



Best Practices for Cardiovascular Disease Prevention in People with Type 2 Diabetes



The ADA's *Standards of Care in Diabetes—2023*

The American Diabetes Association® (ADA) recommends a multifactorial approach to reducing cardiovascular risk. Management of glycemia, blood pressure and lipids and the use of drug therapies with cardiovascular and kidney benefits are the pillars of risk reduction, on a foundation of lifestyle modification and diabetes education.

Lifestyle Management

Lifestyle modifications should be implemented as needed to manage weight and to incorporate dietary adjustments to manage hypertension and/or dyslipidemia. Specific dietary changes depending on patients' needs may include:

- Adopting a Dietary Approaches to Stop Hypertension (DASH) or Mediterranean-style eating pattern
- Reducing sodium, increasing potassium intake and moderating alcohol intake, for blood pressure management
- Reducing saturated and trans fats and increasing n-3 fatty acids, viscous fiber and plant stanols/sterols for lipid control

Moderate-intensity physical activity should be incorporated with a goal of ≥ 150 minutes/week to promote healthy weight loss and help to manage glucose, blood pressure and lipid levels.

Medications for Glucose, Blood Pressure and Lipid Management

Type 2 Diabetes	Hypertension	Dyslipidemia
<ul style="list-style-type: none"> • Choose antihyperglycemic medications based on person-centered factors, including risk for or presence of comorbidities, individualized treatment goals and preferences, as well as drug efficacy, hypoglycemia risk, weight effects, cost/availability and potential side effects. • In people with high risk of atherosclerotic cardiovascular disease (ASCVD), treatment should include agents that reduce cardiorenal risk. • Use a sodium–glucose cotransporter 2 (SGLT2) inhibitor and/or glucagon-like peptide 1 (GLP-1) receptor agonist with demonstrated cardiovascular benefit for glucose-lowering and cardiovascular risk reduction independent of A1C. 	<ul style="list-style-type: none"> • Treat blood pressure that is persistently >130/80 mmHg with one or more antihypertensive agents based on initial blood pressure and intensified based on treatment response. Agents may include an ACE inhibitor/angiotensin receptor blocker, calcium channel blocker and/or diuretic, with the eventual addition of finerenone if needed to attain a target of <130/80 mmHg (individualized based on patients’ characteristics and preferences). 	<ul style="list-style-type: none"> • Statin therapy for primary prevention should be included as follows: <ul style="list-style-type: none"> ○ Consider a moderate-intensity statin for people <40 years of age with other ASCVD risk factors. ○ Prescribe a moderate-intensity statin for people 40–75 years of age with no ASCVD. ○ Prescribe a high-intensity statin for people 40–75 years of age with high ASCVD risk with an LDL cholesterol target of <70 mg/dL. • For secondary prevention in all age groups, prescribe a high-intensity statin with an LDL cholesterol target of <55 mg/dL. • People taking high-intensity statins for either primary or secondary prevention may also require ezetimibe or a PCSK9 inhibitor to reach their LDL cholesterol target.

Antiplatelet Agents

Aspirin should be prescribed (75–162 mg/day) for secondary prevention in all people with type 2 diabetes and a history of ASCVD. Clopidogrel (75 mg/day) is an alternative for those who are allergic to aspirin. For primary prevention, aspirin therapy may be considered for people with diabetes and increased cardiovascular risk, after discussion of the benefits versus the comparable risk of bleeding.



ACC/AHA Guidelines for Primary Prevention in People with Diabetes

The American College of Cardiology (ACC) and American Heart Association (AHA) recommend the following strategies to prevent ASCVD in people with type 2 diabetes:

- An individually tailored heart-healthy eating pattern that avoids saturated and trans fats and reduces cholesterol, sodium and/or refined carbohydrates as needed
- Moderate-intensity physical activity for ≥ 150 minutes/week or vigorous-intensity physical activity for ≥ 75 minutes/week

Glucose-Lowering Medication	Statin Therapy	Antihypertensive Treatment
<ul style="list-style-type: none"> • Metformin as first-line glucose-lowering therapy along with lifestyle modifications • Initiation of an SGLT2 inhibitor or a GLP-1 receptor agonist for patients who have additional ASCVD risk factors and a need for additional glucose-lowering beyond metformin therapy and lifestyle modification 	<ul style="list-style-type: none"> • For all adults with high blood cholesterol, with treatment intensity based on estimated 10-year ASCVD risk and/or initial LDL cholesterol level • Moderate-intensity statin for all individuals 40–75 years of age with diabetes • High-intensity statin for people with diabetes and multiple ASCVD risk factors with a target of $\geq 50\%$ reduction in LDL cholesterol 	<ul style="list-style-type: none"> • For all adults with high blood pressure, with treatment strategy based on 10-year ASCVD risk, initial blood pressure and/or comorbidities • For people with diabetes and blood pressure $> 130/80$ mmHg, treatment to a target of $< 130/80$ mmHg

- Consideration of aspirin therapy (75–100 mg/day) for primary prevention of ASCVD in select adults who are 40–70 years of age and have higher ASCVD risk but no increased bleeding risk.

Synthesizing and Applying the Guidelines in Clinical Practice

Both guidelines emphasize lifestyle modification, with similar nutrition and physical activity recommendations. Both also emphasize the need to manage glucose, blood pressure and lipids.

For glucose-lowering, the ACC/AHA recommends metformin as first-line pharmacotherapy, whereas the ADA calls for initial drug selection based on person-centered factors. The ACC/AHA recommends adding an SGLT2 inhibitor or GLP-1 receptor agonist to metformin for people with high ASCVD risk who need additional glucose-lowering, whereas the ADA recommends using these agents in all high-risk individuals with diabetes independent of A1C.

Ultimately, clinical judgment, informed by both guidelines, will determine the best strategy for each patient.

References

Arnett DK, Blumenthal RS, Albert MA, et al. ACC/AHA guideline on the primary prevention of cardiovascular disease: executive summary. A report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. *J Am Coll Cardiol* 2019;74:1376–1414

ElSayed NA, Aleppo G, Aroda VR, et al.; American Diabetes Association. 10. Cardiovascular disease and risk management: Standards of Care in Diabetes—2023. *Diabetes Care* 2023;46(Suppl. 1):S158–S190