



Update on Guidelines

2019 ACC/AHA Guideline on the Primary Prevention of Cardiovascular Disease

Circulation recently published the ‘2019 ACC/AHA guideline on the primary prevention of cardiovascular disease: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines’, focusing on the primary prevention of atherosclerotic cardiovascular disease (ASCVD). In addition, it comprises comprehensive, targeted recommendations for team-based care, shared decision-making and assessment of social determinants of health as well as newly generated approach for tobacco use, exercise and physical activity, healthy diet and aspirin use for the prevention of ASCVD. These exhaustive patient-centered guidelines address all aspects of patients’ lifestyle habits and estimated risk of ASCVD event and form the first step in deciding on where there may be a need for pharmacotherapy. The ‘Top 10 Key Take-home Messages for the Primary Prevention of Cardiovascular Disease’ are presented below.

1. Healthy lifestyle

Promoting a healthy lifestyle throughout life is the most crucial way to reduce the risk of atherosclerotic vascular disease, heart failure and atrial fibrillation.

2. Team-based care approach

An effective strategy is a multidisciplinary team-based approach focusing on clinician–patient decisions. Moreover, for the implementation of the preventive strategies, clinicians should consider and evaluate socioeconomic risk factors, such as specific barriers to care, limited health literacy, financial distress, cultural influences and education level.

3. Assessment/Estimation

Adults aged 40–75 years and undergoing evaluation for cardiovascular disease prevention should undergo 10-year ASCVD risk estimation as well as have a clinician–patient risk discussion prior to initiating

pharmacological treatment, such as antihypertensive, statin or aspirin therapy. Additionally, the assessment of other risk-enhancing factors, as well as coronary artery calcium scanning, can help guide decisions about preventive interventions in individuals.

4. Healthy diet

For adults, consumption of a healthy plant-based or Mediterranean-like diet focusing on vegetables, fruits, nuts, whole grains, lean vegetable or animal protein (such as fish) and vegetable fiber is recommended, while the intake of refined carbohydrates, processed meats, *trans* fats and sweetened beverages should be reduced. Additionally, adults who are overweight/obese should undergo counseling and caloric restriction to achieve/maintain weight loss.

5. Physical Activity

The amount of moderate-to-vigorous physical activity and incident ASCVD events/mortality are inversely related. Adults should engage in at least 150 min/week and 75 min/week of accumulated moderate- and vigorous-intensity physical activity, respectively.

6. Diabetes

Lifestyle changes, such as improving dietary habits and achieving exercise, are recommended for adults with type 2 diabetes mellitus. Additionally, other risk factors should be actively identified and treated. With respect to medications, the first-line therapy indicated is metformin; consecutively, sodium-glucose co-transporter 2 inhibitor or glucagon-like peptide-1 receptor agonist may be considered.

7. Tobacco use

All adults must be assessed for tobacco use at every healthcare visit; tobacco users should be assisted and firmly advised to quit. Furthermore, directing to specialists is helpful for behavioral modification, nicotine replacement, and drug treatments.

8. Aspirin use

Because of the lack of net benefit, aspirin should be used infrequently in the routine primary prevention of ASCVD. Low-dose aspirin may be considered for the primary prevention of ASCVD in some high-risk adults (aged 40–70 years) not at increased risk of bleeding. However, low-dose aspirin should not be routinely administered for the primary prevention of ASCVD among adults aged >70 years or in adults with increased bleeding risk.

9. Statin therapy

The first-line treatment for the primary prevention of ASCVD in patients with elevated low-density lipoprotein cholesterol levels (≥ 190 mg/dL), those aged 40–75 years, those with diabetes mellitus and those estimated to be at sufficient ASCVD risk after a clinician–patient risk discussion is statin therapy.

10. Hypertension

Non-pharmacological interventions, such as sodium restriction, potassium supplementation and exercise, are recommended for all adults with hypertension. For those requiring pharmacological therapy, the target blood pressure should generally be <130/80 mmHg.

Arnett DK, Blumenthal RS, Albert MA, Buroker AB, Goldberger ZD, Hahn EJ, et al. 2019 ACC/AHA guideline on the primary prevention of cardiovascular disease: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. Circulation. 2019. doi: 10.1161/CIR.0000000000000678