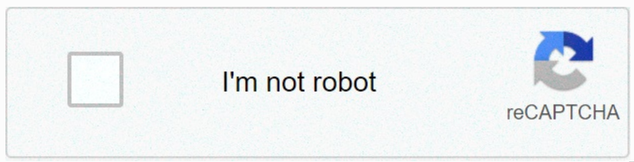

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Coronary heart disease aha guidelines

Go with guidelines - Coronary Artery Disease (GWTG-CAD) is a disease registry designed to support activities that improve the quality of acute myocardial infarction (AMI), CAD and chest pain. Go with the guidelines® - CAD top 10 take-home messages e597Preamble e5971 for primary prevention of heart disease. Introduction e5981.1. Methodology and evidence review e5991.2. Writing Committee Organization e5991.3. Document review and approval e5991.4. Scope of guideline e5991.5. Class e6001.6 of the level of recommendation and proof. Brief e6012. Comprehensive recommendations for ASCVD prevention efforts e6012.1. Patient-centered approach to comprehensive ASCVD prevention e6012.2. Assessment of cardiovascular risk e6023. Lifestyle factors affecting cardiovascular risk e6053.1. Nutrition and diet e6053.2. Exercise and physical activity e6074. Other factors affecting cardiovascular risk e6094.1. Adults with overweight and obese e6094.2. Adults with type 2 diabetes mellitus e6104.3. Adults with high blood cholesterol e6124.4. Adults with high blood pressure or hypertension e6164.5. Treatment of tobacco use e6184.6. Use aspirin e6215. Cost and price considerations e6226. Conclusion e623Appendix 1: Search Criteria e636Appendix 2: Author relationship with industry and other entities (relevant) e641Appendix 3: Reviewer relationship with industry and other entities (comprehensive) e642References e624the most important way to prevent etheirosclerotic vascular disease, heart failure, and aria fibrillation is to promote a healthy lifestyle throughout life. A team-based care approach is an effective strategy for heart disease prevention. Physicians should evaluate social determinants of health that affect individuals to inform treatment decisions. Adults who are aged 40 to 75 years old and are being evaluated for the prevention of heart disease should undergo a 10-year atherosclerotic heart disease (ASKVD) risk estimate and have a physician-patient risk discussion before starting on pharmacological therapy, such as antihiperative therapy, a statin, or aspirin. In addition, assessing for other risk-enhancing factors can help to make decisions about preventive interventions in select individuals, as can coronary artery calcium scanning. All adults should consume a healthy diet that emphasizes the intake of vegetables, fruits, nuts, whole grains, lean vegetable or animal proteins, and fish and reduces the intake of trans fats, red meat and processed red meat, refined carbohydrates and sweet beverages. For adults with overweight and obese, counselling and caloric restrictions are recommended to achieve and maintain weight loss. Adults should be involved in at least 150 minutes per week of accumulated moderate intensity physical activity or 75 minutes per week of vigorous intensity physical activity. For adults with type 2 diabetes mellitus, lifestyle changes, such as improving dietary habits and Exercise recommendations, are important. If the drug is indicated, metformin is the first line therapy, followed by a sodium-glucose cotransporter 2 inhibitor or glucagon-like peptide-1 receptor agonist. Every healthcare visit for tobacco use should be assessed by all adults and tobacco users should be helped and strongly advised to quit. Aspirin should be used repeatedly in regular primary prevention of ASKVD due to lack of net profit. Statin therapy is a first-line treatment for the primary prevention of ASKVD in patients with elevated low density lipoprotein cholesterol levels (≥190 mg/dl), those with diabetes mellitus, who are aged 40 to 75 years old, and are scheduled to be at adequate ASCVD risk after doctor-patient risk discussion. Non-cardiovascular interventions are recommended for all adults with elevated blood pressure or high blood pressure. For those requiring medicinal therapy, target blood pressure should generally be <130/80 mm Hg.1980 since, the American College of Cardiology (ACC) and the 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 for evaluating and classifying evidence, provide a foundation for the delivery of quality heart care. Acc and AHA sponsor the publication of clinical practice guidelines without development and commercial support, and members volunteer their time for writing and review efforts. Clinical practice guidelines provide recommendations applicable to patients with or at risk with the development of heart disease (CVD). There is a focus on medical practice in the United States, but these guidelines are relevant to patients around the world. Although the guidelines can be used to inform regulatory or payer decisions, the goals are to improve the quality of care and align with patients' interests. The guidelines are intended to define practices to meet the needs of patients in most but not all circumstances and should not replace clinical decisions. Recommendations for guideline-guided management and therapy, including clinical evaluation, clinical trials, and both pharmacological and procedural treatments, are effective only when adopted by both physicians and patients. Adherence to recommendations can be enhanced by making shared decisions between physicians and patients, with patient engagement in choosing individual values, preferences, and interventions based on associated conditions and comorbidities. The ACC/AHA Task Force on Clinical Practice Guidelines seeks to ensure that the guideline writing committee includes the requisite expertise and is representative of the wider medical community by selecting experts from a broad array of backgrounds, representing the scope of different geographical areas, sexes, races, races, intellectual attitudes/prejudices and clinical practice. Acc The AHA has rigorous policies and methods to ensure that documents are developed without prejudice or undue influence. The whole policy on relationships with industry and other institutions (RWI) can be found online. Starting in 2017, the guidelines have been several modifications and the guidelines continue to be implemented to reduce and enhance user friendliness. The guidelines are written and presented in a modular knowledge part format, including each part a table of recommendations, a brief summary, recommendation-specific helpful text and, when appropriate, flow diagrams or additional tables. Hyperlinked references are provided for each modular knowledge part to facilitate quick access and review. There are 2 such changes—more structured guidelines including word limits (targets) and useful but a web guideline supplement for non-Christian tables and statistics. This preamble is an abbreviated version, with a detailed version available online. Patrick T. O'Slurry, MD, MACC, FAHAChair, ACC/ACC Introduction Although atherosclerotic heart disease (ASKVD) outcomes have improved significantly in recent decades, ASKVD remains the leading cause of morbidity and mortality globally. S1-1-S1-3 in the United States, it is also the leading cause of death for people of most racial/ethnic groups, with estimated costs of $200 billion annually in health services, drugs, and lost productivity. Much of this is due to sub-established implementation of prevention strategies and uncontrolled ASKVD risk factors in many adults. S1-2Most Americans who have had a myocardial infarction (MI) had adverse levels of at least 1 cardiovascular risk factor before their ASCVD event. S1-4 in 2010, the AHA ideally defined a new model of cardiovascular health, referred to as Simple 7.S1-5 physicians of life the American College of Cardiology (JACC) of the 2018 Journal of Cardiovascular Health Promotion Series will find various aspects of prevention with patients approaching. The S1-6 ideally has a growing number of cardiovascular health factors associated with a reduced prevalence and incidence of ASCVD events, heart failure, atrial fibrillation, cancer, depression, and cognitive impairment. Therefore, transferring individuals towards ideal cardiovascular health is critically important for the prevention of many important health conditions. The ACC/AHA Task Force on Clinical Practice Guidelines has commissioned this guideline to strengthen existing recommendations and various recent scientific statements, expert consensus documents and clinical practice guidelines in a guidance document focused on the primary prevention of ASKVD. However, this guideline also includes newly generated recommendations for aspirin use, exercise and physical activity, and tobacco use, in addition to recommendations related to team-based care, shared decision-making and assessment of social of Health, to create a comprehensive yet targeted ACC/AHA guideline on ASCVD prevention. This guideline has been formatted in modular chunk format to facilitate readability and future updating. Prevention strategies occur at population levels, but should also involve individual adults to slow the development of ASCVD. The most important way to prevent ASCVD is to promote a healthy lifestyle throughout life. Prevention strategies should include a strong focus on lifestyle adaptation (dietary improvements, physical activity and tobacco use and exposure to secondhand smoke) to reduce the risk of future ASKVD events. A comprehensive patient-centered approach that addresses all aspects of a patient's lifestyle habits and the estimated risk of a future ASCVD event is the first step in deciding on where there may be a need for pharmacotherapy. Even if a blood pressure (BP) — lowering the drug, lipid-reducing medication, or diabetes medication is ultimately prescribed, lifestyle goals should be emphasized on a regular basis. Only when a person's risk is sufficiently high, drugs should be considered as part of the shared decision-making process for optimal treatment to reduce ASKVD risk. In short, physicians and individuals should focus on living a healthy lifestyle by referring to these evidence-based recommendations to help prevent ASCVD.1.1. Methodology and Evidence Review This guideline continues with the ACC and AHA to create a comprehensive yet concise compilation of practical guidance for the primary prevention of ASKVD and promote optimal dissemination of information using concise language and formatting. The recommendations listed in this guideline are evidence based and supported by a comprehensive evidence review. A search for literature derived from research involving human subjects published in English, and indexed at Ovid Medline, Pubmed, Cochrane Library, National Institute for Health and Care Excellence (NICE), and other selected databases related to this guideline, was conducted between May and July 2018. For searching for specific search terms and years used per section, please appendix 1. Randomized Controlled Testing (RCT), see systematic review of RCT, meta-analysis, and systematic review of large, United States-based, high-quality cohort studies, as well as observational studies and observational studies, The following 9 subject areas were assessed for their content on prevention of related ASCVD results: risk assessment, diet, exercise/physical activity, obesity and weight loss, type 2 diabetes amitus (T2DM), blood cholesterol, hypertension, smoking cessation, previous ACC/AHA guidelines as well as review of THE US Preventive Services Task Force (USPTF) and other guidance relevant to this guideline were also assessed. Final evidence tables included in online data supplements summarize the evidence used to prepare recommendations Do. Selected references and and This document contains representatives and is not all inclusive. Avlere Health, a health advisory services firm contracted by acc/aha, served as document manager for the guideline to facilitate its development process. As document manager, Avalere led the revised Delphi process to facilitate the writing committee's deliberations and establish recommended class and level of evidence. In parallel, Lee N. Prebil, an independent health data and epidemiology expert, conducted a systematic evidence review for the key theme of exercise and physical activity and conducted targeted literature searches to support discussion of this document of patient-centered approaches, including team-based care, shared decision-making and evaluation of social determinants of health. A targeted literature search for cost and price considerations of this guideline was also conducted. These searches are available as downloadable Excel files. The recommendations and lessons relevant to supportive heart risk, blood cholesterol, and high BP 2 were taken directly from the recently released ACC/AHA guidelines, were adapted to the 2017 Hypertension Clinical Practice Guidelines 1.1-1 and 2018 Cholesterol Clinical Practice Guidelines, S1.1-2 and current guidelines, which provide an overview of the primary prevention of ASCVD among adults. Customized recommendations from previous publications are noted in the recommendation tables, and the guideline provides both the original published recommendation and the customized version. The results of the review of these evidences were evaluated by the writing committee for inclusion in the current guideline. (See Table S1 in Web Supplement for a list of relevant publications and statements used in support of the guideline recommendations.) Each subject area was assigned a primary author, as well as a primary, and sometimes secondary, reviewer. These tasks were based on areas of special expertise of the members of the writing committee. All the recommendations were thoroughly reviewed and discussed among the plenary committee to allow for diverse approaches and ideas for this guideline. The recommendations were then voted on, with a revised Delphi process used to reach consensus. 1.2 ı The writing committee's organization writing committee consisted of doctors, cardiologists, health services researchers, epidemiologists, internists, nurses and a representative. The writing committee consisted of representatives from acc and AHA. Appendix 2 of the current document lists the relevant RWI of the writing committee members. For the purposes of full transparency, extensive disclosure information of members of the writing committee is available online.1.3. The document reviewed and approved this document was reviewed by 5 official reviewers nominated by the ACC and AHA (1 reviewer from the ACC/AHA task force for practice guidelines, 2 reviewers from the AHA, and 2 reviewers from the ACC); On 3 reviewers American Association of Cardiovascular and Pulmonary Rehabilitation, American Society for Nutrition, and American Society of Preventive Medicine; and 23 personal content reviewers. The Reviewers' RWI information was distributed to the Writing Committee and published in this document (Appendix 3). The document was approved for publication by the governing bodies of the ACC and AHA.1.4. The scope of the guideline This guideline is to be a resource for clinical and public health practice communities. It addresses the primary prevention of CVD in adults (≥18 years of age), which focuses on the consequences of ascvd (i.e., acute coronary syndrome, MI, stable or unstable angina, arterial reconvement, stroke, transient ischemic attack, or peripheral artery disease of atherosclerotic origin) as well as heart failure and ataxial fibrillation. The guideline presents recommendations to prevent CVD that relate to lifestyle factors (e.g., diet and exercise or physical activity), other factors affecting CVD exposure (e.g., obesity, diabetes, blood cholesterol, high BP, smoking, aspirin use), patient-centered approaches (e.g., team-based care, shared decision-making, assessment of social determinants of health), and considerations of the cost and value of primary prevention. The recommended class and level of evidence recommendations have been designated with both a class of recommendation (core) and a level of evidence (LOE). The core indicates the strength of the recommendation, including the estimated magnitude in proportion to the risk and the certainty of profit. LOE rates the quality of scientific evidence supporting intervention based on the type, quantity and stability of data from clinical trials and other sources (Table 1). S1.5-1Table 1. Class of recommendation and evidence levels applied for clinical trials in clinical strategies, interventions, treatment, or patient care (updated August 2015) 1.6. AbbreviationBbrMeaning/phraseASCVDatherosclerotic heart diseaseAUAgatston unitsBMIbody Mass IndexBPblood pressureCHDcoronary heart diseaseCKDchronic kidney diseaseCVDcardiovacular diseased hypertension Aproshirti approach to prevent admdiabets blood pressureddibets melitsandselectronic nicotine delivery systemsFDAUS Food and Drug Administration GLP-1RGlucagan-like Peptide-1 ReceptorHbA1chemoglobin A1cHDL-Chigh-density lipoprotein cholesterolHbA1chemoglobin A1cLDL-Clow-density lipoprotein cholesterolMImyocardial infarctionPCEpooled cohort equationRCTrandomized controlled testsSBPsystolic blood pressureSGLT-2sodium-glucose covalent 2T2DMtype 2 diabetes mellitusUSPSTFUS Preventive Services Task Force 2. Comprehensive recommendations for ASCVD prevention efforts 2.1. The patient-centered approach to comprehensive ASCVD PreventionSynopsis aims to promote the delivery of patient-centered care on primary prevention of this 2019 ACC/AHA guideline CVD, which the writing committee felt was fundamental to Provided throughout. These patient-centered recommendations emphasize the importance of evaluating social determinants of health in team-based care delivery, shared decision-making and ASCVD prevention efforts. These recommendations apply to all aspects of clinical practice for primary prevention of ASKVD. Recommendation-specific supporting textteam-based care ASKVD uses multidisciplinary health professionals to improve the quality and maintenance of prevention. It is a multifunctional approach that supports clinical decision-making (i.e., treatment algorithms), collaboration between various physicians and patient and family member participation to facilitate patients' treatment goals. Systematic reviews with S2.1-26 RCTs and meta-analyses demonstrated a greater lack of ASCVD exposure with team-based care than with general care in patients with hypertension, diabetes, and hyperlipidemia. A team-based approach to S2.1-1-S2.1-14 ASKVD prevention may result in significant improvements in patient outcomes S2.1-27 and often get better than patient-needed standard care, especially in low resource settings and among vulnerable populations. In a team-based care model that was performed by advanced practice providers with a tendency compared to patients enrolled in a preventive cardiology clinic — matching the cohort of patients enrolled in primary care clinics, cardiovascular risk reduction was performed through effective risk stratification and preventive management. S2.1-28 other successful interventions that the team has used to support care include telehealth monitoring, follow-up support aids, and patient education. The S2.1-27 decision about primary prevention must be collaborative between a physician and a patient. Shared decision-making occurs when physicians engage patients in discussions about their implications for individual ASCVD risk projections and their implications for preventive strategies, including lifestyle habits, goals, and medical medical treatments. Collaborative decisions are more likely to address potential barriers to treatment options than treatment and guidance without patient input. S2.1-15-S2.1-18Socioeconomic inequalities are strong determinants of CVD exposure internationally. S2.1-21, S2.1-24 Therefore, the doctor must tailor advice for a patient's socioecond and educational status, as well as cultural, work, and home environments. The S2.1-23 Centers for Medicare and Medicaid Services has developed a screening tool to assess 5 domains of non-health-related measures affecting health outcomes: housing instability, food insecurity, transportation difficulties, needed utility assistance, and mutual safety. S2.1-29 ASCVD prevention may benefit from such screening. ASCVD risk starts early in life, with heightened sensitivity tied to lower socioeconth status. S2.1-25 examples of upstream social determinants of health that affect treatment adherence and ASKVD health outcomes include mentally cumorbid Lack of health literacy, exposure to adversity (e.g., home/community violence, trauma exposure, safety concerns), financial stress, inadequate housing conditions, lack of food security (i.e., access to affordable and nutritious food), and inadequate social support. S2.1-30 systems of care should evaluate social determinants of health that affect care delivery for primary prevention of ASKVD (e.g., transportation barriers, availability of health services). Important considerations related to socioecond economic disadvantages are not captured by existing CVD risk equations. S2.1-31 improves the management of BP and lipids, S2.1-32 addressing imperfect social needs that highlights the importance of dietary counseling and encouraging physical activity. S2.1-19 may require more time to address ASCVD prevention with adults from low health literacy or disadvantaged educational backgrounds. Difference cardiovascular outcomes are continued by significant sociality characteristics that are not limited to age, gender and race/ethnicity. Failure to overcome the impact of social determinants of health hinders the efficacy of proven prevention recommendations. Table 2 underlines key considerations relating to health and social determinants of ASCVD prevention. Table 2. For example to help address social determinants of health ASCVD EventsTopic/DomainExample thoughtCardiovascular riskAdults should be regularly evaluated for psychosocial stress and provided with appropriate consultation. S2.1-31Health literacy should be assessed every 4 to 6 y to maximize the recommended effectiveness. In addition to prescription of S2.1-36DietIn dietary modifications, body shape perception, as well as social and cultural impacts, must be evaluated. S2.1-37, S2.1-38Poteial constraints should be assessed, including food access and economic factors; These factors may be particularly relevant to individuals with vulnerable populations, such as individuals living in the inner city or rural environment, those with socioeconthes, and people of advanced age*. In addition to s2.1-39October and prescription of physical activity, access to facilities for exercise, neighborhood environment and physical activity should be assessed. Evaluation and intervention recommendations for psychosocial stress, sleep hygiene and other personal barriers should be included in S2.1-30, S2.1-40, S2.1-41 obesity and weight loss lifestyle counseling for weight loss. S2.1-42-S2.1-44Weight maintenance should be promoted in patients with overweight/overweight. In addition to prescription diabetes type 2 diabetes, environmental and psychosocial factors including depression, stress, self-efficacy and social support, should be evaluated for improving the achievement of glycemic control and adherence to treatment. S2.1-45-S2.1-48High Blood नींद की अवधि<6 h)= and= poor-quality= sleep= are= associated= with= high= blood= pressure= and= should= be= considered.s2.1-49= because= other= lifestyle= habits= can= impact= blood= pressure,= access= to= a= healthy,= low-sodium= diet= and= viable= exercise= options= should= also= be= considered.tobacco= treatmentsocial= support= is= another= potential= determinant= of= tobacco= use.= therefore,= in= adults= who= use= tobacco,= assistance= and= arrangement= for= individualized= and= group= social= support= counseling= are= recommended.s2.1-50 ,s2.1-512.2.= assessment= of= cardiovascular= risksynopsisassessment= of= ascvd= risk= remains= the= foundation= of= primary= prevention.= although= all= individuals= should= be= encouraged= to= follow= a= heart-healthy= lifestyle,= estimating= an= individual's= 10-year= absolute= ascvd= risk= enables= matching= the= intensity= of= preventive= interventions= to= the= patient's= absolute= risk,= to= maximize= anticipated= benefit= and= minimize= potential= harm= from= overtreatment.= the= 10-year= ascvd= risk= estimate= is= used= to= guide= decision-making= for= many= preventive= interventions ,= including= lipid= managements2.2-4,s2.2-36= and= bp= management;s2.2-37= it= should= be= the= start= of= a= conversation= with= the= patient= about= risk-reducing= strategies= (the= “clinician–patient= discussion”)= and= not= the= sole= decision= factor= for= the= initiation= of= pharmacotherapy.s2.2-4,s2.2-36,s2.2-38= all= risk= estimation= tools= have= inherent= limitations,= and= population-based= risk= scores= must= be= interpreted= in= light= of= specific= circumstances= for= individual= patients.= the= pce= have= been= shown= to= overestimates2.2-15 ,s2.2-39–s2.2-47= or= underestimates2.2-12,s2.2-48–s2.2-51= ascvd= risk= for= certain= subgroups.= thus,= after= calculation= of= the= pce,= it= is= reasonable= to= use= additional= risk-enhancing= factors= to= guide= decisions= about= preventive= interventions= for= borderline-= or= intermediate-risk= adults.s2.2-4–s2.2-14= however,= the= value= of= preventive= therapy= may= remain= uncertain= for= many= individuals= with= borderline= or= intermediate= estimated= 10-year= risk,= and= some= patients= may= be= reluctant= to= take= medical= therapy= without= clearer= evidence= of= increased= ascvd= risk.= for= these= individuals ,= the= assessment= of= coronary= artery= calcium= is= a= reasonable= tool= to= reclassify= risk= either= upward= or= downward,= as= part= of= shared= decision-making.= for= younger= adults= 20= to= 59= years= of= age,= estimation= of= lifetime= risk= may= be= considered.= for= adults=>(75 वर्ष की आयु, चिकित्सक और रोगी को कॉमोरबिडिटीज और जीवन प्रत्याशा के संदर्भ में आयु वर्ग के लिए उपयुक्त निवारक उपचारों के संभावित लाभों के बारे में चर्चा में शामिल होना चाहिए। निवारक हस्तक्षेपों के बारे में निर्णयों को सुविधाजनक बनाने के लिए सिफारिश-विशिष्ट सहायक टेक्स्ट, पारंपरिक एएससीवीडी जोखिम कारकों के लिए स्क्रीन करने और 40 से 75 वर्ष की आयु के It is recommended to apply race-and gender-specific PCE (ASCVD risk estimation) to estimate 10-year ASCVD risk for adults. S2.2.1, S2.2.2.2 for stage management 1 hypertension (BP 130-139/80-89 mm HG), adults <10% or=>10% for 10%10%ASCVD risk of </10%> Should be classified as </6> </6> (See Section 4.4 Figure 4). For the management of blood cholesterol, adults are low (<5%), borderline (5% to <7.5%), intermediate (≥7.5% to <20%), or higher (≥20%) 10 years risk. S2.2-4 PCE are best validated among non-Hispanic whites and non-Hispanic blacks living in the United States. S2.2-1, S2.2-39, S2.2-48, S2.2-49, S2.2-52 in other racial/ethnic groupsS2.2-53, S2.2-54 or in some non-U.S. population, S2.2-40, S2.2-41, S2.2-53, S2.2-54 PCE may underestimate more estimates or risks. Therefore, physicians can consider the use of another risk prediction tool as an alternative to PCE if the tool evaluation was validated in a population with similar characteristics to the patient. Examples include general Framingham CVD risk score, S2.2-55 Reynolds risk score, S2.2-56, S2.2-57 score (systematic COronary risk assessment), S2.2-58 and QRISK/JBS3S2.2-59 tools. Other professional societies have included some of these optional valid risk scores in their lipid management guidelines or considered various risk thresholds for preventive interventions. S2.2-58-S2.2-63 Although minor differences exist in organizational guidelines, they are very similar in their broad goal of matching the intensity of preventive therapy to all patient's full (usually 10 years) risk. S2.2-58-S2.2-63 After the age of 20, it is advisable to measure traditional risk factors at least every 4 to 6 years. S2.2-1, S2.2-3 for adults 20 to 39 years of age, limited data exist on the performance and usefulness of 10-year risk estimate devices. S2.2-64 is a major driver because of age risk, in this age range (<40 years) most are unlikely to have a sufficiently elevated 10-year risk to warrant medicinal therapy with statins (with a few exceptions, such as in familial hypercololemia). Nevertheless, periodic assessment of risk factors (for example, at least every 4 to 6 years of age from 20 to 39 years in young adults) is important to guide discussions about the intensity of lifestyle interventions, the frequency of risk factor monitoring, the treatment of non-disease risk factors and consideration of 30 years or lifetime risk estimates. S2.2-1-S2.2-3No single risk calculator is suitable for all patients. In some population, PCE is proper calibration. S2.2-1, S2.2-65-S2.2-67 However, Some studies have found estimates of risk (and potential for treatment) among individuals with chronic inflammatory conditions (e.g., autoimmune disease, S2.2-50 HIV infection 2.2-12) or socioecond economic damage 2.2-48, S2.2-49, S2.2-51 not captured in the current risk scoring model. Patients with familial hypercholeteriomia are at a significant risk of early ASKVD occurrence, and the use of risk calculators does not apply to these patients. In contrast, other studies have overestimed the risk with PCE, especially among people with high socioecoth status and those with continual access to care and Services, which could lead to greater treatment of individuals likely to receive net profit from preventive pharmacotherp over the next decade. S2.2-15, S2.2-39-S2.2-47 PCE can be calibrated by sub-capacity in a more modern population than older peers from where they were obtained. S2.2-68 Therefore, among adults at the borderline (5% to <7.5%) and intermediates (≥7.5% to <20%) Risk, one may consider additional individual risk-enhancing diagnostic factors (Table 3) that can be used to revise the 10-year ASKVD risk estimate. S2.2-4 These factors may include having a family history of premature ASCVD, S2.2-5 chronic inflammatory disease [rheumatoid arthritis, S2.2-6 lupus, S2.2-7 or HIV infection 2.2-12]. South Asian ancestry, S2.2-13 preeclampsiaS2.2-8 or preterm delivery, S2.2-9 early menopause, S2.2-10 erectile dysfunction, S2.2-11 chronic kidney disease (CKD), history of metabolic syndrome, persistently elevated inflammatory markers, S2.2-14 or elevated lipidmarkers. S2.2-4 considers these clinically available risk-enhancing factors, if there is still uncertainty about the reliability of risk estimates for individuals in borderline or intermediate risk categories, so it is advisable to reclassify further test risk estimates upwards or downwards for the sub-clinical coronary atherosclerosis document. S2.2-17-S2.2-19,S2.2-69For intermediate estimated individuals (≥7.5% to <20%) For select adults with PCE or borderline (5% to <7.5%) Estimated risk, coronary artery calcium measurement can be a useful tool in refining risk assessment for preventive interventions (e.g., statin therapy). S2.2-4 In these groups, coronary artery calcium measurement can reclassify the risk upwards (especially if coronary artery calcium scores ≥100 Agatston units (AU) or ≥75th age/sex/race percentile) or below (if coronary calcium artery is zero) in a significant proportion of individuals. The extent of S2.2-15 reclassification is sufficient to provide confidence that patients with elevated coronary artery calcium will have a incidence rate that will obviously exceed the gain thresholds (i.e., ≥10% in 7.5% in years). And those with coronary artery calcium scores of zero <7.5%, which can help guide shared decision-making about statinsS2.2-15, S2.2-16, S2.2-21 or potentially even aspirin. Overview data showed S2.2-70, the presence and severity of coronary artery calcium to be associated with the likelihood of benefiting from statin therapy for ASCVD risk reduction. S2.2-71 coronary artery calcium scoring leads to better differentiation and risk reclassification than other sub-diagnostic imaging markers or biomarkers. In the S2.2-22, S2.2-27 MESA (multi-ethnic study of atherosclerosis) testing, coronary artery calcium score was strongly linked in a classified manner across age, gender, and racial/ethnic groups, independent of traditional exposure with 10-year ASCVD exposure कोरोनरी धमनी कैल्शियम भी कम जोखिम वाली महिलाओं <7.5% 10-year= risk),s2.2-7= younger= adults=></7.5%> <45 years= of= age),s2.2-20= and= older= adults= (≥75= years= of= age),s2.2-26= but= more= data= are= needed= to= support= its= use= in= these= subgroups.= a= coronary= artery= calcium= score= of= zero= identifies= individuals= at= lower= risk= of= ascvd= events= and= death= over= a= ≥10-year= period,s2.2-15,s2.2-17,s2.2-25= who= appear= to= derive= little= or= no= benefit= from= statins= for= ascvd= risk= reduction.s2.2-71= thus,= the= absence= of= coronary= artery= calcium= could= reclassify= a= patient= downward= into= a= lower= risk= group= in= which= preventive= interventions= (eg,= statins)= could= be= postponed.s2.2-22= note= that= the= absence= of= coronary= artery= calcium= does= not= rule= out= noncalcified= plaque ,= and= clinical= judgment= about= risk= should= prevail.= coronary= artery= calcium= might= also= be= considered= in= refining= risk= for= selected= low-risk= adults=></45> <5% 10-year= risk),= such= as= those= with= a= strong= family= history= of= premature= coronary= heart= disease= (chd).s2.2-23= mesas2.2-28= and= astro-charm= (astronaut= cardiovascular= health= and= risk= modification)s2.2-29= are= risk= estimation= tools= that= incorporate= both= risk= factors= and= coronary= artery= calcium= for= estimating= 10-year= chd= and= ascvd= risk,= respectively.= coronary= artery= calcium= measurement= is= not= intended= as= a= “screening”= test= for= all= but= rather= may= be= used= as= a= decision= aid= in= select= adults= to= facilitate= the= clinician–patient= risk= discussion.for= adults= 20= to= 39= years= of= age= (who= are= not= included= in= the= pce)= and= those= 40= to= 59= years= of= age= who= are= not= already= at= elevated= (≥7.5%)= 10-year= risk ,= estimating= a= lifetime= or= 30-year= risk= of= ascvd= may= be= considered= (ascvd= risk= estimator).s2.2-2= younger= individuals= often= have= low= estimated= 10-year= risk,= but= the= presence= of= at= least= 1= major= risk= factor= by= middle= age= is= associated= with= increased= lifetime= ascvd= risk= and= reduced= survival= free= of= morbidity= compared= with= those= with= optimal= risk= factors.s2.2-32–s2.2-34= calculation= of= lifetime= risk= with= the= acc/aha= 30-year/lifetime= risk= estimator= for= those= 20= to= 59= years= of= age= (not= at= high= short-term= risk)= may= be= reasonable= to= consider= as= a= communication= strategy= for= reinforcing= adherence= to= lifestyle= recommendations.s2.2-2table= 3.= risk-enhancing= factors= for= clinician–patient= risk= discussionrisk-enhancing= factors= family= history= of= premature= ascvd= (males,= age=></5%> <55 y;= females ,=

age=></55> <65 y)= primary= hypercholesterolemia= (ldl-c,= 160–189= mg/dl= [4.1–4.8= mmol/l];= non–hdl-c= 190–219= mg/dl= [4.9–5.6= mmol/l])*= metabolic= syndrome= (increased= waist= circumference= [by= ethnically= appropriate= cutpoints],= triglycerides= [=>(150 मिलीग्राम/डीएल, नॉनफास्टिंग], ऊंचा रक्तचाप, ऊंचा ग्लूकोज, और कम <40 mg/dl= in= men;=></40> <50 mg/dL in women] are factors; a tally of 3 makes the diagnosis) Chronic kidney disease (eGFR 15–59 mL/min/1.73 m2 with or without albuminuria; not treated with dialysis or kidney transplantation) Chronic inflammatory conditions, such as psoriasis, RA, lupus, or HIV/AIDS mg/dl= in= women]= are= factors;= a= tally= of= 3= makes= the= diagnosis)= chronic= kidney= disease= (egfr= 15–59= ml/min/1.73= m2= with= or= without= albuminuria;= not= treated= with= dialysis= or= kidney= transplantation)= chronic= inflammatory= conditions,= such= as= psoriasis,= ra,= lupus,= or= hiv/aids=></50 mg/dL in women] are factors; a tally of 3 makes the diagnosis) Chronic kidney disease (eGFR 15–59 mL/min/1.73 m2 with or without albuminuria; not treated with dialysis or kidney transplantation) Chronic inflammatory conditions, such as psoriasis, RA, lupus, or HIV/AIDS > एचडीएल-सी के</65> बीच ASCVD जोखिम अनुमानों को परिष्कृत कर सकता है [[History of premature menopause (before the age of 40) and pregnancy conditions that subsequently increase ASCVD risk, such as preclampsia high-risk race/precampsia, are not the same. South Asian ancestry) Lipid/Biomarkers: Constantly elevated associated with increased ASCVD exposure * Primary hyperperitariamia (≥175 mg/dl, non-risk) If measured: Elevated high sensitivity C-reactive protein (≥2.0 mg/l) Elevated LP (A): A relative indication for its measurement is the family history of ASCVD before time. An LP(a) ≥50 mg/dl or ≥125 nmol/L is a risk-enhancing factor, especially at high levels of LP(A). Elevated Apob (≥130 mg/DL): A relative indication for its measurement will be triglyceride ≥200 mg/dl. A level ≥130 mg/dl corresponds to a LDL-C>160 mg/DL and constitutes a risk increasing factor ABI (<0.9) 3. Lifestyle factors affecting cardiovascular risk 3.1. Nutrition and DietSynopsisApproximately 630 0 Americans died of heart disease in 2015, 366 000 of whom died from coronary artery disease. Heart disease deaths increased by 1% in 2015 after a decline of 4 decades. S3.1-28 This trend has been attributed to the obesity epidemic. Healthy nutrition has a significant impact on ASKVD and its risk factors (see recommendations in individual classes), potentially obesity, high cholesterol, diabetes and high blood pressure. Cardiovascular nutrition literature is limited by the lack of potential randomized trials on a large scale with ASCVD results. Although RCTs focused on hard endpoints are limited, several observational studies have focused on collaborating cvd mortality with dietary patterns – specifically, sugar, low calorie sweeteners, high carbohydrate diets, low carbohydrate diets, refined grains, trans fats, saturated fats, sodium, red meat, and processed red meat (e.g., bacon, salami, ham, hot dog, sausage). S3.1-1-S3.1-24 processed meats are any meat protected by smoking, treating, or brine, or additional chemical preservatives. S3.1-28aRecommendation-specific auxiliary TextPlant-based and Mediterranean diet, with the consumption of enlarged fruits, walnuts, vegetables, pods, and lean vegetable or animal proteins (preferably fish) with underlying soluble and insoluble vegetable fiber, is associated with a lower risk of all-cause mortality than constant control or standard diet. PREDIMED (Prevención con Dieta Mediterránea) tested random participants for a Mediterranean diet supplemented with either extra virgin olive oil or nuts and performed 30% and 28% cuts, respectively, In the combined end point (MI, stroke, or cardiovascular mortality) respectively, but the improved result was largely driven by a decrease in stroke, with no significant improvement on mortality or control diet for MI.S3.1-1 when predIMED platoon was reanalyzed of post hawk versus provegetarian food pattern (animal, egg, fish, dairy, or meat product versus more vegetable consumption versus animal, egg, fish, dairy, or meat product). A significant mortality reduction (41%) Noted in 2 quintiles with the highest vegetarian score. Comparing plant and animal proteins to S3.1-11 Adventist Health Study-2 Cohort 3.1-10 similarly indicated that the use of meat for protein was associated with a 61% increase in mortality, while replacing meat with nuts and seeds was linked to a 40% reduction in mortality. Similarly, classified risk published by Song et al indicated that the low mortality rate was linked to replacing animal proteins of different origins with plant proteins. S3.1-9 evidence is mixed with regard to the effectiveness of dairy intake to reduce ASCVD risk factors, which is why it is not included in the foods listed for this recommendation. Although the DASH (dietary approach to preventing hypertension) diet, which includes low-fat dairy products, BP, was shown to reduce S3.1-14 and pure (potential urban rural epidemiology) studies indicate that dairy intake was associated with a 23% lower mortality rate, S3.1-31 Song et al. Vegetable protein S3.1-9 indicated an 11% increase in cardiovascular mortality with dairy consumption. Trans and saturated fat is associated with a higher risk of total and cause specific death. S3.1-12 however, observational data from pure testing suggested that, when used instead of refined carbohydrates, saturated and unsaturated fats were associated with lower strokes and mortality. S3.1-13Dietary was found in the sodium reduction dash test to reduce BP and cardiovascular incidence and in TOHP (hypertension prevention testing). NHANES (National Health and Nutrition Examination Survey) S3.1-16 to S3.1-14 data suggest that high consumption of sodium (>2000 mg daily), red meat (>14 g/d), and consumption of sugar-sweetened beverages and processed red meat were associated with cardiovascular death. A potential cohort study of U.S. health professionals indicated with at least 1 risk factor that the replacement of animal proteins (the source of cholesterol, saturated fat, a precursor to hem iron and trimethylmine-n-oxide) was associated with lower heart mortality rates with plant proteins. In that study, plants were associated with a 6% higher mortality rate compared with protein, poultry and fish, dairy with an 8% higher mortality rate, unprocessed red meat with a 12% higher mortality rate, eggs with a 19% higher mortality rate, and red meat processed with a 34% higher mortality rate. Overall, each 3% energy increment of plant protein animal protein was associated with a reduction in mortality by 10% for replacement. Many food products intake has been shown to potentially be harmful or increase the risk of ASCVD. Sugar-sweetened and artificially sweetened beverages have been correlated with an increase in the growth of T2DM and with ASCVD exposure, with 1 daily serving of these sugary beverages with a 20% increase in the frequency of diabetes. in S3.1-18 The cohort study, added at >10% of daily calories is associated with increased sugar consumption mortality. S3.1-19 However, adults who are habitually high consumers of sugar-sweetened beverages and have a replacement strategy that provides a sugary flavor while using low calorie-sweetened beverages such as reducing caloric intake may find it useful in transitions to water. With regard to S3.1-20 (REasons for geographic and racial differences in stroke), S3.1-21 Southern dietary patterns were identified as significantly increasing health risks, including a 56% higher risk of heart disease and a 30% higher risk of stroke. This pattern included more fried food, fat, organ and processed meat, and sugar-sweetened beverages. Consuming a dietS3.1-4 with juice and sugary beverages, refined grains, potatoes/fries, and sweets increased more in coronary incidence than the increase seen with the consumption of animal products. Given the additional risks associated with the intake of these different food products, physicians would well advise individuals about their associated disadvantages and advise them to avoid these foods when possible. In addition, chronic dietary patterns that focus on low intake of carbohydrates and a high intake of animal fats and proteins are associated with increased cardiovascular and noncardiac mortality. S3.1-22-S3.1-24 1 In the meta-analysis, S3.1-23 low-carbohydrate diets were all associated with a 31% higher risk of death due to death, with an increase in cardiovascular mortality. Population data from the ARIC (Atherosclerosis Risk in Communities) study indicated an 18% increase in mortality rates with low carbohydrate diets using animal-derived protein and fat sources (e.g., lamb, beef, pork, chicken), S3.1-22 but plant sources (e.g., vegetables, nuts, peanut butter, whole grain bread) were associated with lower mortality rates. In addition, ARIC investigators noted a 23% increase in mortality associated with a high-carbohydrate diet, with optimal carbohydrate intake observed from 50% to 55%. Trans fat intake has been shown to increase the risk of harmful and ASKVD. Trans fats U.S. health professionals had associated with higher all-cause mortality in the platoon study. S3.1-12, S3.1-17 Additionally, regulations to prevent the use of trans fats in the food industry are associated with stroke reduction and MI.S3.1-25Trans fats have adverse effects on lipids and lipoproteins and promote endothal waste, insulin resistance, inflammation, and arrhythmia. Since partially hydrogenated oils are alternative food additives, their elimination has been a public health priority. S3.1-273.2. Exercise and Physical Activity Many health benefits of body activity have been well established, S3.2-12-S3.2-15 and are a cornerstone of maintaining physical activity and improving cardiovascular health. S3.2-6 Still, nearly half of adults in the United States do not meet Physical activity recommendations. S3.2-12 strategies are needed to increase physical activity at both individual and population levels. S3.2-16, S3.2-17Extensive observation data from meta-analysis and systematic reviews support recommendations for aerobic physical activity to reduce ASKVD risk. S3.2-3-S3.2-8, S3.2-12, S3.2-18, S3.2-19 resistance exercise should also be encouraged due to its many health benefits, including improving physical functioning, improving glycemic control in individuals with S3.2-20 diabetes, S3.2-21 and BP possibly lower. S3.2-22 is unclear whether resistance exercise lowers ASCVD exposure. S3.2-12ARobbic physical activity is generally very safe. However, sedentary individuals starting an exercise program should start exercising at low intensity (e.g., slow walking) and gradually recommended levels on duration and progress. S3.2-24 It is uncertain whether an upper limit of habitual exercise, either in amount or intensity, can have adverse cardiovascular consequences. S3.2-25 But, in discussions with patients, it should be pointed out that these very high levels of physical activity (i.e., >10 times the minimum recommended amount) relate to only a small fraction of the population. S3.2-12 individuals with significant functional impairment may need modifications and more specific guidance on the type, duration and intensity of physical activity. Recommendation-specific adylation in healthcare settings has important complementary roles in promoting increased physical activity in textphysical activity assessment and counseling. S3.2-16 detecting physical activity patterns during a standard clinical journey is the first step toward effective counseling and can be accomplished through several available simple evaluation tools. S3.2-16 The results of these devices can be recorded in electronic health records, along with parameters such as weight and BP. Counseling physical activity by S3.2-16 physicians can result in slight improvement in the level of physical activity, with a person as low as 12 to achieve the recommended physical activity level with the required number to counsel. S3.2-1, S3.2-2 This consultation may include an exercise recipe that includes recommended frequency, intensity, time (duration) and types of exercise. Moderate to vigorous physical activity and incidence ASCVD is a consistent, strong, inverse dose-response relationship between events and death volume. S3.2-3-S3.2-8, S3.2-12 the size of the dose-reaction relationship is curvier, with a moderate amount of exposure when comparing those engaging in low or no physical activity. S3.2-5, S3.2-6, S3.2-12 all adults should engage in at least 150 minutes per week of accumulated moderate intensity aerobic physical activity or at least 150 minutes per week to reduce ascvD exposure (or an equivalent combination of moderate and vigorous activity) of aerobic physical activity. these Other health organizations are in line with people. Short periods of S3.2-26 exercise seem as beneficial as long-term ones (e.g., bouts of ≥10 minutes), S3.2-27, S3.2-28 and thus the focus of physical activity counseling should be on the total accumulated amount. Additional reduction in ASKVD exposure is seen in those achieving high amounts of aerobic physical activity (300 minutes per week or 150 minutes per week of vigorous intensity aerobic physical activity) of moderate intensity aerobic physical activity. S3.2-5, S3.2-6, S3.2-12, S3.2-14 there is a continuation, but further diminishing additive advantage of increasing physical activity to much higher levels. S3.2-5, S3.2-6, S3.2-12 Specific exercise recommendations for heart failure prevention may be slightly different because the dose-response relationship with an increase in physical activity levels may be linear. S3.2-29 likely has no lower limit on the amount of moderate to vigorous physical activity at which ASCVD risks starting to earn profits. S3.2-6 All efforts should be made to promote the achievement of the minimum recommended amount of physical activity by all adults. However, for individuals unable to achieve this minimum, encouraging at least some moderate to vigorous physical activity between passive (i.e., no moderate to vigorous physical activity) or increasing the amount in insufficiently active ones, the possibility of reducing ASKVD risk is still beneficial. S3.2-6 strategies should be implemented to further increase physical activity among those receiving less than the targeted amount. Despite focusing on physical activity with moderate and vigorous intensity, such activity accounts for a smaller proportion of individuals' daily time than other types of activity. Other activity states that include a 24-hour period for an average person include sleep, light intensity physical activity, and sedentary behavior (Figure 1). Sedentary behavior refers to waking behavior with the energy expenditure of ≤1.5 metabolic equivalent in a sitting or tilting currency (Table 4). S3.2-30 increased sedentary behavior is associated with worse health parameters, including cardiometabolic risk factors. S3.2-3, S3.2-9-S3.2-11 Sedentary behavior may be most harmful to ASCVD exposure for individuals who engage in moderate to vigorous physical activity in the least amount. S3.2-3, S3.2-10, S3.2-12 thus, strategies to reduce sedentary behavior, especially those not achieving the current recommended physical activity levels, may be beneficial for reducing ASCVD risk. However, reducing ASCVD risk to reduce sedentary behavior over time or modifying data on value are sparse, and whether replacing sedentary behavior with light intensity activity (e.g., slow walking, light work) is unclear is beneficial for ASCVD prevention. S3.2-31 recommended reducing sedentary behavior are limited by reasonable limitations of strength and specificity and uncertainty about optimal approach Sedentary behaviour. S3.2-30Table 4. Definitions and examples of the different intensities of physical activites are given. 1-1.5 Handling, leaning or lying; Televisionlight1.6-2.9Walking gradually, Cooking, Light HouseworkMororate3.0-5.9 Brik Walking (2.4-4 mph), Biking (5-9 mph), Ballroom Dancing, Active Yoga, Recreational SwimmingVigorous≥6Jogging/Running, Biking (≥10 mph), Tennis Singles, Swimming Lapser 1. Hours spent per day in different states of activity. American adults spend on average >7 h/d in sedentary activities. Replacing sedentary time with other physical activity involves either moderate to vigorous physical activity or an increase in light-intensity physical activity. Modified data from Young et al. S3.2-304. Other factors affecting cardiovascular risk 4.1. Adults with overweight and obesity have increased the availability of affordable, tasty, and high-calorie foods and the lack of many jobs physical demands have fueled the obesity epidemic and resulted in an increase in high blood pressure and T2DM. S4.1-7 adults diagnosed as obese (BMI ≥30kg/m2) or overweight (BMI = 25 to 29.9kg/m2) have increased the risk of ASCVD, heart failure, and atrial fibrillation, compared with those of a normal weight. S4.1-8, S4.1-9 Nutritional aspects of obesity revolve around the principle of balancing caloric intake with caloric expenditure. Following the 2013 guideline for managing overweight and obesity in adults from the AHA, ACC, and Obesity Society (TOS), adults with overweight ≥/≥ are not in the world. Existing clinical guidance strongly recommends face-to-face or telephone-distributed weight-loss maintenance programs that provide regular contact (at least monthly) with a trained intervention to help participants engage in higher levels of physical activity (200 to 300 minutes/week), regularly monitor body weight (at least weekly), and consume low-calorie diets. S4.1-10US Food and Drug Administration (FDA) - Approved Medicinal MedicineS4.1-1, S4.1-11 and Bariatric Surgery, Adjund for S4.1-12 complementary lifestyle interventions, may additionally have a role in weight loss and weight loss for selected patients. The current guideline document mainly focuses on lifestyle interventions for overweight and obesity, as outlined in the 2013 AHA/ACC/TOS Guidelines for Managing Overweight and Obesity in Adults. S4.1-10 weight loss interventions should be applied carefully and especially in older adults, to avoid harmful effects, such as lean body/muscle mass and nutritional deficiencies. S4.1-13-S4.1-15Recommendation-specific auxiliary TextClinically significant weight loss (≥5% initial weight) is associated with moderate improvement in BP, low density lipoprotein (LDL-C), triglyceride, and glucose levels/levels among overweight individuals. S4.1-1 weight loss reduces or delays the development of T2DM in individuals with obesity. S4.1-1, S4.1-16, S4.1-17 High intensity (≥14 sessions in 6 months) Comprehensive weight loss interventions provided by a trained intervention work best. S4.1-10 However, other modalities such as individual feedback and electronically distributed weight loss programs with some commercial-based programs have also shown moderate results. Comprehensive lifestyle intervention is a structured program, which includes regular self-eating intake, physical activity, and weight monitoring. An increase in physical activity, preferably aerobic physical activity (e.g., brisk walking) ≥150 minutes/week (equivalent to ≥30 minutes/day on most days of the week), is recommended for initial weight loss. High levels of S4.1-10 physical activity, around 200 to 300 minutes/week, are recommended to maintain weight loss or reduce gaining weight after 1 year. Adults with obesity are also generally prescribing a diet designed to reduce caloric intake by ≥500 kcal/day from baseline, which can often be achieved by limiting women from 1200 to 1500 kcal/day and 1500 kcal/day for men. S4.1-10 a very low calorie diet (defined as <800 kcal/day) should only be determined by physicians trained in a medical care setting with the patient under limited conditions and only under medical supervision. S4.1-10 weight loss average for comprehensive lifestyle interventions 8 kg (5% to 10% of initial body weight) Production has been shown in the short term (≤6 months) and intermediate periods (6 to 12 months), compared with general care. S4.1-1, S4.1-10 However, prolonged interventions after 1 year are associated with gradual weight gain of 1 or 2 kg/year (on average) compared to normal care. Extensive lifestyle interventions have been shown to improve weight loss of 5% to 10% of initial weight gained through, improvement in BP, delay in the introduction of T2DM, improved glycemic control in T2DM, and improve lipid profile. S4.1-1, S4.1-2Measures include BMI, waist circumference, waist-hip ratio, bio salutation, and dual energy X-ray absorption (DXA) to estimate body fat and quant determine the amount of related health risks. S4.1-18 BMI, waist circumference, and waist-hip ratio are easily measured and therefore most widely used in clinical practice. A USPSTF document found good evidence supporting the use of BMI to identify adults at increased risk of future morbidity and mortality. S4.1-18 Because overweight defined by obesity/BMI is the most studied and standardized approach, we recommend its measurements for primary screening of individuals in need of weight loss. BMI should be interpreted with caution in individuals of Asian ancestry, older adults, and muscle adults. S4.1-19, S4.1-20Inceration Increased cardiometabolic and waist circumference is linked to risk. S4.1-3-S4.1-6 central protopota, captured by using waist ASCVD is associated with risk and can be missed when BMI is used as the only measure of obesity. S4.1-21, S4.1-22 waist circumference measurement BMI recommended in all patients with 6.5%<35kg/m2.s4.1-9,s4.1-19,s4.1-23=ethnic=differences=in=waist=circumference=thresholds=associated=with cardiometabolic=risk=have= been= reported.= waist = circumference = may = be= more = useful = than = bmi = in = persons = with = abdominal = obesity = (central = adiposity).s4.1-24= definitions= of = elevated = waist= circumference= as= ≥40= inches = (≥102= cm= in = men = and = ≥35 = inches = (≥88= cm) = in = women = were = recommended = by = the = 1998 = national = heart, = lung, = and = blood = institute = obesity = initiative = expert = panels4.1-25 = and = were = adopted = by = the = 2013 = aha/acc/tos = writing = committee.s4.1-1 = furthermore, = waist= circumference= assessment= is= needed = for = the = diagnosis= of metabolic = syndrome.= thus, = combining= waist= circumference= and = bmi = may = be= the = best = approach = for= assessing = obesity-related = risk.= counseling= and = comprehensive= lifestyle = interventions , = including = calorie = restriction = and = adjunctive = therapies = (eg, = fda–approved= drugs, = bariatric = surgery), = have = all = been = associated = with = significant = reductions = in = waist = circumference = and = improvement = in cardiometabolic = risk = profiles.s4.1-14.2.= adults = with = type = 2 = diabetes = mellitussee = figure = 2 = for = an = algorithm = for = treatment = of = t2dm = for = primary = prevention = of = cardiovascular = disease.figure = 2.figure = 2.figure = 2.figure = treatment = of = t2dm = for = primary = prevention = of = cardiovascular = disease.= cvd = indicates = cardiovascular = disease;= glp-1r, = glucagon-like= peptide-1= receptor; = hba1c, = hemoglobin= a1c; = =glt-2,= sodium-glucose= cotransporter=2;=and=t2dm,= type=2=diabetes=mellitus.synopsist2dm,= defined= as= a= a= hemoglobin = a1c= (hba1c)=>, A metabolic disorder is characterized by insulin resistance leading to hyperglycemia. Unlike type 1 diabetes mellitus (an autoimmune condition largely unrelated to lifestyle factors), the development and progression of T2DM is significantly influenced by dietary patterns, physical activity, and body weight. Nearly 12% of U.S. adults have diabetes, 90% to 95% of whom have T2DM, with significant asymmetry according to age, gender, race/ethnicity and socioeconoes. S4.2-15 worryingly, more than a third of U.S. adults (≈80 million adults) have prediabetes and are at risk of developing T2DM. S4.2-15* Although contemporary data has shown a significant decrease in ASCVD rates in individuals with T2DM, the S4.2-15 T2DM remains a highly prevalent disease and a major ASCVD risk factor. An aggressive, comprehensive approach to ASCVD risk factor treatment in adults with T2DM reduces ASCVD incidence. S4.2-16 management of cholesterol and hypertension in adults with T2DM is discussed in the respective sections of the current guideline (see Sections 4.3. and 4.4.). Recommendation-specific auxiliary TextA is an important intervention in the treatment of heart-healthy dietary pattern T2DM. Mediterranean, Dash, and Diet has been shown to help all weight loss achievement and improve glycemic control </35></35> Potential peers have demonstrated significantly lower chances of CVD events and CVD death in adults with T2DM that follow a healthy dietary pattern. S4.2-17 However, an RCT targeting aggressive lifestyle interventions in T2DM was unable to show a reduction in ASCVD events despite early success in weight loss. The quality of intake of S4.2-18 carbohydrates is especially important for the control of T2DM, and should be focused on avoiding fiber-rich whole grain intake and refined carbohydrates. Additionally, red meat consumption has been shown to increase the risk of T2DM, and a decrease in red meat intake can improve glycemic control. S4.2-20, S4.2-21 is an essential treatment ingredient for weight loss T2DM, and dietary recommendations should be adjusted to achieve meaningful weight loss, if necessary. Setting up a suitable nutrition plan requires time and effort and is best accomplished with assistance from a registered dietitian-nutritionist or diabetes education program. The introduction of an exercise program for those with T2DM has been shown to improve glycemic control, with a pre-meta-analysis meant hbA1c (7.65% vs. 8.31%). In individuals assigned to an exercise program versus control groups. The combination of S4.2-22 aerobic and resistance training improves glycemic control and facilitates more weight loss than any type of exercise alone. S4.2-3, S4.2-4 Potential Platoon Studies have provided supporting data for the benefits of physical activity in individuals with T2DM, with increased levels of physical activity associated with CVD events and lower rates of CVD death. S4.2-17S remains unclear here to promote physical activity in individuals with T2DM. For older individuals with other comorbidities, a simple walking program can be the norm, while for young, healthy individuals, a variety of activities should be encouraged. In addition to a structured exercise program, a general increase in physical activity throughout the day (e.g., biking to walk, walking or working, avoiding long periods of sitting) should be encouraged. Metformin reduces hepatic glucose production and increases peripheral insulin sensitivity, reducing hyperglycemia in adults with T2MM. In a sub-study of UKPDS (United Kingdom Potential Diabetes Studies), metformin resulted in a 32% reduction in results related to microvascular and macrovascular diabetes compared to traditional therapies (i.e., lifestyle modifications alone), a 39% reduction in MI and a 36% reduction in all-cause mortality. Systematic review and meta-analysis of glucose reduction treatments for S4.2-5 T2DM supported the use of metformin as first-line therapy for T2DM due to its acceptable safety profile and its beneficial effects on low cost, weight, weight, and improved ASCVD results (compared with sulfonylures), as well as its acceptable safety profile. However, a separate systematic review found no evidence Reduce CVD events or CVD deaths with metformin. S4.2-8 Metformin carries a small risk of lactic acidosis and should be used with caution in ckd patients. For young individuals or those with a mildly elevated HbA1c at the time of diagnosis of T2DM, physicians may consider a trial of lifestyle therapy for 3 to 6 months before the reconsideration of metformin. Many classes of drugs have been shown to effectively reduce blood glucose, but ASCVD can or may not affect the risk. However, 2 classes of glucose-reducing drugs have recently been demonstrated to reduce CVD incidence in adults with T2DM and high ASKVD exposure. SGLT-2 inhibitors act in contiguous tubals to increase the urine excretion of glucose and sodium, reducing HB1C, body weight and BP. Three RCTs have shown a significant decrease in ASKVD events and heart failure with the use of SGLT-2 inhibitor. S4.2-9, S4.2-10, S4.2-12 Although most patients studied had established CVD on baseline, heart failure reduction has been shown to expand the primary prevention population. S4.2-12, S4.2-27 GLP-1R agonists increase insulin and glucagon production in the liver, increase glucose uptake in muscles and adipose tissue, and reduce hepatic glucose production. Three GLP-1R agonists have been found to significantly reduce the risk of ASCVD in adults with T2DM who are at high ASCVD risk. S4.2-11, unlike a decrease in heart failure with SGLT-2 inhibitors The benefits of S4.2-13, S4.2-14, GLP-1R agonists have been a decrease in ASKVD incidence, although most of the patients studied had established CVD.In patients with additional risk factors for T2D and CVD, it may be advisable to start these 2 classes of drugs for primary prevention of CVD. Adults with high blood cholesterol recommendations from the 2018 Cholesterol Clinical Practice Guidelines 4.3-1 have been incorporated and adapted below. Summary Primary ASKVD prevention requires attention to ASKVD risk factors starting early in life (Fig 3). The guideline addresses key issues related to cholesterol management and primary ASCVD prevention, which have also been addressed in the recently published 2018 Cholesterol Clinical Practice Guidelines. S4.3-1 Therefore, the relevant subset of those recommendations is presented here, with the helpful text with it. This writing committee agrees that priority should be given to assessing lifelong risk for young adults (aged 20 to 39) and promoting healthy lifestyles. Drug therapy is indicated only in select patients with medium-high LDL-C (≥160 mg/DL) or very high LDL-C (≥190 mg/DL). Askvd exposure of 40 to 75 years of age, 10 years in adults should guide therapeutic considerations. The higher the estimated risk, the higher the chances of the patient benefiting from statin treatment. For patients aged 75 years > risk status and a Patient risk discussion needs to be decided whether to continue or start statins For a detailed discussion of statin safety and management of side effects associated with statins, please refer to Section 5 of the 2018 Cholesterol Clinical Practice Guidelines. S4.3-1Figure 3. Primary prevention. The color corresponds to the class recommended in Table 1. ABI indicates ankle-brachial index; apobe, apolypoprotein B; ASKVD, atherosclerotic heart disease; CAC, coronary artery calcium; CHD, coronary heart disease; HIV, human immunodeficiency virus; HS-CRP, high-sensitivity C-reactive protein; LDL-C, low-density lipoprotein cholesterol; and LP(a), lipoprotein (A). Reproduced with permission from Grundy et al. S4.3-1 Copyright © 2018, American Heart Association, Inc., and American College of Cardiology Foundation. Recommendation in primary prevention-specific auxiliary TextLarge-scale RCTs with moderate intensity performed ASCVD risk reduction of 4.3-6, S4.3-36 and high intensity statin therapyS4.3-7 that outweigh the risks seen. Afterward, a large-scale RCT in an ethnically diverse population confirmed statin benefits from a medium-intensity statin therapy, compared with placebo, in intermediate-risk patients. That RCT enrolled men ≥55 years of age and women with at least 1 cardiovascular risk factor for ≥65 years of age. In the placebo group, the 10-year risk of hard ASKVD was 8.7%, and the risk of extended ASKVD endpoint that included coronary reconducion was 10%. After S4.3-9 5.6 years, those assigned to rosuvastatin 10mg per day showed significant absolute risk reduction in both co-primary end points, with an acceptable safety record. By comparison, after an average follow-up of 1.9 years, high-intensity statin doses of rosuvastin in Jupiter were assigned (justification for the use of statins in prevention: an intervention test evaluating rosuvastin) RCT achieved more LDL-C reductions and more reductions in ASCVD results. S4.3-7 This meta-analyses confirm that the net benefit of LDL-C-less therapy in people at risk is higher with a higher cut in LDL-C. S4.3-2, S4.3-10If, maximum ASCVD risk reduction is desired in terms of risk discussion, it is advisable to use high intensity statins ≥50% to reduce LDL-C. It offers increased benefits, especially when the 10-year ASCVD risk is ≥20%. Jupiter enrolled men ≥50 years of age and women with high sensitivity C-reactive protein values ≥2.0 mg/l and LDL-C<130 mg/DL for the age of ≥60 years. Randomly assigned participants to 20 mg per day of Rosuvastin achieved an average LDL-C reduction of 50% and a decrease in highly significant ASKVD risk over 1.9 years. S4.3-7 importantly achieved the percentage benefit determined the magnitude of ldl-C reduction. The USPTF systematic review of statin therapy in S4.3-29 primary prevention showed a lower risk of all cause and heart mortality and ASCVD events and noted greater absolute advantages in those at greater baseline risk, S4.3-5 consistent with other high quality Reviews and meta-analysis. S4.3-2, S4.3-8, S4.3-35 It underlines the need for aggressive and safe risk reduction in the highest risk groups and the need for follow-up LDL-C testing to determine the adherence and adequacy of the impact of the prescribed statins. S4.3-1most patients aged 40 to 75 years are at intermediate or high risk (PCE ≥7.5% 10-year risk) of ASCVD incidence. S4.3-15, S4.3-16, S4.3-18 4 Double Blind Elementary - Prevention of moderate statin therapy in middle peers in older peers with diabetes in this age range showed significant reductions in RCTs ASCVD events. A meta-analysis of these tests found that moderate intensity statin therapy was associated with a reduction in risk of 25%, S4.3-13, similar to those without diabetes, and with no clear difference in profit between type 1 diabetes mellite and T2M. Therefore, statin therapy of moderate intensity is indicated for primary prevention in patients aged 40 to 75 years with diabetes. Patients with primary severe hypercholeteriomia (LDL-C ≥190 mg/DL [≥4.9 mmol/L]) have a higher risk of ASCVDS4.3-23 and premature and recurring coronary events. Although no randomized, placebo controlled trials of statin therapy have been carried out specifically in subjects with LDL-C ≥190 mg/DL, A placebo-controlled primary prevention study demonstrated in men with a mean baseline LDL-C of 192 ± demonstrated a reduced incidence of MI and cardiovascular death in those receiving 17 mg/DL S4. 3-24 These findings were extended to 2 560 in that RCT, especially in a post-hawk analysis of primary prevention subjects and in long-term follow-up studies after testing after 20 years of observation. S4.3-37 Because medium or high-intensity statins have been shown to reduce ASCVD risk and because high-intensity statins provide a greater ASCVD risk reduction than medium-intensity statins or placebos, S4.3-2 maximum tolerated statin therapy should be administered to patients with LDL-C ≥190 mg/dll. Please refer to the 2018 Cholesterol Guidelines 4.3-1 for recommendations on the use of non-statin treatments in these patients. The incidence of the first ASKVD incidence in patients aged 40 to 75 years with diabetes is linked to increased morbidity and mortality compared to those without diabetes, which places a particularly high premium on primary prevention in persons with diabetes in that age range. Although tests using medium-intensity statin therapy have demonstrated significant benefits in such individuals, residual risks in statin treatment groups in these tests remained high. (For example, 8.5% had major cardiovascular events in 3.8 years). The benefit from S4.3-13 statin therapy is related to both global risk and intensity of treatment, no RCTs of S4.3-2 and high intensity statin therapy have been exclusively in peers of patients with diabetes. These are the things and the fact that there is a high trajectory of lifelong risk based on diabetic patients Those without diabetes do, high-intensity statin therapy is preferred in diabetic patients as they develop risk modifiers (Table 5). Knowledge of risk-enhancing factors (Table 3 in Section 2.2) is useful for all individuals, but especially for people with intermediate risk (ASKVD risk from 7.5% to ≤20%). For example, a family history of premature ASCVD in an RCT, S4.3-38, elevated hsCRP with ≥60 years of age and ASCVD who identified women without benefiting from high-intensity statin therapy. People with primary LDL-C height of ≥160 mg/DL (≥4.1 mmol/L) have lifelong ASCVD risk and benefit from statin therapy. S4.3-33, S4.3-36 increased ASCVD exposure is seen with metabolic syndrome; S4.3-31 including inflammatory disease, psoriasis 4.3-39 and rheumatoid arthritis; And HIV when treated with protease inhibitors. The presence of S4.3-40 risk-enhancing factors may affect the range for statin initiation or intensification. Lipoprotein (A) levels, especially in people with a family history of premature ASCVD, may increase the risk. S4.3-27 However, no available RCT evidence supports lipoprotein (A) levels as a goal of therapy. Triglycerides, the middle primary height of non-HDL-C (Total Cholesterol - HDL-C), and, if measured, apoliprotein B can improve the selection of those at increased ASKVD risk. S4.3-33In adults at intermediate risk, coronary artery calcium measurements may be effective to meaningfully reclassify the risk in a large part of individuals. S4.3-41-S4.3-55 In adults with such intermediate risk, those with coronary artery calcium ≥100 AU or coronary artery calcium ≥75th percentile ASCVD incidence rates for which initiation of statin therapy is justified. Those with coronary artery calcium scores of S4.3-41 zero appear to have a low range of 10-year incidence rates which statin therapy can be of limited value. For those with coronary artery calcium scores of 1 to 99 AU, The 10-year ASCVD incidence rate is 3.8%, 6.5%, and 8.3% for adults from 45 to 54, 55 to 64, and 65 to 74 years old, respectively, indicating that risk reclassification is modest for individuals with coronary artery calcium scores from 1 to 99. Therefore, for patients with coronary artery calcium scores from 1 to 99, it is advisable to repeat the risk discussion. If these patients do not remain treated, repeat coronary artery calcium measurements in 5 years may have some value, but the data are limited. Selected examples of S4.3-56, S4.3-57 candidates who can benefit from knowing that their coronary artery calcium scores are zero are listed in Table 6. Physicians have a family history of patients who have coronary artery calcium scores of zero but who should not reduce the risk in persistent cigarette smokers, have diabetes, have a family history of ASCVD, or, possibly, have chronic inflammatory conditions. In the presence of these conditions, the coronary artery calcium of zero does not rule out the risk of non-social plaque or increased risk of thrombosis. There is also S4.3-58Benefit from statin therapy कम जोखिम वाले व्यक्तियों में। 5% से <7.5% risk= range,= available= generic= statins= are= cost-effective.s4.3-59= nonetheless,= the= challenge= among= those= in= a= lower= ascvd= risk= category= is= to= include= those= who= would= benefit,= yet= avoid= casting= too= wide= a= net,= to= minimize= treating= those= who= would= derive= little= benefit= from= statins.= this= risk= group= benefits= greatly= from= a= clinician–patient= risk= discussion.= clinicians= should= assess= priorities= for= health= care,= perceived= ascvd= risk,= and= prior= risk= reduction= experiences= and= should= use= best= practices= for= communicating= risk= to= arrive= at= a= shared= risk= decision.= the= presence= of= risk-enhancing= factors= is= probably= the= best= indicator= favoring= initiation= of= statin= therapy= (table= 3= in= section= 2.2.). s4.3-60= although= a= coronary= artery= calcium= score= can= be= useful= in= select= individuals,= it= will= be= positive= less= often= in= this= lower-risk= group= than= in= those= with= higher= levels= of= ascvd= risk= and= is= not= recommended= routinely.s4.3-41table= 5.= diabetes-specific= risk= enhancers= that= are= independent= of= other= risk= factors= in= diabetes= mellitusrisk= enhancers= in= diabetic= patientslong= duration= (≥10= years= for= t2dms4.3-61= or= ≥20= years= for= type= 1= diabetes= mellituss4.3-16)albuminuria= ≥30= mcg= albumin/mg= creatinines4.3-62egfr=></7.5%> <60 ml/min/1.73= m2s4.3-62retinopathys4.3-63neuropathys4.3-64abi=></60> <0.9S4.3-65,S4.3-66Table 6.= selected= examples= of= candidates= for= coronary= artery= calcium= measurement= who= might= benefit= from= knowing= their= coronary= artery= calcium= score= is= zerocoronary= artery= calcium= measurement= candidates= who= might= benefit= from= knowing= their= coronary= artery= calcium= score= is= zeropatients= reluctant= to= initiate= statin= who= wish= to= understand= their= risk= and= potential= for= benefit= more= preciselypatients= concerned= about= need= to= reinstitute= statin= therapy= after= discontinuation= for= statin-associated= symptomsolder= patients= (men= 55– 80= y= of= age;= women= 60–80= y= of= age)= with= low= burden= of= risk= factorss4.3-53= who= question= whether= they= would= benefit= from= statin= therapymiddle-aged= adults= (40–55= y= of= age)= with= pce-calculated= 10-year= risk= of= ascvd= 5%= to=></0.9S4.3-65,S4.3-66Table> <7.5% with= factors= that= increase= their= ascvd= risk,= although= they= are= in= a= borderline= risk= group.4.4.= adults= with= high= blood= pressure= or= hypertensionrecommendations= from= the= 2017= hypertension= clinical= practice= guidelines4.4-1= are= adapted= below.synopsisin= the= united= states,= hypertension= accounts= for= more= ascvd= deaths= than= any= other= modifiable= ascvd= risk= factor.s4.4-63= the= prevalence= of= hypertension= (defined= as= systolic= blood= pressure= [sbp]= ≥130= mm= hg= or= diastolic= blood= pressure= [dbp]= ≥80= mm= hg)= us= adults= is= 46%;= is= higher= in= blacks= than= in= whites,= asians,= and= hispanic= americans;= and= increases= dramatically= with= increasing= age.s4.4-64= in= a= meta-analysis= of= 61= prospective= studies,= a= log-linear= association= was= observed= between= sbp= levels=></7.5%> <115 to=>180 मिमी एचजी और डीबीपी के स्तर <75 to 105 mm Hg and risk of ASCVD. S4.4-55 In that analysis, 20–mm Hg higher SBP and 10–mm Hg higher DBP were each associated to= 105= mm= hg= and= risk= of= ascvd.s4.4-55= in= that= analysis,= 20–mm= hg= higher= sbp= and= 10–mm= hg= higher= dbp= were= each= associated=></75 to 105 mm Hg and risk of ASCVD. S4.4-55 In that analysis, 20–mm Hg higher SBP and 10–mm Hg higher DBP were each associated > </115> में उन लोगों के लिए S4.3-35 S4.3-35 Doubling the risk of death from stroke, heart disease, or other vascular disease. The increased risk of ASKVD associated with high SBP and DBP has been reported in the broad age spectrum at the age of 30 to 80 years. Although the relative risk of the event is higher than the CVD associated with SBP and DBP is smaller at older age, the corresponding high BP full risk increase is larger in older persons (≥65 years) given the high full risk of CVD at an older age. See Figure 4 for S4.4-55 BP thresholds and treatment recommendations algorithms and refer to the 2017 Hypertension Clinical Practice Guidelines for comprehensive details. S4.4-1Figure 4. BP thresholds and recommendations for treatment. The color corresponds to the class recommended in Table 1. BP indicates blood pressure; and CVD, heart disease. Customized with permission from Whelton et al. S4.4-1 Copyright © 2017, American College of Cardiology Foundation and American Heart Association, Inc. recommend-specific adjuncive TextNonpharmacological interventions are effective in reducing BP and may be enough to prevent hypertension and achieve target BP in some individuals with hypertension, and they are integral in managing those on anti-hypertension medication. S4.4-2, S4.4-3, S4.4-6, S4.4-9-S4.4,4,S4.4-14, S4.4-15, S4.4-4-4-20, S4.4-24more, have been shown to further combine recommended non-medical interventions to increase the impact on bp reduction. S4.4-65 Nonpharmacological Intervention Preferred therapy for adults with elevated BP and a suitable first-line therapy for adults with Stage 1 hypertension which is an estimated 10-year <10% ASKVD risk. The observance and effect of nonpharmacological therapy should be assessed within 3 to 6 months. See Table 7 for recommended targets and estimated impact on SBP. Meta-analysis and RCT provide evidence for the benefit of BP lowering drugs on ASKVD prevention in adults with medium to high ASKVD risk and SBP ≥130 mm HG or DBP ≥80 mm HG, S4.4-32, S4.4-33, S4.4-36, S4.4-37, S4.4-66 significant results with performance reductions in stroke, heart failure, coronary events, and death. Significant cuts were observed in stroke and all due to SBP <130 mm HG in death and stroke in DBP<80 mm Hg.S4.4-37 Sprint (Systolic Blood Pressure Intervention Test) provides additional support for bp usage at low SBP level of CVD Medicines in patients without ≥130 mm Hg.S4.4-34Antihypertensive drug treatment that is based on overall ASCVD risk evaluation combined with BP levels can prevent more CVD incidences from treatment that is based on BP levels alone. S4.4-67-S4.4-70 These meta-analyses are consistent in concluding that reducing BP results reduces large absolute risk in high-risk individuals, regardless of the specific cause of baseline treated or untreated BP ≥130/80 mm HG and elevated risk. These analyses indicate that the benefits of treatment outweigh Threshold BP ≥130/80 mm Hg.Meta - Analysis and systematic review of tests that report a reduction in standard BP to reduce more acute BP than the damage that reduces more acute BP significantly reduces the risk of stroke, coronary events, major cardiovascular events, and cardiovascular mortality. S4.4-33, S4.4-39, S4.4-47, S4.4-71 achieve an additional 10-mm HG reduction when compared with an average BP of 158/82 143/76 mm HG, 144/85 to 137/81 mm HG, and 134/79 to 125/76 mm HG diabetes mellitus and CKD patients were included in the analysis. Most patients with S4.4-39 CKD have a 10-year ASCVD risk ≥10%, requiring initiation of antihypertensive drug therapy at BP ≥130/80 mm HG. In Sprint, participants with CKD who were random to intensive therapy (SBP targets <120 mm HG) achieved the same beneficial decrease in CVD events and all due mortality rates that were seen among their counterparts without CKD, with no difference seen in major kidney results. S4.4-34 evaluated the impact of other RCTsS4.4-43, S4.4-44 that isolate BP targets on CKD progression in patients with CKD demonstrated no benefit for more intensive BP reduction, though post-Hawk follow-up analysis favored lower targets in patients with more severe proteinuria. S4.4-72 These tests were given less power to detect differences in CVD event rates. Many meta-analyses and systematic reviews support more intensive BP treatment to reduce cardiovascular events but do not demonstrate a decrease in the rate of progression of kidney disease. S4.4-31, S4.4-33, S4.4-39 more intensive BP treatment may result in a slight decrease in the glomerular filtration rate, which is mainly considered due to hemodialymic effects and can be reversible. Electrolyte abnormalities are also more likely during intensive BP treatment. Most adults with diabetes require a 10-year ASCVD risk ≥10%, the initiation of antihypertensive drug therapy in BP ≥130/80 mm HG and a treatment target of <130/80 mm Hg.. Multiple meta-analysis of S4.4-73 RCTs is included in all tests with a difference in BP <130/80 mm HG among those with S4.4,S4.4-71 and diabetes supported reducing BP to 130/80 mm HG. Two meta-analysis RCTs addressing target BP in adults with diabetes mellitus that restrict analysis for randomized patients to different BP levels. The target of S4.4-33, S4.4-47 133/76 mm HG provided significant benefits compared to 140/81 mm HG for BP major cardiovascular events, MI, stroke, albuminuria, and retinopathy progression. In the Agreement in S4.4-33 (Action to Control Cardiovascular Risk in Diabetes) testing, reducing the S4.4-51 bp target (SBP<120 mm HG) did not reduce the overall outcome rate of fatal and non-fatal major heart attacks and was associated with greater risk of adverse events, such as self-reported hypotension and a decrease in estimated gloltular nisphation rates. Secondary analysis of the trial of the agreement a Results performed Intensive BP/standard glycemic group of stroke risk reduction. SBP's relationship with S4.4-74 CVD exposure is the same in SBP levels and in groups that differ in absolute risk levels. Relative risk reduction due to S4.4-55 bp lowering drug therapy is consistent across the full risk range seen in tests, suggesting that relative risk reduction may be the same at lower levels of absolute risk. Indirect support is also provided by evidence from tests using BP reducing drugs to reduce the risk of high levels of BP development. In S4.4-75, S4.4-76 ASHA-3 (Heart Outcome Prevention Assessment-3) BP testing, there was no evidence of short-term gain during the treatment of adults (average age 66 years) with relatively low risk of CVD (3.8% CVD incidence rate during follow-up of 5.6 years). However, subgroup analysis suggested benefits in those with an average SBP>140 mm HG (and a CVD risk of 6.5% during 5.6 years of follow-up). Treatment of high blood pressure patients without S4.4-59product risk has been systematically under-studied as low-risk groups will need long-time follow-up to a sufficient number of clinical events to provide useful outcome data. While clinical trials are evidence that both medication and nondrug therapy will disrupt the progressive course of hypertension, there is no trial evidence that this treatment reduces CVD morbidity and mortality. Clinical trial evidence a target of 140/90 mm HG in this population is the strongest for BP. However, observational studies show that these individuals often have a high lifetime risk and will benefit from BP control earlier in life. S4.4-77Table 7 . Best Proven Non-Anthropological Interventions for Hypertension Prevention and Treatment * Non-Human-Related InterventionsGolprom Effect The weight/body fatbest target of SBPHyperationAnormenmotenarevate is ideal body weight, but aims to reduce body weight by at least 1 kg for most overweight adults. Expect about 1 mm Hg for every 1-kg reduction in body weight.-5 mm Hg-2/3 mm HgS4.4-2Healthy dietDASH dietary pattern†Consume a diet rich in fruits, vegetables, whole grains, and low-fat dairy products, with reduced content of saturated and total fat.-11 mm Hg-3 mm HgS4.4-7, S4.4-8Reduced intake of dietary sodiumDietary sodiumOptimal goal is <1500 mg/d, but aim for at least a 1000-mg/d reduction in most adults.-5/6 mm Hg-2/3 mm HgS4.4-10, S4.4-12Enhanced intake of dietary potassiumDietary potassiumAim for 3500–5000 mg/d, preferably by consumption of a diet rich in potassium.-4/5 mm Hg-2 mm HgS4.4-14Physical activityAerobic90–150 min/wk65%–75% heart rate reserve-5/8 mm Hg-2/4 mm HgS4.4-19, S4.4-20Dynamic resistance90–150 min/wk50%–80% 1 rep maximum6 exercises , 3 sets/exercises, 10 repetition/set-4mm HG-2mm HgS4.4-19Isometric resistance4 × 2 minutes (hand hold), 1 minute rest between exercises, 30%-40% maximum voluntary contraction, 3 wk-5mm HG-4mm HgS4.4-21, S4.4-78Modecation reduces alcohol in persons drinking alcohol: male: ≤2 drinks Daily Female: ≤1 drinks daily-4mm HG-3mm HGS4.4-20, S4.4-24, S4.4-254.5. Treatment of tobacco UseSynopsisTobacco use in the United States is the leading preventable cause of disease, disability and death. S4.5-7 smoking and use of smokeless tobacco (e.g., chewing tobacco) all cause an increased risk of mortality and is a cause of ASCVD. S4.5-4, S4.5-5 secondhand smoke is a cause of ASCVD and stroke, s4.5-6 and nearly a third of CHD deaths are caused by exposure to smoke and secondhand smoke. Even low levels of smoking increase the risk of acute MI; Thus, reducing the number of cigarettes per day does not completely eliminate the risk. S4.5-8 Healthy People 2020 recommends that termination treatment be expanded in clinical care settings, provided to all tobacco users with access to proven termination treatment. S4.5-9 Electronic Nicotine Delivery System (ENDS), often called e-cigarettes, is a new class of S4.5-10 tobacco product that emits fine and aerosol containing ultrafine mites, nicotine, and toxic gases that may increase the risk of cardiovascular and lung diseases. S4.5-11 arrhythmia and hypertension have also been reported with the use of e-cigarettes. S4.5-12 is associated with chronic use oxidative stress and a steady increase in sympathetic stimulation in young, healthy subjects. S4.5-13Recommendation - Based on the U.S. Public Health Service's Clinical Practice Guideline for Treating Specific Auxiliary TextOn Tobacco Use and Dependence, S4.5-14, S4.5-15 USPSTF recommended (grade A) in 2003 and confirmed in 2009 that physicians ask all adults about tobacco use. S4.5-2 treats tobacco use status as an important sign and recording the status of tobacco use in health records in every health care trip not only increases the rate of tobacco treatment, but also improves tobacco restraint. S4.5-15, S4.5-16 includes office-wide screening systems (e.g., chart stickers, computer signs) that can extend vital signal-to-tobacco use status (current, pre, never) to facilitate tobacco termination. S4.5-15 Because many people using tobacco do not report it, using multiple questions to assess the status of tobacco use may improve accuracy and disclosure. For example, physicians should ask, have you smoked any tobacco products in the last 30 days, even a puff? Have you vaped or 'juuled' in the last 30 days, even a puff? Have you used any other tobacco product in the last 30 days? If these questions are answered with yes, the patient is considered the current smoker. Physicians should avoid asking if you are going to smoke? Or do you smoke? Because people are less likely to report tobacco use when asked in this way. S4.5-17Tobacco users 6 months The chances of quitting are high when doctors strongly recommend adults to quit tobacco use when doctors do not give any advice or general care. To help S4.5-2 patients leave, it is serious To use language that is clear and strong, yet compassionate, non-judgemental, and personal, to urge every tobacco user to get out. S4.5-15 for example, the most important thing you can do for your health is to quit tobacco use. I can help (we). Askvd benefits of quitting are immediate. S4.5-18 the best and most effective treatment is those that are acceptable and possible for an individual patient; Physicians should consider the patient's specific medical history and preferences and should offer tailored strategies that provide the best work for the patient. S4.5-3, S4.5-19 In alignment with previous expert consensus about strategies for tobacco cessation, S4.5-19Table 8 briefly recommends behavioral interventions and pharmacotherapy for tobacco treatment. There are 7 FDA-approved cessation drugs, including 5 forms of nicotine replacement. Note that black box warnings about neuropsychiatric events have been removed by the FDA. S4.5-20,4.5-21 Net Benefits of FDA-Tobacco-Cessation Pharmacotherapy and Behavioral Interventions (also just 3 minutes of practical advice), alone or combined, in nonpregnant adults (≥18 years of age) who smoke is sufficient. The net benefit of tobacco cessation on perinatal consequences and behavioral interventions for pregnant women who exercise restraint in smoking smoking is considerable. However, the evidence on pharmacotherapy for tobacco cessation in pregnant women is insufficient; The balance of profit and harms cannot be determined. In hospitalized adults using tobacco, intensive consultation with continuous supportive follow-up contacts is recommended for at least one month after discharge. S4.5-22ENDS is not recommended as a tobacco treatment method. The evidence is unclear about whether the ends are useful or effective for tobacco treatment, and they can be potentially harmful. Evidence on the use of end-of-smoking devices in adults (including pregnant women) and adolescents is insufficient 4.5-23 or limited. S4.5-24 USPSTF recommends that physicians direct tobacco smoking to patients who have other cessation interventions with established effectiveness and safety. Cigarette smoking remains a strong, independent risk factor for ASCVD events and premature death. S4.5-4 Even among older adults, tobacco cessation is beneficial in reducing additional risk. S4.5-5 The risk of heart failure and death for most former smokers is similar to those of smokers never after >15 years of tobacco cessation. In the S4.5-25 National Health Interview survey, smoking was strongly associated with ASCVD in young people after adjusting to several risk factors, S4.5-26 which is why abstinence is recommended from an early age. Tobacco use dependence is a chronic disease that requires highly efficient chronic disease management. It is a reasonable hope that every health system or practice should devote to trained staff for tobacco treatment. Those receiving training in tobacco treatment Professionals are more To ask about tobacco use, to provide advice for quitting, provide behavioral interventions, follow up with individuals, and increase the number of tobacco users who quit. S4.5-1 participants who earn a certificate in tobacco treatment practice demonstrate a nationally recognized level of training and skill acquisition in treating tobacco dependence. s4.5-27 A tobacco treatment specialist is a professional who has the skills, knowledge, and training to be effective, evidence-based interventions for tobacco dependence in a range of near intensity. A list of S4.5-28 accredited tobacco treatment specialist programs is available here: smoke exposure is known to cause CVDS4.5-6 and stroke 4.5-16 in nonsmokers, and this can lead to immediate adverse events. There is no safe limit for exposure to S4.5-30 secondhand smoke. S4.5-31 can also trigger brief exposure to longstanding smoke to an MI.S4.5-30, S4.5-32, even though exposure to longstanding smoke has steadily decreased over time, some subgroups remain exposed to longstanding smoke in homes, vehicles, public places, and workplaces. It is estimated that 41 000 preventable deaths per year result in adult smoking as a result of exposure to old smoke. S4.5-33 The U.S. Department of Housing and Urban Development banned the use of combustible tobacco products in all public housing living units, indoor common areas and public housing agency administrative office buildings, extending from public housing buildings to all outdoor areas up to 25 feet. S4.5-34 Therefore, the current writing committee recommends that physicians advise patients to take precautions against exposure to longstanding smoke and aerosols from all tobacco products, such as smoking restrictions inside all homes and vehicles (including ends) by installing and building all entrances, within 25 feet from windows, and vents. Table 8. Recommended behaviors for prescribing and pharmacotherapy main features of tobacco treatment modalities * Behavior intervention time†<3 min= of = tobacco = status = assessment = with = cessation = counseling = at = each = = encounter = >3-10 minutes of tobacco status evaluation with termination consultation in each clinic encounter > 10 minutes of tobacco status evaluation with termination consultation in each clinic, precautions Nosing PrecautionsNRT*Patch21 mg, 14 mg, or 7 mgStarting Dosage: ≥10 mg for CPD 21 mg; 14 mg for 30 minutes after waking up; <10 cpdlocal= irritation= possible;= avoid= with = skin = disorders; = may = remove= for= sleep= if= neededgum2= mg = or = 4= mgstarting= dose:4= mg = first = tobacco = use = ≤30 = min = after = waking;= 2 = mg = if = first = tobacco = use= is=>Max 20 lozenges or 24 pieces of gum/d.Chew and park gum * hiccups/indigestion possible; Avoid food or beverages 15 minutes before and after useLozenge2 mg or 4 mgNasal spray 10 mg /mLStarting dosage: Dose/H (1 dose = 1 each nostril spray); Maximum 40 doses/dLocal irritation possible; Avoid with nasal or reactive airway disorders </10></3></3> Dosage: Puff for 20 minutes/cartridge every 1-2 hours; Maximum 16 cartridges/dCough possible; Avoid with reactive airway disordersOther§Bupropion (Zyban [GlaxoSmithKline], Wellbutrin SR [GlaxoSmithKline]) 150 mg SR150 mg once daily (am) for 3d; Then 150 mg twice daily; Can use in combination with NRTS4.5-21Avoid with history/tour risk/tour risk. Then 0.5 mg twice daily for 4D; Then take 3-6 monosa mangoes daily for 1 mg (followed by 3-6 Monosa Mango Use Start Pack) with food. Dozing of the kidneys is necessary. Very limited drug interaction; Near-exclusive kidney clearance. 4.6। Aspirin UseSynopsisfor decades, aspirin has been widely administered for ASCVD prevention. By irreversing platelet function, aspirin reduces the risk of atherthrombosis but also increases the risk of bleeding, especially in the gastrointestinal tract. S4.6-11 aspirin is well established for secondary prevention of ASCVDS4.6-12 and is widely recommended for this indication. S4.6-13 However, in primary prevention, the use of aspirin is more controversial. Because individuals without pre-ASCVD are inherently less likely to have a prior history than future ASCVD events, it's more challenging for physicians and patients to balance benefits and harms prophylactic aspirin for primary prevention. This uncertainty is reflected in international guidelines where, for example, aspirin is not recommended in the European guidelines for primary ASCVD prevention 4.6-13, but is recommended in the pre-US guidelines for selected primary prevention for adults who raise the risk of ASCVD on the basis of traditional risk factors. S4.6-14, S4.6-15 adding to this controversy and recent primary prevention tests that, contrary to older trials, are conducted, S4.6-12 has shown lower overall benefits of prophylactic aspirin with coadministration of contemporary ASCVD preventive treatment, such as evidence-based hypertension and cholesterol therapy. To balance the benefits and risks of S4.6-5-S4.6-9, S4.6-17Recommendation-specific auxiliary TextTo, the former U.S. guidelines have recommended only elevated ASCVD risk (for example, as calculated by risk estimates such as PCE or based on the presence of specific ASCVD risk factors). The S4.6-14, S4.6-18 meta-regression analysis of historical tests shows that ASKVD tracks risk quite well with baseline-estimated ASCVD exposure. S4.6-19 In contrast, the risk of bleeding on aspirin is less well correlated with baseline-estimated ASCVD exposure. S4.6-19 (a non-obscure list of scenarios associated with increased risk of bleeding includes: previous gastrointestinal bleeding or peptic ulcer disease or bleeding from other sites, age >70 years, concurrent use of thrombocytopenia, cogulopathy, CKD, and other drugs that increase bleeding risk, such as nonsteroidal anti-inflammatory drugs, Direct oral anticoagulants, and warfarin. In this context, the Post Hawk study of older trials shows that the profit-risk ratio for prophylactic aspirin generally becomes more favorable at an estimated 10%- S4.6-15, S4.6-19 However, the relative benefits of aspirin, especially non-exponential MI and perhaps stroke (with a trend for low mortality) have been less pronounced in more recent tests. S4.6-9, S4.6-16, S4.6-17, S4.6-20 Similarly, in these recent tests, the estimated ASCVD risk typically exceeds the actual risk observed during the follow-up. S4.6-17 These recent figures argue for the lower core for prophylactic aspirin in the current guideline (class AIIB) and the removal of a specific PCE risk threshold as an inclusion criterion for aspirin consideration. These changes instead reflect the need to consider the totality of evidence available for ASCVD exposure [inclusive, where appropriate, risk-enhancing factors, such as the strong family history of premature MI, the inability to achieve lipid or BP or glucose targets, or the significant height in coronary artery calcium scoreS4.6-21] and also to make tailor-made decisions about patient aspiritic asin for patient and physician preferences. Based on the risk factors present, a given patient and his physician may decide that reducing the risk of MI (which is not potentially serious long-term results captured by clinical trials over a period of 5 to 10 years) is worth a slight additional risk of severe bleeding. Recent tests show that the absolute risk for ASCVD events is generally narrowing the difference of relative benefits for bleeding and, although relative damage to aspirin, the number needed to be treated to prevent an ASCVD phenomenon remains lower than the number required for damage caused by bleeding. Others may feel that the benefit of prophylactic aspirin is equal to risk and may instead choose to focus on optimal control of other modified ASCVD risk factors. Therefore, a class IIb recommendation remains more appropriate than a Class III recommendation for adults aged 40 to 70 years. Given the narrow overall balance between the benefits and disadvantages of prophylactic aspirin, the dosage for primary prevention is the limited justification for using aspirin at >100 mg daily. Indeed, meta-analyses show that askvd exposure benefits for low-dose aspirin are equivalent to this for high-dose aspirin, but the risk of bleeding is higher with high-dose aspirin. Recent observational studies inspire future research on the privatization of prophylactic aspirin doses according to patient-specific factors (for example, patient-specific factors, Weight), S4.6-22 Although we note that, especially regarding weight gain, there is no evidence low-dose aspirin was any more effective in low-dose aspirin more recently published Ascend (a study of cardiovascular events iN diabetes) testing, s4.6-16 tested in low-weight individuals than high-weight individuals. Most importantly, recent clinical trials also teach us that low-dose prophylactic aspirin may be the best Among individuals with high ASKVD risk who cannot achieve optimal control of other ASKVD risk factors. Primary prevention S4.6-23prophilic aspirin in adults >70 years of age is potentially harmful and, given the high risk of bleeding in this age group, it is difficult to justify for regular use. S4.6-9 Also, <40 years= of = age, = there = is = insufficient = evidence = to = judge = the = risk –benefit = ratio = of = routine = aspirin = for = the = primary = prevention = of = ascvd.= however, = one = caveat = is = that, although = routine = routine = = use = is = not = recommended = in = these = settings, = there = is = also = insufficient = evidence = to = comment = on = whether there = may = be = select = circumstances = in = physicians = might discuss = prophylactic = with = adults= > </40> <40 years= of = age= or=>70 years of age for adults in terms of other known ASCVD risk factors (for example, A strong family history of

premature MI, inability to achieve lipid or BP or glucose targets, or significant height in coronary artery calcium scores). As estimated from the first recommendation, there is no justification for regular administration of low-dose aspirin for primary prevention of ASKVD among adults at low-estimate ASKVD risk. For example, in a recent coming (a randomized trial of induction vs. pregnant management) testing, the average 10-year ASKVD risk <10%, and = the = overall = benefits = of = prophylactic = aspirin = by= intention-to-treat= were= negligible.s4.s4.6-17the= accumulated = trial= and = observational = data = to = to = date = support = avoiding = prophylactic = = in = the = setting = of = known = risk = factors = for = increased = bleeding = outcomes.s4.6-10= a= nonexhaustive= list= of = conditions= associated = with = increased = bleeding = risk = = a = history = of previous= = gastrointestinal = bleeding = or peptic = ulcer = disease = or = bleeding = at = at = sites, = = age>70 years, Thrombocytopenia, cogulopathy, Concurrent use of CKD, and other drugs that increase bleeding risk, such as non-steroidal anti-drugs, steroids, direct oral anticoagulants, and warfarin. S4.6-105. The growing need to consider cost and price consideration value directly stems from the goal of achieving the best possible health outcomes with finite health resources in the primary prevention of CVD.S5-1Value in health care can be defined as a medical or incremental health benefit of the procedure relative to its incremental net long-term costs. The guideline supports major goals considering cost and value in the development process, including: 1) increasing overall value in the delivery of heart care and 2) involving health professionals in challenging care decisions that should be made to increase value in the U.S. health care system. S5-2 Our national guidelines include the underlying systemic challenges in the integration of price assessments, including: 1) cost variability in various health care settings; 2) Various patients variability in costs and benefits; 3) Variability over time; 4) Variability in those who bear the burden of health outcomes (i.e., </10%; ></40></40>/40> individual patients) versus those who bear the burden of health care costs (for example, often spread to third-party donors, taxpayers beyond the individual); and 5) an inadequate literature basis on which to present a sound, evidence-based assessment of certain specific treatments. S5-1, S5-2 There are additional challenges specific to the scope of prevention. As described in the 2011 AHA policy statement, the value of fundamental and primary prevention in CVD: S5-1Stimresting the value of prevention in healthy patients is more difficult than evaluating therapy for a generally established disease because the time horizon for clinical manifestation of the disease is generally longer- several decades in the young. Thus, it is difficult, perhaps impossible, to assess the long-term effectiveness in terms of survival or quality adjusted life-years (QALYs) or tries to look into a future ahead of growing uncertainty about the consequences. Furthermore, the principle of exemption, which places relative emphasis on current costs and benefits, while reducing drift costs and benefits, creates disadvantages for prevention because costs often accrue at present, while benefits can only be fully felt in the future for a long time. Despite these methodological challenges, the former AHA statements have highlighted public policies, Community efforts and medicinal interventions which are likely to be cost-effective and, at times, cost-saving prevention strategies compared to common benchmarks. For example, strong evidence suggests that antihypertensive therapies S5-3-S5-6 and statin therapy, S5-7-S5-9, are high-value interventions in a wide spectrum of risk and age levels, especially with low-cost generic drug formulations. The inclusion of value range in clinical practice guidelines is one of the many considerations in medical decision making and resource allocation. Physicians, researchers, and policymakers should continue to place cost-effective analysis in reasonable terms, extracting key pricing while fully recognizing challenges in incorporating the characteristic and downstream benefits of a given therapeutic prevention strategy. Further research and methodical progress are needed to comprehensively delin the full spectrum of benefits produced by the prevention approach, making the cost effectiveness assessment more consequent to clinical practice. Conclusion Most ASCVD events are avoidable through fundamental prevention (i.e., prevention of risk factor development) and control of traditional cardiovascular risk factors. Tobacco avoidance is critically important for ASCVD prevention, and should engage most days of the week in regular intensified physical activity for all adults and strive to follow a healthy dietary pattern to help lower future ASCVD risks. Diet high in fruits, vegetables and whole grains is best. Are the favorite sources of fish, legumes, and poultry Reducing the consumption of trans fats, sugars (including sugar-sweetened beverages), red meat, sodium and saturated fats are also important. Physicians should work in partnership with patients to assess their readiness for continuous lifestyle improvements, identify potential barriers to change, and encourage them to continue to try to achieve measurable goals and monitor their progress. S6-1 Finally, social determinants of ASCVD risk - and their impact on the patient's ability to prevent or treat risk factors - must be taken into account. Physicians need to consider patients' health literacy and education levels and assess patients' motivation to improve their lifestyle habits. The goal of the doctor matches the intensity of preventive efforts with a person's absolute risk of future ASCVD event and with the person's willingness and ability to implement preventive strategies. Risk estimates are incomplete and based on group averages that are then applied to individual patients. The doctor should balance an understanding of a patient's estimated ASCVD risk with potential benefits and adverse risks from pharmacological therapy in the context of a risk discussion. To determine the suitability of pharmacological medicine after quantitative risk estimation in cases that are unclear, risk-enhancing factors or selective use of coronary artery calcium measurements may inform decision-making for lowering of cholesterol or antihypertial drug use in intermediate-risk individuals. This primary prevention guideline strives to provide physicians with information they need to help their patients reduce their risk of ASCVD and encourage them to make healthy lifestyle changes if needed. ACC/AHA Task Force memberspatrick T. O.Gara, MD, MACC, FAHA, Chair; Joshua A. Beckman, MD, MS, FAHA, Chair Election; Glenn N. Levine, MD, FACC, FAHA, Immediate Past Chair*; Sana M Al Khatib, MD, MHS, FACC, FAHA; Kim K. Bircher, Pharmd, MS, AACC; Joaquin E. Cigaroa, MD, FACC; Anita Dewal, MD, MPH, FACC, FAHA; Lee A. Fleisher, MD, FACC, FAHA; Federico Gentile, MD, FACC; Zachary D. Goldberger, MD, MS, FACC, FAHA*; Mark A. Hlatky, MD, FACC, FAHA; John Economidis, MD, PhD, FAHA*; Jose A. Jogler, MD, FACC, FAHA; Laura Mauri, MD, MSc, FAHA*; Marian R. Piano, RN, PhD, FAHA; Barbara Riegel, PhD, RN, FAHA*; Duminda N. Wijeysundera, MD, PhDPrepresidents and Staffamerican College of Cardiology. Michael Valentine, MD, FACC, PresidentTimothy W. Attebery, MBA, FACHE, CHIEF Executive OfficerWilliam J. Oetgen, MD, MBA, FACC, Executive Vice President, Science, Education, Quality, and PublicationsMaryAnne Elma, MPH, Senior Director, Science, Education, Quality, and Publications Amelia Scholtz, PhD, Publishing Manager, Science, Education, Quality, and Publishing American College of Cardiology/American Heart AssociationKatherine A. Shihan, PhD, Director Guidelines, Strategy and Operations Senior Manager, Manager, Guidelines Operations American Heart AssociationSivoor Benjamin, MD, FAHA, PresidentNancy Brown, Chief Executive Officer Rose Marie Robertson, MD, FAHA, Chief Science and Medical OfficerGayle R. Whitman, PhD, RN, FAHA, FAHA, FAAN, Senior Vice President, Office of Science, MPH, RN, Science and Medical Consultant, Office of Science Operations, Jody Hundley, Production and Operations Manager, Scientific Publications, Office of Science Operations * An HbA1c optimal screening method, T2DM.* Current member during writing effort with a level ≥ of task force. Footnotes The American Heart Association requests that this document be cited as follows: Arnet DK, Blumenthal RS, Albert MA, Barkar AB, Goldberger ZD, Han EJ, Himmelfab CD, Kheda A, Lloyd-Jones D, McAvoy JW, Michos Ed, Hamida MD, Munoz D, Smith SC Jr., Virani SS, Williams K. 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Specialist peer review of AHA-commissioned documents (e.g., scientific details, clinical practice guidelines, systematic reviews) is conducted by the AHA Office of Science Operations. For more on developing AHA statements and guidelines, visit . Select the Guidelines and Details drop-down menu near the top of the web page, then click Publishing Development. Permissions: Many copies, modifications, changes, enhancements and/or distributions of this document are not permitted without the Express permission of the American Heart Association. Instructions for obtaining permission are located at . A link to the copyright permission request form appears in the second paragraph (.

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Medical Subject Headings (MeSH) TermsKey WordsNutrition and DietSearch since the 2017 review1exp Diet/diet*exp Diet Therapy/cardiovascularHealthy DietcoronaryPrimary Prevention/heartmyocardial infarctionMICVDCHDcerebrovascularstrokemicrovascularmortalityprevent*Obesity and Weight LossSearch since the 2018 review2exp Obesity/obes*exp Weight LossoverweightPrimary Prevention/weightcardiovascularcoronaryheartmyocardial infarctionMICVDCHDcerebrovascularstrokemicrovascularmortalityprevent*Type 2 Diabetes MellitusSearch since the 2015 review3exp Diabetes Mellitus, Type 2/impaired fasting glucosePrediabetic State/impaired glucose toleranceGlucose Intolerance/IfgPrimary Prevention/Igtprediabetes*type 2 diabet*DMcardiovascularcoronaryheartmyocardial infarctionMICVDCHDcerebrovascularstrokemicrovascularmortalityprevent*Tobacco UseSearch since the 2015 review4Smoking/smokingexp Tobacco Use Cessation/cigarette*Tobacco Use Disorder/tobaccoElectronic Cigarettes/nicotinePrimary Prevention/vapevapinge-cigaretteelectronic cigaretteelectronic nicotine delivery system*ENDScardiovascularcoronaryheartmyocardial infarctionMICVDCHDcerebrovascularstrokemicrovascularmortalityprevent*Aspirin UseSearch since the 2016 review5Aspirinaspirinexp Cerebrovascular Disorders/acetylsalicylic acidexp Cardiovascular Diseases/clopidogrelPrimary Prevention/cardiovascularcoronaryheartmyocardial infarctionPrimary Prevention/ The determinants of the healthsearch are limited to English. No date restrictions (held 7/11/2018) Similar article searches were also conducted where potentially highly relevant papers were established, but due to automatic period mapping in PUBMED, Some MeSH conditions may have been employed social determinants of social state of health Assopysal DeprivationCo-based caregivers limited to 1/1/2010-10/14 /2018 (although the first article can be identified through related article searches) Related article searches were also conducted where potentially highly relevant papers were uniquely foundered, but due to automatic period mapping in PUBMED, some MeSH conditions may have been employed employed EdDteamTeam careMultidisciplyte approach Decision makingsearch limited to English, Prevention Primary PreventionCardiovascular Disease, Cholesterol Aspirinmoking Obesity Heart DiseaseAtherosclerosis (although first article can be identified through related article search) related article searches were also conducted where potentially highly relevant papers were specified, BUT DUE TO AUTOMATIC TERM MAPPING PUB INMED, SOME MESH TERMS MAY HAVE BEEN AUTOMATICALLY EMPLOYEDShared decision makingPreventionCardiovascularAtherosclerosisStrokeHeartHypertensionLipidsCholesteroldiabetesExercise & Physical ActivitySearch limits: Not ACP Journal Club OR Summaries for patients OR Editorial OR case-report OR letter OR letter OR abstract OR newspaper article OR comment OR baseline characteristics OR study design OR methodologyTerms to identify clinical trials/SRs/Mas:Filters: Meta-Analysis, Systematic Reviews, Clinical Trial, Controlled Clinical Trial, Randomized Controlled Trial, From 2011/01/01 to 2018/05/25, Humans, English , Adult: 19+ yearsTerms to identify observational studies:2011/01/01/01 to 2018/12/31, Humans, English, Epidemiologic Studies, Case-Control Studies, Cohort Studies, Cross-Sectional Studies, epidemiolog*AND*, case control, cohort stud*, cross sectional, cohort analys*, followup stud*, longitudinal, retrospective, prospective, observational and stud*Filters: Adult: 19+ yearsWaist CircumferenceSearch limited to adult populations, 01/01/2010-10/3/18, English linguistic coronary syndrome acute coronary syndrome angina unstable unstable angina?, angina unstable my Cardiogenicamyocardial infarctionschok cardiogenic shock cardiogenicmyocardial stunningmyocardial stunningno riflo esshar girfectest elevation myocardial infectionste in stenomon-st elevated myocardial Ameem Death/Sudden Cardiac Strokebrine Infarctionbrain Stem InfarctionAl Medullary SyndromeSemicaria Ischemia Dementia Multi-Infection Forfarction Cerebral Artery Infarction Middle Cerebral Rear cerebral artery myocardial revascularization artery artery bypassinternal mammary coronary artery anastomosis angioplasty angioplasty angioplasty transluminal percutanus coronary earheart failure hasapitations? 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Or the result? Or the episode? Risk Scorcoronary Risk Modification Cardiovascular DiseasesCardiovascular or CVDicardiovascular Disease Coronary Disease Coronary Arterial Rogmyological Infection Felich or Chcserbrovascular DisorderSpnia Paraxismaledema Cardiac Appendix 2. Committee Member Employors Spaspinkers Bureauship/Partnerships/Principals Individual ResearchInstitutor, Organizational, or other financial benefits expert Sakshidonna K. Arnett, co-chair of the University of Kentucky College of Public Health-Dean and professor of epidemiology NoneOneRoger S. Blumenthal, co-chairjohns Hopkins University -Professor and director of medicine, Cicaron Center for the Prevention of Heart Diseasesononomche A. Albertucsf School of Medicine - Professor of Medicine and UCSF Nutrition Centernonenandrew B. Berocarfagre Baker Daniel LLP, PartnerAnninonovonzacheri de GoldbergerUniversity of Wisconsin School of Medicine and Public Health-Medicine Associate Professor, Department of Cardiology, Professor and Director of Nonanvanonelan J. Hannuniversity of Nursing College, Breath, Marcia a. Dek NursingAnnoncheril, Professor of Marisia A. Deke NursingOnnonsononacheryl Denison Himmelfon. Associate Dean's Office for Research, Science and Innovation; and Deputy Director, Johns Hopkins Institute for Clinical and Translational ResearchAnononamite Kheraut Western School of Medicine - Professor and Director of Internal Medicine, Preventive Cardiology Programnondonodondonodonodondonold Lloyd-JonsnornWestn University-Eileen M. Folal Professor; Senior Associate Dean for Clinical and Translational Research; chair, preventive medical department; and Director, Clinical and Translational Sciences Institute of Nonnonnoz. William McEvoyNational University of Ireland, Galway Campus - Professor of Preventive Cardiology; National Institute for Preventive Cardiology, Galway-Medical and Research Director; and University Hospital Galway, Ireland - Consultant cardiologist. NoneNoneNonenoneNoneErin D. MichosJohns Hopkins School of Medicine - Associate Professor of Medicine and Associate Director of Preventive Cardiology, Ciccarone Center for Heart Disease Prevention; Johns Hopkins Bloomberg School of Public Health -Associate Professor of Epidemiology NoneOneNoneMichaeld. MiedemaMinneapolis Heart Institute - Research Cardiologist Novonnovanvanonedonnadaniel Munojodirt University Medical Center - Assistant Professor of Medicine, Division of Cardiology, Medical Director for Quality, Vanderbilt Heart and Vascular Institute, and Associate Medical Director, Cardiovascular ICUNonenidney C. Smith JrUniversity of North Carolina, Professor of Chapel Hill-Medicine, Division of CardiologyNoneSalim S. Viranbayler College of Medicine - Professor, Section of Cardiovascular Research and Director for Research, Cardiology Fellowship Training Michael E. DeBakey VA Medical Center - Staff Cardiologist and Investigator, Health Policy, Quality and Information Program, Center for Quality, Effectiveness and Innovations at SafetyNoneNoneKim A. Williams SrRush Medical College - James B. Herrick Professor and Head, Department of Cardiology, Internal MedicineAnnonsonosef Yebohwaque Forest Baptist Health - Associate Professor, Internal Medicine, CardiovascularAnnononanononbonbobbback Gianversity of California Los Angeles/U.S. Department of Veterans Affairs Greater Los Angeles Healthcare System, David Geffen School of Medicine - Assistant Professor 3. Reviewer Revaluation Planned ProspectusPicpers Bureaustip/Partnerships/PrincipalsPersonal ResearchInstitution, Organisational, or other financial benefits specialist SakshiSalriami Peterson Official Reviewer-Ahohospital Affiliations: American Family Children's Hospital; Unitypoint Health- Meriter; UW School of Medicine and Public HealthDepartment of PaediatricsAnnonanononKim K BirtcherOfficial Reviewer - ACC/AHA Task Force Clinical Practice Guidelines on Houston, Pharmacy College, Clinical Professor • Jones and Bartlett LearningNoneNoneone • Accreditation Council for Clinical Lipidology (Other Category) †Nonjay Gandhiahisthener - ACCMetro Health Medical Center Cleveland, Associate Professor Case Western Reserve University School of MedicineVanonen • Cleveland Heart Lab • Juventus • Athersi (Data Safety Monitoring Board) • Tenin (Other Category) Nononandria PriceOfficial Reviewer - ACC Science and Quality Committee Quality Database at Indiana University Health, DirectorNoneNoneNoneNone « ACC * NoneNoneJenn Sanner BeauchampContent Critic - Texas Health Science Center's AHAUniversity, Sizic School of Health Sciences Nursing, Associate ProfessorAnninoVannegalon N. LevineContent Critic - Clinical Practice Guidelines on ACC/AHA Task Force At Baylor College of Medicine in Professor of Medicine • TexasNone • Out of Hospital Cardiopulmonary Arrest 2017 (Defendant)*• Out of Hospital Death 2018 (Defendant) * NonePatrick T. O'GaraContent Reviewer - ACC/A Strategic Planning Instructions for Cardiovascular Division at Brigham and Women's Hospital on Clinical Practice Guidelines on THEHA Task Force • Edwards Scientist (Other †) professor of medicine at Watkins Family Cardiology and professor of medicine at Harvard Medical SchoolNoneNoneNone • Medtronic (Others) • NIH (Other) * NoneNoneJoshua A. BeckmanContent Reviewer - ACC/AHA Task Force on Clinical Practice Guidelines, Vascular Medicine; Professor of Medicine at Vanderbilt University• Aralez Pharmaceuticals*• AstraZeneca Pharmaceuticals*• Janssen Scientific Affairs*• ER Squibb & Sons• Boehringer Ingelheim Pharmaceuticals*• Merck• Sanofi• AstraZeneca PharmaceuticalsNone• Bristol-Myers Squibb*• Bayer (Data Safety Monitoring Board)*• Novartis Corporation (Data Safety Monitoring Board)• Vascular Interventional Advances (Officer, Director, Trustee, or other Fiduciary Role)*• EMX†• JanaCare†NoneNoneAnita DeswalContent Reviewer—ACC/AHA Task Force on Clinical Practice GuidelinesChief, Cardiology, Michael E. DeBakey VA Medical Center & Baylor College of Medicine, Professor, Baylor College of MedicineNoneNoneNone• NIH*• ACC/AHA (Other)• Novartis Corporation (Other)†• AHA Get With The Guidelines Steering Committee (Other)†• Heart Failure Society of America (Other)†• Immediate Past Chair and Member, AHA Committee on Heart Failure and Transplantation (Other)†• NIH (Other)†NoneNoneFederico GentileContent Reviewer—ACC/AHA Task Force Clinical Practice GuidelinesCentro Medico Diagnostico-Director, Cardiovascular Diseaseonovonjosozjose A. Joglercontent Reviewer - ACC/AHA Task Force on Clinical Practice GuidelinesProgram Director, Clinical Cardiac Electrophysiology Fellowship Program; Professor, UT Western Medical Centre, Nononanduminda en VisualSundercontent Reviewer- ACC/AHA Task Force on Clinical Practice Guidelines Associate Professor Anaesthesia, University of TorontoNoneNoneNone • Canadian Institutes of Health Research *• Ministry of Health and Long-Term Care of Ontario (Canada) * • NIH*• PCORI (Data Safety Monitoring Board) †NONE • Canadian Institute of Health

Research (Ottawa, Ontario, Canada) * Eileen M. Handbergcontent Reviewer - ACCResearch Professor of Medicine; Director, Clinical Trial Program; Programme Director, Florida Care, UF Health • Bristol-Myers Squib CompanyOnone • Astrom Biosciences*• Amorst, Inc.*• Biocardia, Inc.*• Brigham and Women's Hospital*• Capricor*• Cytotor Therapeutics, Inc.*• Department of Defense *• Direct Flow Medical*• Duke Clinical Research Institute*• East Carolina University*• Harfit Inc*• Medtronic*• Ink*• Mesoblast Inc*• NIH*• PCORI*• Sanofi Aventis*• Amgen (Others) • AstraZeneca (Others) • Boehringer Ingleheim (Others) • Daiichi Sankyo (Others) • Gilad Sciences, Inc. (Others) • Ionis (Others) • Stasepsa (Others) Nononprem Somconstant Reviewer-Apsocassociation Professor of Medicine (Cardiology), Director, Nuclear Cardiology, UPMC • Alanyam Farmon • American Society of Nuclear Cardiology *• Estellas Pharma US* Nononic Staticcontent Critic - Acassociate Professor of Medicine Division Cardiovascular Medicine School of Medicine, OHSUNoneNone • Hygeia/Desi MD*• American Heart Association*• Medical Research Foundation of Oregon * NoneNoneNNaonemela Morriscontent Critic-ACCProfessor, Medical University South Carolina • Amgen Inc. • Sanofi • Regenronvanononnonnundridge FreemanConter Reviewer - ACCDirecter , clinical cardiology and operations; Co-Director, Nuclear Cardiology, National Jewish Healthnon • Boehringer Ingleheim* Nonononcol J. 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