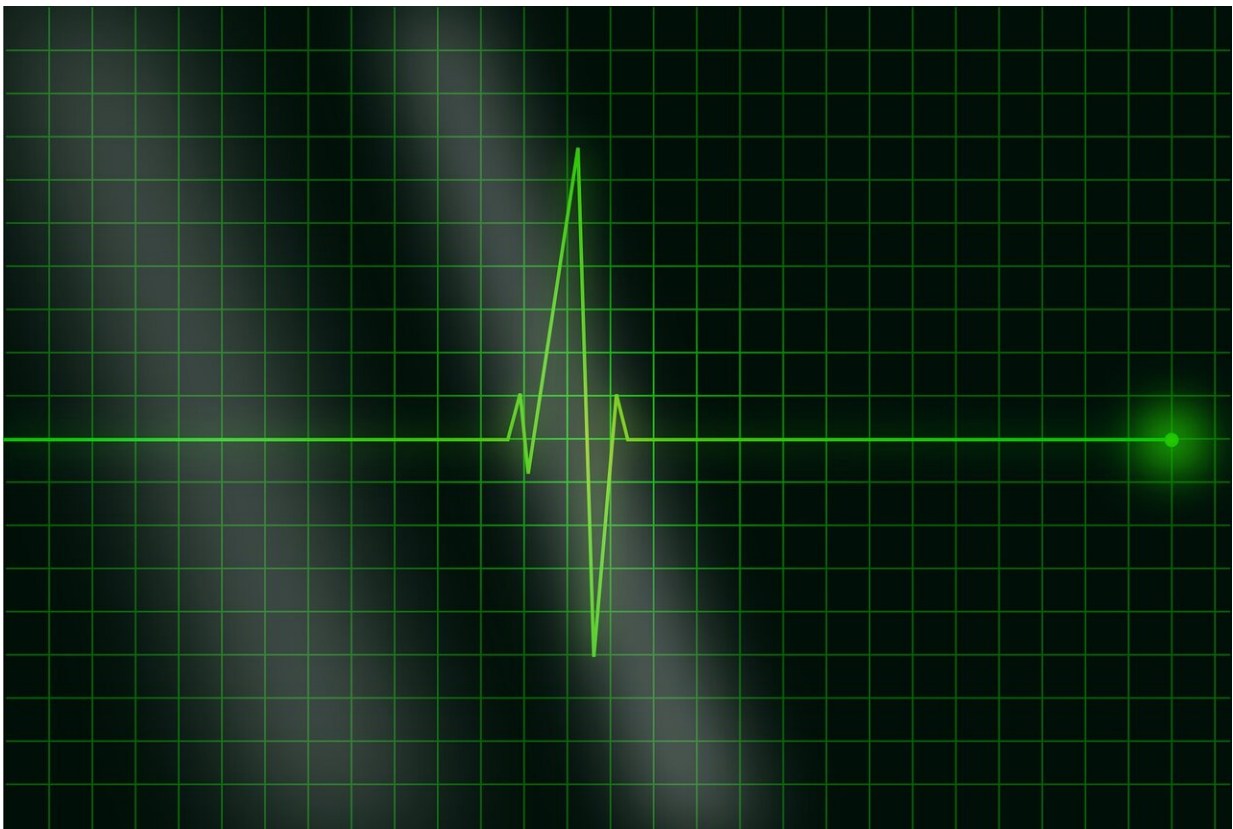


Fewer than 1 in 5 adults with type 2 diabetes in the US are meeting optimal heart health targets

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Fewer than 1 in 5 adults with Type 2 diabetes in the U.S. are meeting targets to reduce heart disease risk. Fortunately, available therapies can

help when combined with new approaches that address social determinants of health and other barriers to care, according to a new American Heart Association scientific statement published today in the Association's flagship journal *Circulation*. A scientific statement is an expert analysis of current research and may inform future clinical practice guidelines.

"This new scientific statement is an urgent call to action to follow the latest evidence-based approaches and to develop new best practices to advance Type 2 diabetes treatment and care and reduce CVD risk," said Joshua J. Joseph, M.D., M.P.H., FAHA, chair of the statement writing group and an assistant professor of medicine in the division of endocrinology, diabetes and metabolism at The Ohio State University College of Medicine in Columbus, Ohio. "Far too few people—less than 20% of those with Type 2 diabetes—are successfully managing their [heart disease risk](#), and far too many are struggling to stop smoking and lose weight, two key CVD risk factors. Health care professionals, the [health care industry](#) and broader community organizations all have an important role to play in supporting people with Type 2 diabetes."

Type 2 diabetes is the most common form of diabetes, affecting more than 34 million people in the U.S., representing nearly 11% of the U.S. population, according to the U.S. Centers for Disease Control and Prevention's 2020 National Diabetes Statistics Report, and cardiovascular disease (CVD) is the leading cause of death and disability among people with Type 2 diabetes (T2D). Type 2 diabetes occurs when the body is unable to efficiently use the insulin it makes or when the pancreas loses its capacity to produce insulin. People with T2D often have other cardiovascular disease risk factors, including overweight or obesity, high blood pressure or high cholesterol. Adults with T2D are twice as likely to die from CVD—including heart attacks, strokes and [heart failure](#)—compared to adults who do not have T2D.

The new scientific statement, based on the writing group's extensive review of clinical trial results through June 2020, addresses the gap between existing evidence on how best to lower cardiovascular risk in people with T2D and the reality for people living with T2D. Targets to reduce CVD risk among people with T2D include managing [blood glucose](#), blood pressure and cholesterol levels; increasing physical activity; healthy nutrition; obesity and weight management; not smoking; not drinking alcohol; and psychosocial care. Greater adherence to an overall healthy lifestyle among people with T2D is associated with a substantially lower risk of CVD and CVD mortality.

"In the United States, less than 1 in 5 adults with T2D not diagnosed with cardiovascular disease are meeting optimal T2D management goals of not smoking and achieving healthy levels of blood sugar, blood pressure and low-density lipoprotein (LDL) cholesterol, also known as 'bad' cholesterol," Joseph said.

A surprisingly large proportion—as high as 90% - of factors to effectively manage CVD with T2D includes modifiable lifestyle and societal factors. "Social determinants of health, which includes health-related behaviors, socioeconomic factors, environmental factors and structural racism, have been recognized to have a profound impact on cardiovascular disease and Type 2 diabetes outcomes," he said. "People with T2D face numerous barriers to health including access to care and equitable care, which must be considered when developing individualized care plans with our patients."

Shared decision-making among patients and [health care professionals](#) is essential for successfully managing T2D and CVD. A comprehensive diabetes care plan should be tailored based on individual risks and benefits and in consideration the patient's preferences; potential cost concerns; support to effectively manage T2D and take medications as prescribed, including diabetes self-management education and support;

promotion and support of healthy lifestyle choices that improve cardiovascular health including nutrition and physical activity; and treatment for any other CVD risk factors.

"One avenue to continue to address and advance diabetes management is through breaking down the four walls of the clinic or hospital through community engagement, clinic-to-community connections and academic-community-government partnerships that may help address and support modifiable lifestyle behaviors such as physical activity, nutrition, smoking cessation and stress management," Joseph said.

The statement also highlights recent evidence on treating T2D that may spur clinicians and patients to review and update their T2D management plan to also address CVD risk factors:

New ways to control blood sugar

The American Heart Association's last scientific statement on blood sugar control was published in 2015, just as research was starting to suggest that glucose-lowering medications may also reduce the risk of heart attack, stroke, heart failure or cardiovascular death.

"Since 2015, a number of important national and international clinical trials that specifically examined new T2D medications for lowering cardiovascular disease and cardiovascular mortality risk among people with Type 2 diabetes have been completed," Joseph said. "GLP-1 (glucagon-like peptide-1) receptor agonists have been found to improve blood sugar and weight, and they have been game changers in reducing the risk of heart disease, stroke, heart failure and kidney disease." GLP-1 medications (injectable synthetic hormones such as liraglutide and semaglutide) stimulate the release of insulin to control blood sugar, and they also reduce appetite and help people feel full, which may help with weight management or weight loss.

In addition, SGLT-2 (sodium-glucose co-transporter 2) inhibitors (oral medications such as canagliflozin, dapagliflozin, ertugliflozin and empagliflozin) have also been found to be effective in reducing the risks of CVD and chronic kidney disease. SGLT-2 inhibitors spur the kidneys to dispose of excess glucose through the urine, which lowers the risk of heart failure and slows the decrease in kidney function that is common among people with T2D.

"Cost may be a barrier to taking some T2D medications as prescribed, however, many of these medications are now more commonly covered by more health insurance plans," Joseph said. "Another barrier is recognition by patients that these newer T2D medications are also effective in reducing the risk of heart disease, stroke, heart failure and kidney disease. Increasing public awareness about the link between CVD and T2D and provide support, education and tools that help improve T2D and reduce CVD risk are at the core of the [Know Diabetes by Heart](#) initiative, from the American Heart Association and American Diabetes Association."

Personalized blood pressure control

The statement highlights that individualized approaches to treating [high blood pressure](#) are best. These approaches should consider ways to minimize the side effects of hypertension treatment and avoid potentially over-treating frail patients.

Importance of lowering cholesterol levels

Statin medications remain the first line of lipid-lowering therapy, and the Association suggests other types of medications may be considered for people unable to tolerate a statin or who aren't reaching their LDL cholesterol targets with a statin. These medications may include

ezetimibe, bempodoic acid, bile acid resins, fibrates and PCSK-9 inhibitors, depending on the individual's overall health status and other health conditions.

Re-thinking aspirin use

Older adults (ages 65 years and older) with T2D are more likely than those who do not have T2D to take a daily low-dose aspirin to help prevent [cardiovascular disease](#). However, it may be time to review if daily low-dose aspirin is still appropriate. Recently published research suggests the increased risk of major bleeding from aspirin may outweigh the benefits, and newer, more potent antiplatelet medications may be more effective for some people.

The statement reinforces the importance of a comprehensive, multidisciplinary and individualized approach to reduce CVD risk among people with T2D. Optimal care should incorporate healthy lifestyle interventions, and medications and/or treatments including surgery that improve T2D management and support healthy weight and weight loss. Social determinants of health, structural racism and health equity are important factors that must also be considered and addressed.

The scientific statement was prepared by the volunteer writing group on behalf of the American Heart Association's Diabetes Committee of the Council on Lifestyle and Cardiometabolic Health; the Council on Arteriosclerosis, Thrombosis and Vascular Biology; the Council on Clinical Cardiology; and the Council on Hypertension. American Heart Association scientific statements promote greater awareness about cardiovascular diseases and stroke issues and help facilitate informed health care decisions. Scientific statements outline what is currently known about a topic, and what areas need additional research. While scientific statements inform the development of guidelines, they do not make treatment recommendations. American Heart Association

guidelines provide the Association's official clinical practice recommendations.

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