

Ethylene Oxide Hemoglobin Adduct in Non-smokers (2013 - 2018)

CAS Number 75-21-8

Geometric mean and selected percentiles of hemoglobin adduct concentrations (in pmol/g hemoglobin) for the non-smoking[^] U.S. population from the National Health and Nutrition Examination Survey.

Demographic (Categories)	Survey (Years)	Geometric Mean (95% CI)	50th Percentile (95% CI)	75th Percentile (95% CI)	90th Percentile (95% CI)	95th Percentile (95% CI)	Sample Size
Total population	13-14	18.2 (17.1-19.2)	18.5 (17.6-19.5)	24.0 (22.6-25.5)	32.4 (30.2-34.3)	39.5 (36.3-45.5)	1945
Total population	15-16	17.6 (16.6-18.8)	16.8 (16.0-17.6)	22.2 (20.9-23.5)	30.9 (28.3-34.6)	41.5 (35.0-52.6)	1896
Total population	17-18	20.8 (20.1-21.5)	20.1 (19.1-20.9)	25.8 (24.9-27.1)	35.4 (32.5-36.8)	44.4 (38.9-48.2)	1794
Age 6-11 years	13-14	21.7 (20.2-23.3)	21.2 (19.2-23.6)	27.6 (24.3-30.9)	34.0 (31.5-36.5)	41.0 (36.2-49.8)	321
Age 6-11 years	15-16	21.1 (20.3-22.0)	20.5 (19.6-21.6)	25.6 (24.2-27.0)	33.6 (30.0-38.1)	39.2 (36.3-41.8)	301
Age 6-11 years	17-18	24.3 (22.8-26.0)	24.3 (22.6-25.9)	30.8 (28.1-33.5)	39.5 (33.6-43.8)	43.8 (39.0-52.3)	266
Age 12-19 years	13-14	18.6 (17.4-19.9)	18.8 (17.4-19.9)	23.3 (22.0-25.7)	31.6 (28.4-36.9)	39.2 (31.0-52.4)	358
Age 12-19 years	15-16	17.5 (16.0-19.3)	17.2 (16.0-18.6)	22.6 (19.9-25.1)	29.8 (26.1-34.9)	35.0 (29.8-39.2)	328
Age 12-19 years	17-18	20.5 (18.9-22.1)	19.4 (18.0-21.3)	25.2 (22.3-27.8)	32.5 (30.1-34.8)	36.7 (33.5-48.4)	296
Age 20+ years	13-14	17.7 (16.7-18.8)	18.2 (17.1-19.2)	23.6 (22.1-24.9)	31.8 (28.7-35.1)	39.5 (35.1-45.5)	1266
Age 20+ years	15-16	17.3 (16.2-18.5)	16.3 (15.3-17.3)	21.6 (20.4-23.2)	30.7 (27.7-35.0)	42.9 (35.0-54.3)	1267
Age 20+ years	17-18	20.5 (19.6-21.4)	19.6 (18.8-20.7)	25.3 (23.9-27.0)	35.3 (31.5-37.0)	45.0 (38.7-49.9)	1232
Male	13-14	18.5 (17.3-19.8)	19.2 (18.0-19.9)	24.6 (23.0-25.9)	32.7 (29.2-34.3)	39.2 (34.3-46.5)	897
Male	15-16	18.5 (17.5-19.7)	17.4 (16.3-18.2)	23.3 (22.0-24.2)	33.1 (29.5-37.0)	52.6 (39.3-54.5)	882
Male	17-18	21.4 (20.0-22.9)	20.3 (19.2-21.3)	26.6 (24.5-29.1)	36.8 (33.3-44.4)	50.2 (46.3-57.4)	835
Female	13-14	17.9 (16.8-19.0)	18.2 (17.1-18.9)	23.5 (22.3-24.8)	32.0 (29.4-36.1)	39.5 (35.4-45.5)	1048
Female	15-16	16.9 (15.6-18.2)	16.3 (15.3-17.4)	21.2 (20.2-22.8)	30.0 (26.0-34.0)	37.0 (31.6-44.5)	1014
Female	17-18	20.3 (19.6-21.0)	19.7 (18.7-20.7)	25.3 (24.2-26.9)	32.5 (30.4-36.1)	39.0 (36.8-41.5)	959
Non-Hispanic Black	13-14	20.0 (18.6-21.6)	19.7 (18.2-21.6)	28.3 (24.4-30.9)	37.9 (33.4-45.2)	51.4 (40.3-71.9)	376
Non-Hispanic Black	15-16	20.3 (19.2-21.5)	19.6 (17.8-21.5)	26.1 (24.4-28.6)	34.9 (30.7-41.5)	42.8 (35.8-52.0)	340
Non-Hispanic Black	17-18	22.3 (20.8-24.0)	21.8 (20.3-23.1)	28.9 (26.1-31.9)	37.0 (33.5-43.1)	45.5 (38.5-56.8)	341
Non-Hispanic White	13-14	17.3 (15.9-18.8)	17.9 (16.6-19.2)	23.0 (20.8-25.1)	31.0 (27.1-34.3)	38.5 (32.0-45.5)	680
Non-Hispanic White	15-16	16.6 (15.2-18.1)	15.9 (14.9-16.9)	20.5 (18.9-21.9)	27.7 (25.6-31.6)	41.5 (29.9-54.6)	569
Non-Hispanic White	17-18	19.9 (18.8-21.1)	19.1 (17.9-20.4)	24.9 (22.7-26.2)	32.5 (30.1-36.8)	42.1 (36.4-49.9)	563
All Hispanic	13-14	19.3 (18.4-20.2)	19.1 (18.6-19.9)	23.8 (22.4-25.4)	31.7 (28.6-34.8)	38.5 (34.0-47.8)	585
All Hispanic	15-16	18.5 (17.6-19.4)	17.6 (16.7-18.7)	22.9 (21.8-23.9)	30.6 (27.0-37.9)	40.8 (31.9-62.9)	654
All Hispanic	17-18	21.1 (20.1-22.2)	20.3 (19.4-21.0)	26.1 (23.5-28.1)	33.8 (30.4-37.9)	40.9 (36.0-49.2)	514

Limit of detection (LOD, see Data Analysis section) for Survey years 13-14, 15-16, and 17-18 are 8.20, 8.20, and 12.9 respectively.

[^] Non-smoking is defined as a serum cotinine concentration of 10 ng/mL or less.