Measure lipid levels

LIFES ESSENTIAL 8 TO PREVENT CARDIOVASCULAR DISEASE

The American Heart Association (AHA) has identified eight simple measures (“Life’s Essential 8”) to prevent cardiovascular disease.1,2

Life’s Essential 8: Updating and Enhancing the American Heart Association’s Construct of Cardiovascular Health: A Presidential Advisory From the American Heart Association

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

Measure height, weight, waist circumference

Calculating body mass index (BMI) is recommended annually or more frequently to identify adults with overweight or obesity for weight loss considerations. It is reasonable to measure waist circumference to identify those at higher cardiometabolic risk.

Measure blood pressure

Nonpharmacologic interventions are recommended for all adults with elevated blood pressure or hypertension and cardiovascular disease. For those requiring pharmacologic therapy, the target blood pressure should generally be less than 130/80 mmHg.

Measure A1C

Statin therapy is a first-line treatment for primary ASCVD prevention in
- Those with diabetes who are 40–75 years of age.
- Patients with elevated LDL-C levels (≥190 mg/dL).
- Those at sufficient ASCVD risk following a clinician-patient risk discussion.
- Exzeme or PCSK9i may be indicated for those with ASCVD where LDL-C remains >70 mg/dL on maximally tolerated statin.

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Assess tobacco use

All adults should be asked at every visit for tobacco use, and those who use tobacco should be assisted and strongly advised to quit. Referral to specialists is helpful for both behavioral modification, nicotine replacement, and drug treatments.

Assess physical activity level

Adults should engage in at least 150 minutes per week of accumulated moderate intensity or 75 minutes per week of vigorous intensity physical activity.

Assess dietary pattern

All adults should consume a healthy diet that emphasizes the intake of vegetables, fruits, nuts, whole grains, lean vegetable or animal protein, and fish and minimizes the intake of trans fats, processed meats, refined carbohydrates, and sweetened beverages.

Assess sleep pattern

Most adults need 7-9 hours of sleep each night.

LIPID LOWERING THERAPY RECOMMENDATIONS FOR PERSONS WITH TYPE 2 DIABETES

In adults 40 to 75 years of age with diabetes mellitus, regardless of estimated 10-year ASCVD risk, modest-intensity statin therapy is indicated (S4.3-1—S4.3-9).

In adults 40 to 75 years of age with diabetes mellitus and an LDL-C level of 70 to 189 mg/dL, (1.7 to 4.8 mmol/L), it is reasonable to assess the 10-year risk of a first ASCVD event by using the race and sex-specific Pooled Cohort Equations to help stratify ASCVD risk (S4.3-10, S4.3-11).

In adults with diabetes mellitus who have multiple ASCVD risk factors, it is reasonable to prescribe high-intensity statin therapy with the aim to reduce LDL-C levels by 50% or more (S4.3-12, S4.3-13).

In adults older than 75 years of age with diabetes mellitus and who are already on statin therapy, it is reasonable to continue statin therapy (S4.3-5, S4.3-8, S4.3-13).

In adults with diabetes mellitus and 10-year ASCVD risk of 20% or higher, it may be reasonable to add ezetimibe to maximally tolerated statin therapy to reduce LDL-C levels by 50% or more (S4.3-14, S4.3-15).

In adults older than 75 years with diabetes mellitus, it may be reasonable to initiate statin therapy after a clinician-patient discussion of potential benefits and risks (S4.3-5, S4.3-8, S4.3-13).

In adults 20 to 39 years of age with diabetes mellitus that is either of long duration (≥10 years of type 2 diabetes mellitus, ≥20 years of type 1 diabetes mellitus), albuminuria (230 mg of albumin/mg creatinine), estimated glomerular filtration rate (eGFR) less than 60 mL/min/1.73 m2, retinopathy, neuropathy, or ABI <0.9, it may be reasonable to initiate statin therapy (S4.3-5, S4.3-6, S4.3-8–S4.3-25).

In adults with ASCVD, where LDL-C remains >70 mg/dL while on maximally tolerated statin therapy, ezetimibe can be added and for those at very high risk a PCSK9i.

ASCVD RISK CALCULATOR

The assessment of ASCVD risk remains the foundation of primary prevention. The purpose of the ASCVD Risk Calculator is to estimate a patient’s 10-year ASCVD risk at the index visit for cardiovascular disease and hypertension prevention. ACC/AHA guidelines recommend the use of the PCE as an important starting point, not as the final arbiter, for decision-making in primary prevention of ASCVD.1

Adults who are 40 to 75 years of age and are being evaluated for cardiovascular disease prevention should undergo a 10-year atherosclerotic cardiovascular disease (ASCVD) risk estimation and have a clinician-patient risk discussion before starting on pharmacological therapy, such as antihypertensive therapy, a statin, or aspirin. ACC/AHA 2018 Cholesterol Guidelines and 2017 Hypertension Guidelines recommend the use of quantitative 10-year risk assessment, based on measurement of traditional ASCVD risk factors and with use of a validated risk prediction tool, as the first step in considering treatment options for primary prevention.

ASCVD Risk Calculator: KnowDiabetesbyHeart.org/RiskCalc

Measure height, weight, waist circumference

Age, sex, race

Measure blood pressure

(systolic blood pressure)

Measure lipid levels

Determine diabetes status

Assess tobacco use (smoking status)
Approaches to management of glycemia in adults with type 2 diabetes, with the goal of reducing complications and maintaining quality of life in the context of comprehensive cardiovascular risk management and patient-centered care. The principles of how this can be achieved are summarized and underpin the approach to management and care. These recommendations are not generally applicable to patients with monogenic diabetes, secondary diabetes, or type 1 diabetes, or to children.

**Goals of Care**
- Prevent complications
- Optimize quality of life

**Decisions Cycle for Patient-Centered Glycemic Management in Type 2 Diabetes**

**Review and Agree on Management Plan**
- Review management plan
- Mutual agreement on change
- Ensure agreed modification of therapy is implemented in a timely fashion to avoid clinical inertia
- Ensure cycle-understanding is real (at least once a year)

**Implement Management Plan**
- Patients not meeting goals generally should use all 3 months of 3 months walking as a means to improve glycemic status
- Individual needs including BMI, weight, they want & can, blood pressure, lifestyle

**Assess Key Patient Characteristics**
- General health
- Comorbidities, i.e., ASCVD, CKD, HF
- Clinical characteristics, i.e., age, BMI, weight
- Issues such as motivation and depression
- Cultural and socioeconomic context

**Consider Specific Factors That Impact Choice of Treatment**
- Individualized HbA1c target
- Impact on weight and lipids
- Side effect profile of medication
- Complexity of regimen, i.e., frequency, mode of administration
- Choice to optimize adherence and persistence
- Access, cost, and availability of medication

**Shared Decision-Making to Create a Management Plan**
- Involves an educated and informed patient (and their family/caregiver)
- Seeks patient preferences
- Effective communication includes motivational interviewing, goal-setting, and shared decision-making
- Empowers the patient
- Ensures access to DSMES

**Pharmacologic Treatment of Hyperglycemia in Adults with Type 2 Diabetes**

**First-Line Therapy** depends on comorbidities, patient-centered treatment factors, including cost and access considerations, and management needs generally includes metformin and comprehensive lifestyle modifications.

**ASCVD/Indicators of High Risk, HF, CKD**

**Recommend Independently of Baseline AIC, Individualized AIC Target, or Metformin Use**

**ASCD/Indicators of High Risk**
- Age > 45 years
- Multiple risk factors
- Younger age
- History of diabetes in first-degree relatives

**+HF**
- History of chronic heart failure or cerebrovascular disease

**+CKD**
- GFR < 60 mL/min/1.73 m²
- Proteinuria</p>

**IF A1C Above Target**
- Consider additional comorbidities, patient-centered treatment factors, and management needs in choice of therapy, as below:

**Minimize Hypoglycemia**
- Select a glucose-lowering agent that can be effective in reducing A1C progression in CKD
- GLP-1 may be needed in patients with CKD without evidence of reducing A1C progression in CKGs
- GLP-1 may be needed in patients with CKD with evidence of reducing A1C progression in CKGs

**Minimize Weight Gain/Promote Weight Loss**
- For patients on a GLP-1RA, consider incorporating SGLT2Is and/or insulin
- For patients on a GLP-1RA, consider incorporating SGLT2Is and/or insulin

**Consider Cost and Access**
- Available in generic form at lower cost
- Certain insulin/medication may be available at the lowest acquisition cost

**CHRONIC KIDNEY DISEASE SCREENING**

At least annually, urinary albumin (e.g., spot urine albumin-to-creatinine ratio) and estimated glomerular filtration rate should be assessed in patients with type 1 diabetes with duration of ≥ 5 years and in all patients with type 2 diabetes regardless of treatment.

Patients with diabetes and urinary albumin ≥ 300 mg/g creatinine and/or an estimated glomerular filtration rate 30–60 mL/min/1.73 m² should be monitored twice annually to guide therapy.

Visit KnowDiabetesByHeart.org/Professional/Guidelines/ for more information.

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