

Strategies to help patients stay heart-healthy

Many type 2 diabetes patients seem to be unaware of—or at least underestimate—their risk for cardiovascular disease (CVD). At least half of patients fail to reach treatment targets for A1C, blood pressure and LDL cholesterol.¹ What’s more, researchers have found an “alarmingly low” adherence rate for high-risk diabetes patients who are prescribed statins and/or ACE inhibitors: Only 34% are fully compliant with treatment—and they have significantly lower rates of major cardiac events versus patients who are non-compliant.²

The low adherence is particularly worrisome since research shows that T2DM patients with high CV risk factors can expect a reduced life expectancy of up to 12 years or greater.³ “We’ve known for a long time that a patient with diabetes has as much cardiovascular disease risk as a nondiabetic patient who’s had a single heart attack. And this realization has fueled a lot of research over the last 10 years,” notes Suneil Koliwad, MD, assistant professor of medicine and a chair of diabetes research at the University of California-San Francisco Diabetes Center. “I think six or seven years ago the focus for diabetes management was primarily on glucose control...but now we know that if you want to prevent heart disease, you have to control diabetes *and* the cardiovascular risk factors.”

AACE guidelines offer an evidenced-based approach

In light of this, the American Association of Clinical Endocrinologists (AACE) 2017 guidelines for managing type 2 diabetes

underscore the need for aggressive management of cardiovascular risks. In particular, the guidelines stress the importance of lipid management as well as keeping blood pressure at goal. For most type 2 diabetes patients, the AACE recommends a target blood pressure below 130/80, while lipid targets are based on a patient’s specific risk profile (see Table 1 on the opposite page).⁴

Matthew A. Cavender, MD, assistant professor of medicine at the University of North Carolina, Chapel Hill, reiterates that diabetes management is not only about controlling blood sugar but also instituting a plan of action that includes providers across several specialties—such as primary care practitioners, cardiologists, diabetes educators and registered dietitians—to keep patients as heart-healthy as possible. Yet this can be challenging, concedes Dr. Cavender: “Patients with type 2 diabetes have trouble adhering to their often complex medication regimens, let alone attempting to keep up with preventative therapy.”

One such therapy, a statin to lower LDL cholesterol, is recommended for the majority of patients with type 2 diabetes. To help practitioners decide on the optimal treatment plan, the AACE has issued new guidelines specifically for managing dyslipidemia, which stress the need to control LDL cholesterol and also set treatment targets.⁵ Ultimately, the AACE hopes to drive home the importance of managing cardiovascular disease risks aggressively—and also make it a natural part of ongoing type 2 diabetes care. Here, experts offer strategies to consider.

Table 1. AACE risk categories and lipid treatment goals for patients with T2DM

RISK CATEGORY	RISK FACTORS*/10-YEAR RISK	LDL-C (mg/dL)	Non-HDL-C (mg/dL)	Apo B (mg/dL)
Extreme risk	<ul style="list-style-type: none"> Progressive atherosclerotic CVD including unstable angina in patients after achieving an LDL-C <70 mg/dL Established clinical cardiovascular disease in patients with T2DM, chronic kidney disease 3/4, or familial hypercholesterolemia History of premature atherosclerotic CVD (<55 male, <65 female) 	<55	<80	<70
Very high risk	<ul style="list-style-type: none"> Established or recent hospitalization for acute coronary syndrome, coronary, carotid or peripheral vascular disease, 10-year risk >20% Diabetes or chronic kidney disease 3/4 with 1 or more risk factor(s) Familial hypercholesterolemia 	<70	<100	<80
High risk	<ul style="list-style-type: none"> ≥2 risk factors and 10-year risk 10-20% Diabetes or chronic kidney disease 3/4 with no other risk factors 	<100	<130	<90
Moderate risk	≤2 risk factors and 10-year risk <10%	<100	<130	<90
Low risk	0 risk factors	<130	<160	Not recommended

*Major CVD risk factors are high LDL-C, polycystic ovary syndrome, cigarette smoking, blood pressure ≥140/90 or on BP medication, low HDL-C (<40), family history of coronary artery disease, chronic kidney disease stage 3/4, evidence of coronary artery calcification and age (men ≥45; women ≥55). Adapted from Garber et al. *Endocr Pract.* 2017;23:207-238. See full AACE guidelines for complete recommendations.

• **Calculate a patient’s 10-year risk.** Dr. Koliwad uses a two-step process: “First, I phenotype my patient as carefully as possible, taking into consideration their family history, their body shape and weight, their ethnicity, and the presence or absence of other features most associated with diabetes and its consequences,” he says.

“The second step is to access an online risk calculator, and input the data to get a 10- or 20-year cardiovascular disease risk assessment profile,” Dr. Koliwad says, who recommends using *cvriskcalculator.com*. “That information can go in the person’s chart and be used as talking points during exams.”

• **Individualize targets.** Once you’ve established CVD risk, says Dr. Koliwad, the next

thing to do is optimize pharmacotherapy, including cholesterol and blood pressure medications, depending on “the intensity of control you want for that particular patient in alignment with their risk,” he says. For example, the AACE guidelines include an “extreme risk” category for T2DM patients with established CVD, with correspondingly low LDL targets (less than 55 mg/dL) vs. a looser target of less than 100 mg/dL for T2DM patients with no other cardiovascular risk factors. Fortunately, getting LDL to an acceptable level is now easier with the advent of newer drugs such as PCSK9 inhibitors, which help lower LDL when other therapies fail. Also, adding ezetimibe to a statin can potentially enhance the cholesterol-lowering benefit of statin therapy.⁶ ▶

Statin therapy: How to maximize the benefits

Encouraging eligible diabetes patients to take a statin is crucial. Here, experts offer insight on how to make the most of this valuable cholesterol-lowering treatment.

- **Measure LDL improvement as a percentage.** “The goal is to reduce LDL by 30% to 50% regardless of the baseline number,” explains Om P. Ganda, MD, director of the Lipid Clinic at Joslin Diabetes Center. “So even if the patient has an LDL of, say, 80 or 90 [considered a “good” number for nondiabetic patients], he or she still needs a medium-dose statin to lower it by 30%—and for any patient who also has hypertension or smokes, it’s better to get it down by 50%.”
- **Help patients understand their lipid goals.** “Many patients are focused on their total cholesterol level so I review the importance of looking at the different lipid components—LDL, HDL, triglycerides—as well as stratifying each patient based on his or her personal risk factors,” says New York-based endocrinologist Rachel Pessah-Pollack, MD.
- **Don’t give up on statin-resistant patients.** “Some physicians may try just one or two drugs, or don’t use a high enough dose,” notes Dr. Ganda. “Or patients can have side effects on one drug but may not on another. I try all options, because less than 1% of patients are truly intolerant.” For particularly intolerant cases, Dr. Ganda suggests consulting resources at the National Lipid Association (see lipid.org).

• **Zero in on tobacco use.** Lifestyle changes—eating a low-sodium diet, losing weight, increasing physical activity—are the cornerstone of managing cardiovascular risks. However, smoking cessation is key, says Steven Nissen, MD, chair of the department of cardiovascular medicine at Cleveland Clinic. “A patient who smokes negates any effort he or she makes to implement diet and exercise changes,” he notes. While gradual changes are often recommended when making dietary changes, a stepwise approach may backfire when it comes to kicking tobacco. A study found that quitting smoking abruptly (i.e., “cold turkey”) was more likely to result in lasting abstinence than cutting down first, even for smokers who initially preferred gradual reduction.⁷ Medications used for smoking-cessation therapy are also effective.⁸ However, nicotine replacement products such as patches and electronic cigarettes don’t appear to be helpful: Because they still contain nicotine, these products are just as likely to raise A1C levels as cigarettes.⁹

• **Empower patients with achievable goals.** Some patients may fail to address issues like hypertension because it seems less important than their diabetes. “I empower my patients to modify their risks on a daily basis,” says Rachel Pessah-Pollack, MD, a clinical assistant professor at New York’s Icahn School of Medicine at Mount Sinai. “For example, in patients with mildly elevated blood pressure, we review the DASH diet and how to limit sodium intake and increase potassium intake, as well as increase physical activity.” For simple patient tools that help explain this eating plan, see dashdiet.org.

Another example: “If patients are overweight or obese, I encourage them to keep a log of their food intake and consider meeting with a dietitian. I also calculate their body mass index and help determine a reasonable weight goal,” she says. “Then I see patients in three months to assess if they’re moving forward. After three months of lifestyle modifications, they often have lower numbers and can see the result of their hard work.”

• **Be mindful of their regimen.** Ironically, certain blood pressure medications, notably beta-blockers, are associated with weight gain. If this occurs, consider trying a different antihypertensive class. Also, stress that eating a low-salt diet and increasing physical activity can help patients to avoid, or at least minimize, potential weight gain. In addition, caution is advised when using drugs such as TZDs and sulfonylureas that are associated with an increased risk of heart failure.

• **Set goals for postprandial glucose.** Dr. Nissen cautions that providers may base therapy adjustments on fasting blood sugars while potentially overlooking postprandial levels. However, two-hour postload glucose (≥ 7.8) may be a better predictor of CV events in patients with coronary artery disease than fasting plasma glucose and A1C, notes a study in *Diabetes Care*.¹⁰

• **Identify obstacles and personalize the solutions.** “When you consider all the environmental factors that can affect risk, one thing stands out: There are environmental disparities across the population,” says Dr. Koliwad. “For example, the challenge could be nutritional—a person lives in a food desert, so they’re forced into consuming a diet that is unhealthy. It’s important to identify this up front, because maybe they qualify for voucher programs or similar social benefits.”

• **Help them build a care team.** Dr. Cavender encourages his patients to work with professionals across several specialties, including cardiologist. Also, referring patients to allied health professionals can help fill educational gaps and keep patients on track. For example, studies have found that pharmacist intervention improves patient compliance with cholesterol and blood pressure medications.^{11,12} 

—Susan Sloane, RPh, CDE

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