

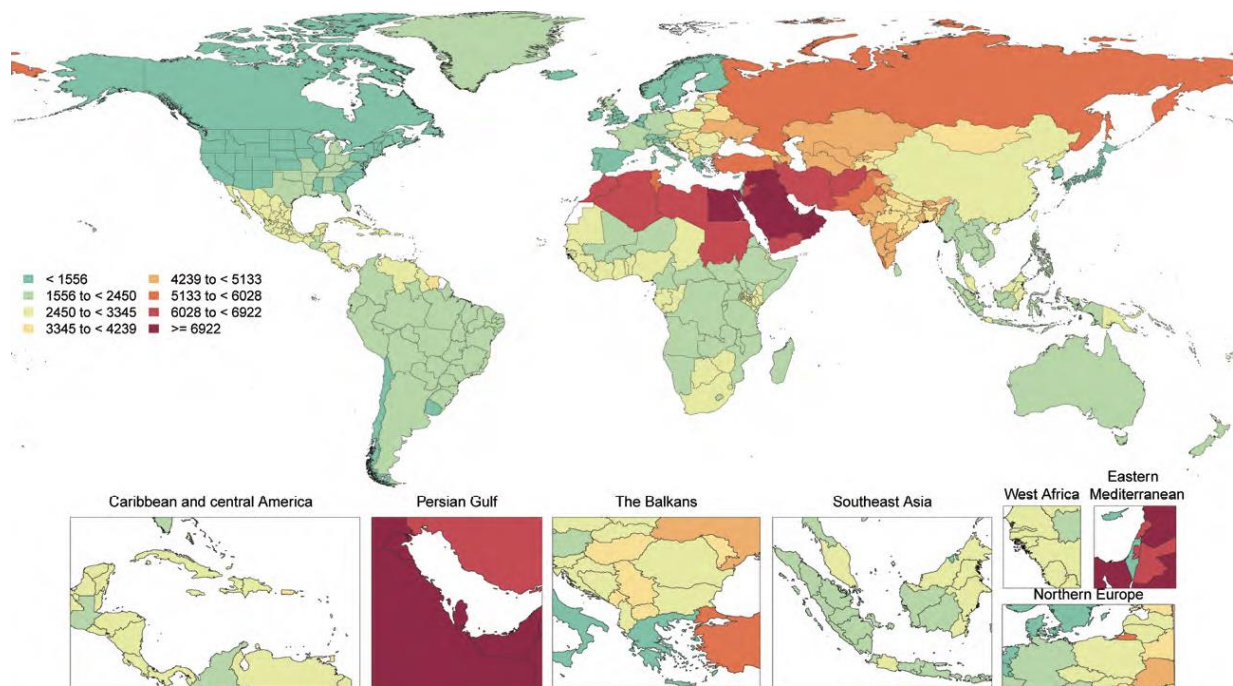


Figure 1. Age-standardized global prevalence rates of IHD per 100 000, both sexes, 2021.

These estimates reflect improvements in demography and population estimation, statistical and geospatial modeling methods, and the addition of nearly 3000 new data sources since the 2024 Statistics Update.

During each annual GBD Study cycle, population health estimates are produced for the full time series.

Improvements in statistical and geospatial modeling methods and the addition of new data sources may lead to changes in past results across GBD Study cycles.

GBD indicates Global Burden of Diseases, Injuries, and Risk Factors; and IHD, ischemic heart disease.

Palaniappan LP, et al. 2026 Heart Disease and Stroke Statistics: A Report of US and Global Data From the American Heart Association. *Circulation*. 2026;153:e275-e906.

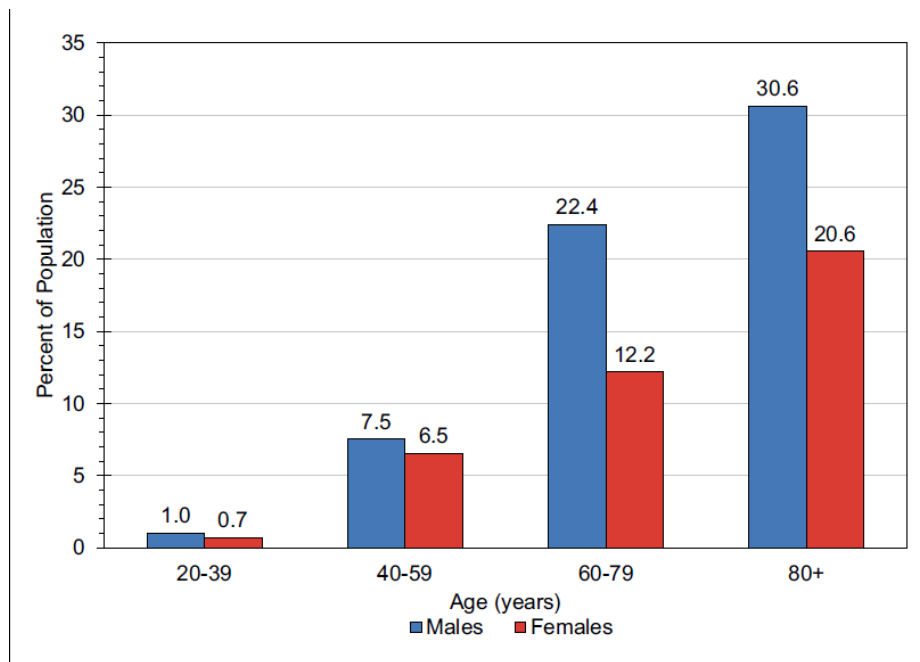


Figure 2. Prevalence of CHD by age and sex, United States (NHANES, 2021-2023).

CHD indicates coronary heart disease; and NHANES, National Health and Nutrition Examination Survey.

Palaniappan LP, et al. 2026 Heart Disease and Stroke Statistics: A Report of US and Global Data From the American Heart Association. *Circulation*. 2026;153:e275-e906.

Table 1. Global Ranking of Modifiable Risk Factors

<i>Rank</i>	<i>Cause of Death</i>	<i>Number of Deaths in 2021</i>
1	High systolic blood pressure	10,800,000
2	Dietary risks	6,580,000
3	High low-density lipoprotein cholesterol	3,810,000
4	Ambient particulate matter pollution	3,130,000
5	Smoking	2,370,000
6	High fasting plasma glucose	2,300,000
7	High body mass index	1,950,000
8	Kidney dysfunction	1,870,000
9	Household air pollution from solid fuels	1,610,000
10	Lead exposure	1,570,000
11	Low temperature	1,020,000
12	Secondhand smoke	743,000
13	High alcohol use	407,000
14	Low physical activity	397,000
15	High temperature	164,000

Modified from Vaduganathan M, et al. The Global Burden of Cardiovascular Diseases and Risk: A Compass for Future Health. *J Am Coll Cardiol.* 2022.

Table 2. Simplified guide to Nova food classification for clinical use

Nova groups	What it means (clinician-friendly)	How to explain to patients	Examples
Group 1: Unprocessed or minimally processed foods	Natural or slightly altered foods, no added ingredients.	Whole foods—the way nature made them.	Fresh fruit, vegetables, eggs, plain yogurt, milk, fresh meat
Group 2: Processed culinary ingredients	Substances extracted from foods or nature used in cooking.	Basic cooking ingredients.	Oil, butter, salt, sugar
Group 3: Processed foods	Foods with added salt, sugar, or oil to make them last longer or taste better.	Still recognizable foods, but with some added ingredients.	Canned vegetables, cheese, bread, smoked meats
Group 4: Ultra- processed foods	Industrially made, typically with additives, little to no whole food content.	Packaged, long- shelf-life products— often high in sugar, salt, or fat.	Chips, soft drinks, sweets, processed meats, many ready meals, fruit yogurts, many breakfast cereals

Guasti L, et al. Ultra-processed foods, lifestyle management, and cardiovascular diseases. *Eur Heart J.* 2026;47:3456-3473.

Table 3. Familial hypercholesterolaemia

ESC/EAS 2019 GL on dyslipidemias. Genetic disorders of lipoprotein metabolism

Disorder	Prevalence	Gene(s)	Effect on lipoproteins
HeFH	1 in 200–250	LDLR APO B PCSK9	↑LDL-C
HoFH	1 in 160 000–320 000	LDLR APO B PCSK9	↑↑LDL-C
FCH	1 in 100/200	USF1 + modifying genes	↑LDL-C ↑VLDL-C ↑ApoB
Familial dysbetalipoproteinaemia	1 in 5000	APO E	↑↑IDL and chylomicron remnants (BVDL)
Familial lipoprotein lipase deficiency (familial chylomicron syndrome)	2 in 10 ⁶	LPL APO C2 ApoAV, GPIHBP1 LMF1	↑↑chylomicrons and VLDL-C
Tangier disease (analphalipoproteinaemia)	1 in 10 ⁶	ABCA1	↓↓HDL-C
Familial LCAT deficiency	1 in 10 ⁶	LCAT	↓HDL-C

Apo = apolipoprotein; FCH = familial combined hyperlipidaemia; HDL-C = high-density lipoprotein cholesterol; HeFH = heterozygous familial hypercholesterolaemia; HoFH = homozygous familial hypercholesterolaemia; IDL = intermediate-density lipoprotein; LCAT = lecithin cholesterol acyltransferase; LDL-C = low-density lipoprotein cholesterol; VLDL = very low-density lipoprotein cholesterol.

Dutch Lipid Clinic Network diagnostic criteria for familial hypercholesterolaemia

Criteria	Points
1) Family history	
First-degree relative with known premature (men aged <55 years; women <60 years) coronary or vascular disease, or first-degree relative with known LDL-C above the 95th percentile	1
First-degree relative with tendinous xanthomata and/or arcus cornealis, or children aged <18 years with LDL-C above the 95th percentile	2
2) Clinical history	
Patient with premature (men aged <55 years; women <60 years) CAD	2
Patient with premature (men aged <55 years; women <60 years) cerebral or peripheral vascular disease	1
3) Physical examination^a	
Tendinous xanthomata	6
Arcus cornealis before age 45 years	4
4) LDL-C levels (without treatment)	
LDL-C ≥8.5 mmol/L (≥325 mg/dL)	8
LDL-C 6.5–8.4 mmol/L (251–325 mg/dL)	5
LDL-C 5.0–6.4 mmol/L (191–250 mg/dL)	3
LDL-C 4.0–4.9 mmol/L (155–190 mg/dL)	1
5) DNA analysis	
Functional mutation in the <i>LDLR</i> , <i>apoB</i> , or <i>PCSK9</i> genes	8
Choose only one score per group, the highest applicable; diagnosis is based on the total number of points obtained	
A 'definite' FH diagnosis requires >8 points	
A 'probable' FH diagnosis requires 6–8 points	
A 'possible' FH diagnosis requires 3–5 points	

a Exclusive of each other (i.e. maximum 6 points if both are present).

CAD = coronary artery disease; FH = familial hypercholesterolaemia; LDL-C = low-density lipoprotein cholesterol; PCSK9 = proprotein convertase subtilisin/kexin type 9.

AHA 2015 Statement on familial hypercholesterolemia. FH Diagnostic Categories

ICD-10 Category	Clinical Criteria	With Genetic Testing Performed
Heterozygous FH	LDL-C ≥160 mg/dL (4 mmol/L) for children and ≥190 mg/dL (5 mmol/L) for adults and with 1 first-degree relative similarly affected or with premature CAD or with positive genetic testing for an LDL-C-raising gene defect (LDL receptor, apoB, or PCSK9)	Presence of 1 abnormal LDL-C-raising (LDL receptor, apoB or PCSK9) gene defect Diagnosed as heterozygous FH if LDL-C-raising defect positive and LDL-C <160 mg/dL (4 mmol/L) Occasionally, heterozygotes will have LDL-C >400 mg/dL (10 mmol/L); they should be treated similarly to homozygotes Presence of both abnormal LDL-C-raising (LDL receptor, apoB or PCSK9) gene defect(s) and LDL-C-lowering gene variant(s) with LDL-C <160 mg/dL (4 mmol/L)
Homozygous FH	LDL-C ≥400 mg/dL (10 mmol/L) and 1 or both parents having clinically diagnosed familial hypercholesterolemia, positive genetic testing for an LDL-C-raising (LDL receptor, apoB, or PCSK9) gene defect, or autosomal-recessive FH If LDL-C >560 mg/dL (14 mmol/L) or LDL-C >400 mg/dL (10 mmol/L) with aortic valve disease or xanthomata at <20 y of age, homozygous FH highly likely	Presence of 2 identical (true homozygous FH) or nonidentical (compound heterozygous FH) abnormal LDL-C-raising (LDL receptor, apoB or PCSK9) gene defects; includes the rare autosomal-recessive type Occasionally, homozygotes will have LDL-C <400 mg/dL (10 mmol/L)
Family history of FH	LDL-C level not a criterion; presence of a first-degree relative with confirmed FH	Genetic testing not performed

apoB indicates apolipoprotein B; FH, familial hypercholesterolemia; ICD-10, *International Classification of Diseases, 10th Revision*; LDL, low-density lipoprotein; LDL-C, low-density lipoprotein cholesterol; and PCSK9, proprotein convertase subtilisin/kexin type 9.

ESC 2019 GL on dyslipidaemias. Recommendations for the detection and treatment of patients with heterozygous familial hypercholesterolaemia

Diagnosis of FH is considered in patients with CHD aged <55 years for men and <60 years for women, in people with relatives with premature fatal or non-fatal CVD, in people with relatives who have tendon xanthomas, in people with severely elevated LDL-C [in adults >5 mmol/L (>190 mg/dL), in children >4 mmol/L (>150 mg/dL)], and in first-degree relatives of FH patients. I C

FH should be diagnosed using clinical criteria and confirmed, when possible, via DNA analysis. I C

Family cascade screening once the index case is diagnosed. I C

ASCVD = atherosclerotic cardiovascular disease; CHD = coronary heart disease; CVD = cardiovascular disease; FH = familial hypercholesterolaemia; HoFH = homozygous FH; LDL-C = low-density lipoprotein cholesterol; PCSK9 = proprotein convertase subtilisin/kexin type 9.

Table 4. ACC/AHA 2026 Guideline on Dyslipidemias. Genetic Testing for Familial Hypercholesterolemia.

1	B-NR	1. In adults with possible, probable, or definite FH, panel-based genetic testing for pathogenic/likely pathogenic rare variants for FH is beneficial to identify individuals at highest risk of cardiovascular events and to facilitate cascade screening. ¹⁻⁴
2a	B-NR	2. In adults with severe hypercholesterolemia with an LDL-C ≥ 190 mg/dL (4.9 mmol/L) without an identified secondary cause, panel-based genetic testing for pathogenic/likely pathogenic rare variants for FH can be useful to identify those with FH who are at higher risk of ASCVD events. ^{1,2}
2b	B-NR	3. In adults with an elevated LDL-C of 160 to 189 mg/dL (4.1–4.9 mmol/L) without an identified secondary cause, panel-based genetic testing for pathogenic/likely pathogenic rare variants for FH may be considered to identify those with FH who are at higher risk of events. ^{1,2}