2011–2014	2015–2018
20 years and over, crude						
Percent of population with high cholesterol (serum total cholesterol greater than or equal to 240 mg/dL) <sup>6</sup>						
Both sexes <sup>4</sup> .....	19.6	17.3	16.4	14.1	12.1	11.5
Male .....	17.7	16.5	15.2	12.9	10.7	10.3
Female .....	21.3	18.0	17.5	15.2	13.5	12.6
Not Hispanic or Latino:						
White only .....	20.3	18.0	17.4	14.7	12.9	11.9
White only, male .....	18.0	16.9	15.7	12.6	10.8	9.7
White only, female .....	22.5	19.1	18.9	16.7	14.9	13.9
Black or African American only .....	16.7	14.4	11.7	11.1	8.6	9.9
Black or African American only, male .....	14.7	12.2	10.8	10.9	7.4	9.2
Black or African American only, female .....	18.2	16.1	12.5	11.3	9.5	10.5
Asian only .....	---	---	---	---	10.9	11.5
Asian only, male .....	---	---	---	---	10.9	12.8
Asian only, female .....	---	---	---	---	10.9	10.3
Hispanic or Latino .....	---	---	---	13.5	12.1	10.6
Hispanic or Latino, male .....	---	---	---	14.7	12.7	12.9
Hispanic or Latina, female .....	---	---	---	12.2	11.6	8.5
Mexican origin .....	14.9	12.9	14.2	13.6	10.6	11.8
Mexican origin, male .....	15.4	15.0	15.7	14.7	12.3	14.9
Mexican origin, female .....	14.3	10.7	12.6	12.3	8.8	8.5
Percent of poverty level <sup>5</sup> :						
Below 100% .....	17.6	16.4	16.8	12.8	11.3	10.0
100%–199% .....	19.8	18.2	16.0	14.6	11.1	11.2
200%–399% .....	19.3	18.7	15.8	14.6	13.4	11.6
400% or more .....	19.9	15.5	17.1	13.7	12.5	12.4
Male						
20–44 years .....	12.5	14.2	14.1	11.1	10.0	9.8
20–34 years .....	8.2	9.8	9.5	7.6	6.0	8.2
35–44 years .....	19.4	19.7	20.5	16.2	16.2	12.5
45–64 years .....	27.2	22.2	19.1	17.7	13.6	13.7
45–54 years .....	26.6	23.6	20.8	18.7	15.7	15.6
55–64 years .....	28.0	19.9	16.0	16.3	11.5	11.9
65–74 years .....	21.9	13.7	10.9	7.5	7.6	6.4
75 years and over .....	20.4	10.2	9.6	6.8	*3.6	3.2
Female						
20–44 years .....	9.4	10.4	11.3	8.4	7.2	5.7
20–34 years .....	7.3	8.9	10.3	5.8	5.4	5.0
35–44 years .....	12.3	12.4	12.7	11.9	9.8	6.9
45–64 years .....	33.4	23.0	23.9	21.3	19.9	19.4
45–54 years .....	26.7	21.4	19.7	17.7	18.0	17.8
55–64 years .....	40.9	25.6	30.5	25.6	22.1	20.9
65–74 years .....	41.3	32.3	24.2	20.6	15.8	17.5
75 years and over .....	38.2	26.5	18.6	20.2	16.1	11.9

See footnotes at end of table.

**Table 23. Cholesterol among adults aged 20 and over, by selected characteristics: United States, selected years 1988–1994 through 2015–2018—Con.**

Excel version (with more data years and standard errors when available): <https://www.cdc.gov/nchs/hus/contents2019.htm#Table-023>

[Data are based on interviews and laboratory data of a sample of the civilian noninstitutionalized population]

Sex, race and Hispanic origin <sup>1</sup> , percent of poverty level, and age	1988–1994	1999–2002	2003–2006	2007–2010	2011–2014	2015–2018
20 years and over, age adjusted <sup>2</sup>						
Mean serum total cholesterol level (mg/dL)						
Both sexes <sup>4</sup> .....	206	203	200	196	192	190
Male .....	204	202	198	194	189	188
Female .....	207	204	202	198	195	192
Not Hispanic or Latino:						
White only .....	206	204	201	196	193	191
White only, male .....	205	202	198	193	189	188
White only, female .....	208	205	203	199	196	194
Black or African American only .....	205	199	194	192	186	185
Black or African American only, male .....	202	195	193	191	183	184
Black or African American only, female .....	207	202	195	192	189	186
Asian only .....	---	---	---	---	191	192
Asian only, male .....	---	---	---	---	189	191
Asian only, female .....	---	---	---	---	192	192
Hispanic or Latino .....	---	---	---	198	194	190
Hispanic or Latino, male .....	---	---	---	199	193	190
Hispanic or Latina, female .....	---	---	---	197	195	189
Mexican origin .....	206	202	202	198	192	190
Mexican origin, male .....	206	204	203	200	194	191
Mexican origin, female .....	206	199	200	196	191	189
Percent of poverty level <sup>5</sup> :						
Below 100% .....	205	201	203	196	191	187
100%–199% .....	205	204	201	198	191	190
200%–399% .....	207	205	199	196	193	190
400% or more .....	205	202	201	195	194	193
20 years and over, crude						
Both sexes <sup>4</sup> .....	204	203	200	197	192	191
Male .....	202	202	198	194	188	187
Female .....	206	204	202	199	196	194
Not Hispanic or Latino:						
White only .....	206	205	202	198	194	192
White only, male .....	203	203	198	193	188	187
White only, female .....	208	206	205	201	199	197
Black or African American only .....	200	197	193	191	186	185
Black or African American only, male .....	198	194	192	191	183	184
Black or African American only, female .....	201	199	194	191	189	187
Asian only .....	---	---	---	---	191	192
Asian only, male .....	---	---	---	---	190	191
Asian only, female .....	---	---	---	---	192	192
Hispanic or Latino .....	---	---	---	197	193	190
Hispanic or Latino, male .....	---	---	---	199	193	192
Hispanic or Latina, female .....	---	---	---	194	193	188
Mexican origin .....	199	197	198	198	192	190
Mexican origin, male .....	199	200	200	200	194	193
Mexican origin, female .....	198	194	196	195	189	187
Percent of poverty level <sup>5</sup> :						
Below 100% .....	200	198	200	194	189	186
100%–199% .....	202	202	199	197	190	189
200%–399% .....	205	204	199	197	193	190
400% or more .....	206	204	203	198	196	195

See footnotes at end of table.

**Table 23. Cholesterol among adults aged 20 and over, by selected characteristics: United States, selected years 1988–1994 through 2015–2018—Con.**

Excel version (with more data years and standard errors when available): <https://www.cdc.gov/nchs/hus/contents2019.htm#Table-023>

[Data are based on interviews and laboratory data of a sample of the civilian noninstitutionalized population]

Sex, race and Hispanic origin <sup>1</sup> , percent of poverty level, and age	1988–1994	1999–2002	2003–2006	2007–2010	2011–2014	2015–2018
Male						
Mean serum total cholesterol level (mg/dL)						
20–44 years .....	194	196	196	194	188	186
20–34 years .....	186	188	186	186	179	179
35–44 years .....	206	207	209	205	202	198
45–64 years .....	216	213	206	202	196	196
45–54 years .....	216	215	208	204	200	200
55–64 years .....	216	212	202	199	192	192
65–74 years .....	212	202	191	182	180	177
75 years and over .....	205	195	187	176	168	169
Female						
20–44 years .....	189	191	192	187	184	181
20–34 years .....	184	185	188	181	179	176
35–44 years .....	195	198	197	195	193	188
45–64 years .....	225	215	213	211	209	207
45–54 years .....	217	211	208	208	207	204
55–64 years .....	235	221	219	214	210	210
65–74 years .....	233	224	214	207	200	203
75 years and over .....	229	217	206	203	199	194

--- Data not available.

\* Estimates are considered unreliable. Starting with 2013–2016 data, the reliability of survey percentage estimates is assessed using new multistep National Center for Health Statistics data presentation standards for proportions. Before 2013–2016 data, the reliability of estimates was evaluated based on relative standard errors (RSEs). Data preceded by an asterisk have an RSE of 20%–30%. Data not shown have an RSE greater than 30%. For more information, see Appendix II, Data presentation standards for proportions; Relative standard error (RSE).

<sup>1</sup>Persons of Hispanic or Mexican origin may be of any race. Starting with 1999 data, race-specific estimates are tabulated according to the 1997 “Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity” and are not strictly comparable with estimates for earlier years. The non-Hispanic race categories shown conform to the 1997 standards. Starting with 1999 data, race-specific estimates are for persons who reported only one racial group. Before 1999, estimates were tabulated according to the 1977 standards. Estimates for single-race categories before 1999 included persons who reported one race, or if they reported more than one race, identified one race as best representing their race. See Appendix II, Hispanic origin; Race.

<sup>2</sup>Estimates are age adjusted to the year 2000 standard population using five age groups: 20–34 years, 35–44 years, 45–54 years, 55–64 years, and 65 years and over. Age-adjusted estimates may differ from other age-adjusted estimates based on the same data and presented elsewhere if different age groups are used in the adjustment procedure. See Appendix II, Age adjustment.

<sup>3</sup>Hypercholesterolemia is measured serum total cholesterol greater than or equal to 240 mg/dL (6.20 mmol/L) or taking cholesterol-lowering medications. Respondents were asked, “Are you now following this advice [from a doctor or health professional] to take prescribed medicine [to lower your cholesterol]?” See Appendix II, Cholesterol.

<sup>4</sup>Includes persons of all other races and Hispanic origins not shown separately.

<sup>5</sup>Calculated by dividing family income by the U.S. Department of Health and Human Services’ poverty guidelines specific to family size, as well as the appropriate year and state. Persons with unknown percentage of poverty level are excluded (9% in 2015–2018). See Appendix II, Family income; Poverty.

<sup>6</sup>High cholesterol is serum total cholesterol greater than or equal to 240 mg/dL (6.20 mmol/L), regardless of whether the respondent reported taking cholesterol-lowering medications. See Appendix II, Cholesterol.

NOTES: Standard errors for selected years and data for additional years are available in the Excel spreadsheet version of this table on the *Health, United States* website at: <https://www.cdc.gov/nchs/hus/index.htm>. Data for the percentage of the population with hypercholesterolemia have been revised and differ from previous editions of *Health, United States*.

SOURCE: NCHS, National Health and Nutrition Examination Survey. See Appendix I, National Health and Nutrition Examination Survey (NHANES).