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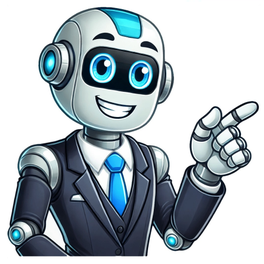

إرشادات الكوليسترول النافع 2018 acc / aha

< Back to Listing As a library, NLM provides access to scientific literature. Inclusion in an NLM database does not imply endorsement of, or agreement with, the contents by NLM or the National Institutes of Health. Learn more: PMC Disclaimer | PMC Copyright Notice . Author manuscript; available in PMC: 2020 Aug 5. Since 1980, the American College of Cardiology (ACC) and American Heart Association (AHA) have translated scientific evidence into clinical practice guidelines with recommendations to improve cardiovascular health. These guidelines, which are based on systematic methods to evaluate and classify evidence, provide a foundation for the delivery of quality cardiovascular care. The ACC and AHA sponsor the development and publication of clinical practice guidelines without commercial support, and members volunteer their time to the writing and review efforts. Clinical practice guidelines provide recommendations applicable to patients with or at risk of developing cardiovascular disease (CVD). The focus is on medical practice in the United States, but these guidelines are relevant to patients throughout the world. Although guidelines may be used to inform regulatory or payer decisions, the intent is to improve quality of care and align with patients' interests. Guidelines are intended to define practices meeting the needs of patients in most, but not all, circumstances, and should not replace clinical judgment. Recommendations for guideline-directed management and therapy, which encompasses clinical evaluation, diagnostic testing, and both pharmacological and procedural treatments, are effective only when followed by both practitioners and patients. Adherence to recommendations can be enhanced by shared decision-making between clinicians and patients, with patient engagement in selecting interventions on the basis of individual values, preferences, and associated conditions and comorbidities. The ACC/AHA Task Force on Clinical Practice Guidelines strives to ensure that the guideline writing committee both contains requisite expertise and is representative of the broader medical community by selecting experts from a broad array of backgrounds, representing different geographic regions, sexes, races, ethnicities, intellectual perspectives/biases, and scopes of clinical practice, and by inviting organizations and professional societies with related interests and expertise to participate as partners or collaborators. The ACC and AHA have rigorous policies and methods to ensure that documents are developed without bias or improper influence. The complete policy on relationships with industry and other entities (RWI) can be found online. Beginning in 2017, numerous modifications to the guidelines have been and continue to be implemented to make guidelines shorter and enhance "user friendliness." Guidelines are written and presented in a modular knowledge chunk format, in which each chunk includes a table of recommendations, a brief synopsis, recommendation-specific supportive text and, when appropriate, flow diagrams or additional tables. Hyperlinked references are provided for each modular knowledge chunk to facilitate quick access and review. More structured guidelines–including word limits ("targets") and a web guideline supplement for useful but noncritical tables and figures–are 2 such changes. This Preamble is an abbreviated version, with the detailed version available online. The reader is encouraged to consult the full-text guidelineP-1 for additional guidance and details, since the executive summary contains mainly the recommendations. Keywords: AHA Scientific Statements; Guidelines; biomarkers, coronary artery calcium score; pharmacological; cardiovascular disease; cholesterol, LDL-cholesterol; diabetes mellitus; drug therapy; hydroxymethylglutaryl-CoA reductase inhibitors/statins; hypercholesterolemia; lipids; patient compliance; primary prevention; risk assessment; risk reduction discussion; risk treatment discussion, secondary prevention; ezetimibe; proprotein convertase subtilisin/kexin type 9 inhibitor (PCSK9) inhibitors In all individuals, emphasize a heart-healthy lifestyle across the life course. A healthy lifestyle reduces atherosclerotic cardiovascular disease (ASCVD) risk at all ages. In younger individuals, healthy lifestyle can reduce development of risk factors and is the foundation of ASCVD risk reduction. In young adults 20 to 39 years of age, an assessment of lifetime risk facilitates the clinician–patient risk discussion (see No. 6) and emphasizes intensive lifestyle efforts. In all age groups, lifestyle therapy is the primary intervention for metabolic syndrome. In patients with clinical ASCVD, reduce low-density lipoprotein cholesterol (LDL-C) with high-intensity statin therapy or maximally tolerated statin therapy. The more LDL-C is reduced on statin therapy, the greater will be subsequent risk reduction. Use a maximally tolerated statin to lower LDL-C levels by ≥50%. In very high-risk ASCVD, use a LDL-C threshold of 70 mg/dL (1.8 mmol/L) to consider addition of nonstatins to statin therapy. Very high-risk includes a history of multiple major ASCVD events or 1 major ASCVD event and multiple high-risk conditions. In very high-risk ASCVD patients, it is reasonable to add ezetimibe to maximally tolerated statin therapy when the LDL-C level remains ≥70 mg/dL (≥1.8 mmol/L). In patients at very high risk whose LDL-C level remains ≥70 mg/dL(≥1.8 mmol/L) on maximally tolerated statin and ezetimibe therapy, adding a PCSK9 inhibitor is reasonable, although the long-term safety (>3 years) is uncertain and cost effectiveness is low at mid-2018 list prices. In patients with severe primary hypercholesterolemia (LDL-C level ≥190 mg/dL [=4.9 mmol/L]), without calculating 10-year ASCVD risk, begin high-intensity statin therapy. If the LDL-C level remains ≥100 mg/dL (≥2.6 mmol/L), adding ezetimibe is reasonable. If the LDL-C level on statin plus ezetimibe remains ≥100 mg/dL (≥2.6 mmol/L) and the patient has multiple factors that increase subsequent risk of ASCVD events, a PCSK9 inhibitor may be considered, although the long-term safety (>3 years) is uncertain and economic value is low at mid-2018 list prices. In patients 40 to 75 years of age with diabetes mellitus and LDL-C ≥70 mg/dL (≥1.8 mmol/L), start moderate-intensity statin therapy without calculating 10-year ASCVD risk. In patients with diabetes mellitus at higher risk, especially those with multiple risk factors or those 50 to 75 years of age, it is reasonable to use a high-intensity statin to reduce the LDL-C level by ≥50%. In adults 40 to 75 years of age evaluated for primary ASCVD prevention, have a clinician–patient risk discussion before starting statin therapy. Risk discussion should include a review of major risk factors (eg, cigarette smoking, elevated blood pressure, LDL-C, hemoglobin A1C [if indicated], and calculated 10-year risk of ASCVD); the presence of risk-enhancing factors (see No. 8); the potential benefits of lifestyle and statin therapies; the potential for adverse effects and drug–drug interactions; consideration of costs of statin therapy; and patient preferences and values in shared decision-making. In adults 40 to 75 years of age without diabetes mellitus and with LDL-C levels ≥70 mg/ dL (≥1.8 mmol/L), at a 10-year ASCVD risk of ≥7.5%, start a moderate-intensity statin if a discussion of treatment options favors statin therapy. Risk-enhancing factors favor statin therapy (see No. 8). If risk status is uncertain, consider using coronary artery calcium (CAC) to improve specificity (see No. 9). If statins are indicated, reduce LDL-C levels by ≥30%, and if 10-year risk is ≥20%, reduce LDL-C levels by ≥50%. In adults 40 to 75 years of age without diabetes mellitus and 10-year risk of 7.5% to 19.9% (intermediate risk), risk-enhancing factors favor initiation of statin therapy (see No. 7). Risk-enhancing factors include family history of premature ASCVD; persistently elevated LDL-C levels ≥160 mg/dL (≥4.1 mmol/L); metabolic syndrome; chronic kidney disease; history of preeclampsia or premature menopause (age 12 months) with statin therapy plus a second lipid-modifying agent compared with statin alone? 4.1 Numerical values for triglycerides, total cholesterol (TC), low-density lipoprotein (LDL-C), high-density lipoprotein (HDL-C), and non–HDL-C are given in both mg/ dL and mmol/L. To convert to mmol/L, the values in mg/ dL for TC, LDL-C, HDL-C, and non–HDL-C were divided by 38.6 and for triglycerides, by 88.6. On May 10, 2018 a writing committee member discussed their participation in an industry-supported, multicenter study, which they had thought was not relevant to this prevention guideline. However, when this was reviewed using specific ACC/AHA criteria, it was considered to represent a relevant relationship with industry. Given the current policy that a prevention guideline writing committee member must be free of any relevant relationships with industry, this member was removed from the committee. The 2 sections authored by the writing committee member were removed and replaced by new material written by the guideline chairs, and the revised sections reviewed and approved by all remaining writing committee members. The writing committee member did not participate in any further guideline discussions or review of the manuscript or recommendations. The writing committee consisted of medical experts including cardiologists, internists, interventionalists, a nurse practitioner, pharmacists, a physician assistant, a pediatrician, a nephrologist, and a lay/patient representative. The writing committee included representatives from the American College of Cardiology (ACC), American Heart Association (AHA), American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR), American Association Academy of Physician Assistants (AAPA), Association of Black Cardiologists (ABC), American College of Preventive Medicine (ACPM), American Diabetes Association (ADA), American Geriatrics Society (AGS), American Pharmacists Association (APhA), American Society for Preventive Cardiology (ASPC), National Lipid Association (NLA), and Preventive Cardiovascular Nurses Association (PCNA). Appendix 1 of the present document lists writing committee members' relevant RWI. For the purposes of full transparency, the writing committee members' comprehensive disclosure information is available online. This document was reviewed by 21 official reviewers each nominated by the ACC, AHA, AAPA, ABC, ACPM, ADA, AGS, APhA, ASPC, NLA, and PCNA, as well as 27 individual content reviewers. Reviewers' RWI information was distributed to the writing committee and is published in this document (Appendix 2). This document was approved for publication by the governing bodies of the ACC, the AHA, AAPA, ABC, ACPM, ADA, AGS, APhA, ASPC, NLA, and PCNA. The purpose of the present guideline is to address the practical management of patients with high blood cholesterol and related disorders. The writing committee reviewed previously published guidelines, evidence reviews, and related statements. Table S1 in the Web Supplement contains a list of publications and statements deemed pertinent. The primary sources of evidence are randomized controlled trials (RCTs). Most RCTs in this area have been performed with statins as the only cholesterol-lowering drug.S1.4-1–S1.4-3 Since the 2013 ACC/AHA cholesterol guideline,S1.4-4 newer cholesterol-lowering agents (nonstatin drugs) have been introduced and subjected to RCTs. They include ezetimibe and PCSK9 inhibitors, and their use is limited mainly to secondary prevention in patients at very high-risk of new atherosclerotic cardiovascular disease (ASCVD) events. Most other patients with ASCVD are treated with statins alone. In primary prevention, statins are recommended for patients with severe hypercholesterolemia and in adults 40 to 75 years of age either with diabetes mellitus or at higher ASCVD risk. Throughout these guidelines similar to the 2013 guidelines, consistent attention is given to a clinician–patient risk discussion for making shared decisions. Besides major risk factors of the pooled cohort equations (PCE), the clinician–patient risk discussion can include other risk-enhancing factors, and when risk status is uncertain, a coronary artery calcium (CAC) score is an option to facilitate decision-making in adults ≥40 years of age. In children, adolescents, and young adults, identifying those with familial hypercholesterolemia (FH) is a priority. However, most attention is given to reducing lifetime ASCVD risk through lifestyle therapies. Recommendations are designated with both a class of recommendation (COR) and a level of evidence (LOE). The class of recommendation indicates the strength of recommendation, encompassing the estimated magnitude and certainty of benefit in proportion to risk. The level of evidence rates the quality of scientific evidence supporting the intervention on the basis of the type, quantity, and consistency of data from clinical trials and other sources (Table 2).S1.5-1 Applying Class of Recommendation and Level of Evidence to Clinical Strategies, Interventions, Treatments, or Diagnostic Testing in Patient Care (Updated August 2015) Among lipid-lowering drugs, statins are the cornerstone of therapy, in addition to healthy lifestyle interventions. Other LDL-lowering drugs include ezetimibe, bile acid sequestrants, and PCSK9 inhibitors. Triglyceride-lowering drugs are fibrates and niacin; they have a mild LDL-lowering action, but RCTs do not support their use as add-on drugs to statin therapy.S3.1-1 Characteristics of LDL-lowering drugs are summarized in Table S3 in the Web Supplement. The intensity of statin therapy is divided into 3 categories: high-intensity, moderate-intensity, and low-intensity.S3.1.1-1 High-intensity statin therapy typically lowers LDL-C levels by ≥50%, moderate-intensity statin therapy by 30% to 49%, and low-intensity statin therapy by