

DIABETES & CARDIOVASCULAR DISEASE:

Are Statins Enough?



Diabetes care and education specialists (DCES) help people with diabetes incorporate behaviors that minimize or prevent complications and promote positive outcomes of prediabetes and diabetes. This material focuses on dyslipidemia and cardiovascular risk and gives an overview of an additional option for you to consider in your treatment toolbox. Key points for counseling clients on these topics can be found as well.

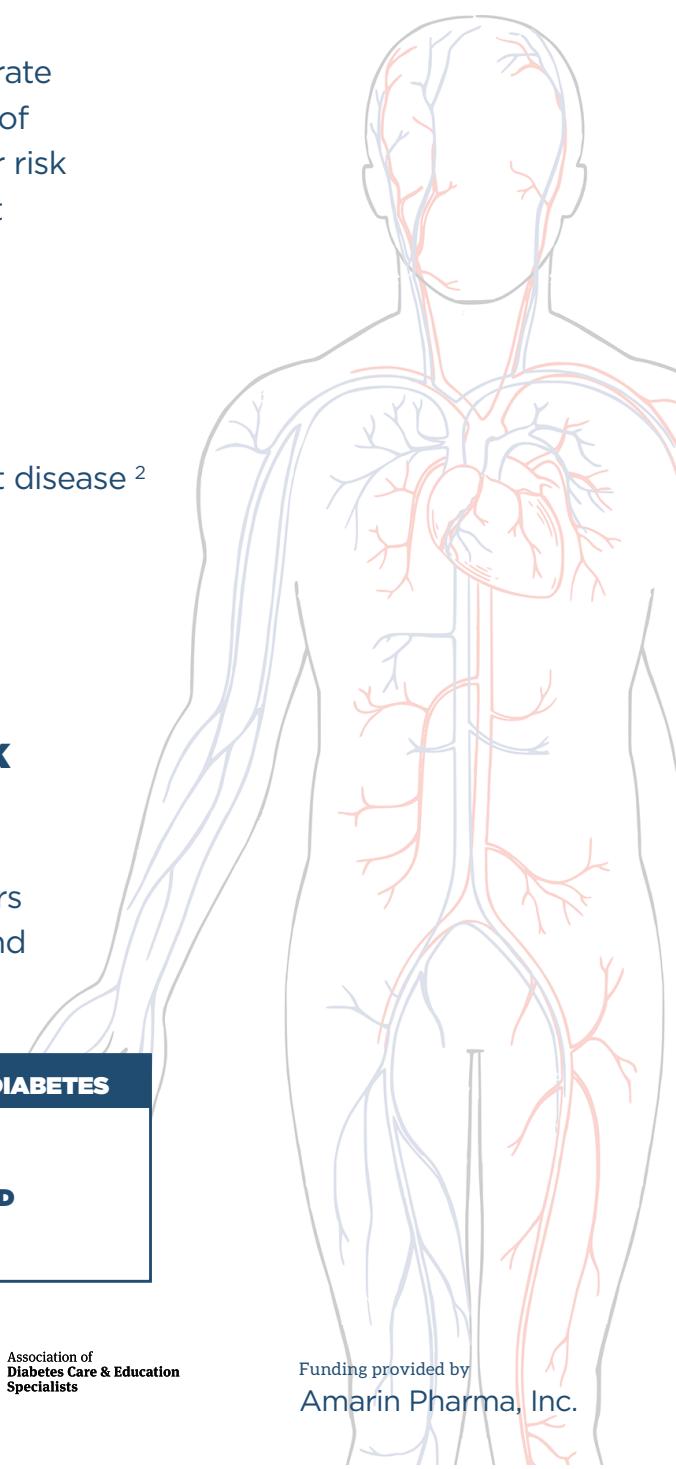
There's a strong correlation between cardiovascular disease (CVD) and diabetes

- Approximately 34 million adults in the US are diagnosed with diabetes ¹
- At least 68% of people age 65 or older with diabetes die from some form of heart disease ²
 - 16% of people age 65 or older with diabetes die of stroke ²
- Adults with diabetes are two times more likely to die from heart disease than adults without diabetes ^{2,3}

MANAGING LIPIDS IS IMPORTANT IN REDUCING CARDIOVASCULAR RISK

Recommended cholesterol and triglyceride ranges from the American Diabetes Association (ADA) for people with diabetes are listed below. There are several approaches to help people aim for these goals. Lifestyle therapy including behaviors such as eating heart healthy foods, increasing physical activity, reducing alcohol, and quitting smoking all contribute to managing lipids and lowering risk.^{4,5}

COMPONENT	RECOMMENDED RANGE FOR PEOPLE WITH DIABETES
HDL Cholesterol ("good cholesterol")	>40mg/dL for men; >50mg/dL for women
LDL Cholesterol ("bad cholesterol")	<100mg/dL without CVD; <70mg/dL with CVD
Triglycerides (TG)	<150mg/dL





People with type 2 diabetes have an increased prevalence of lipid abnormalities

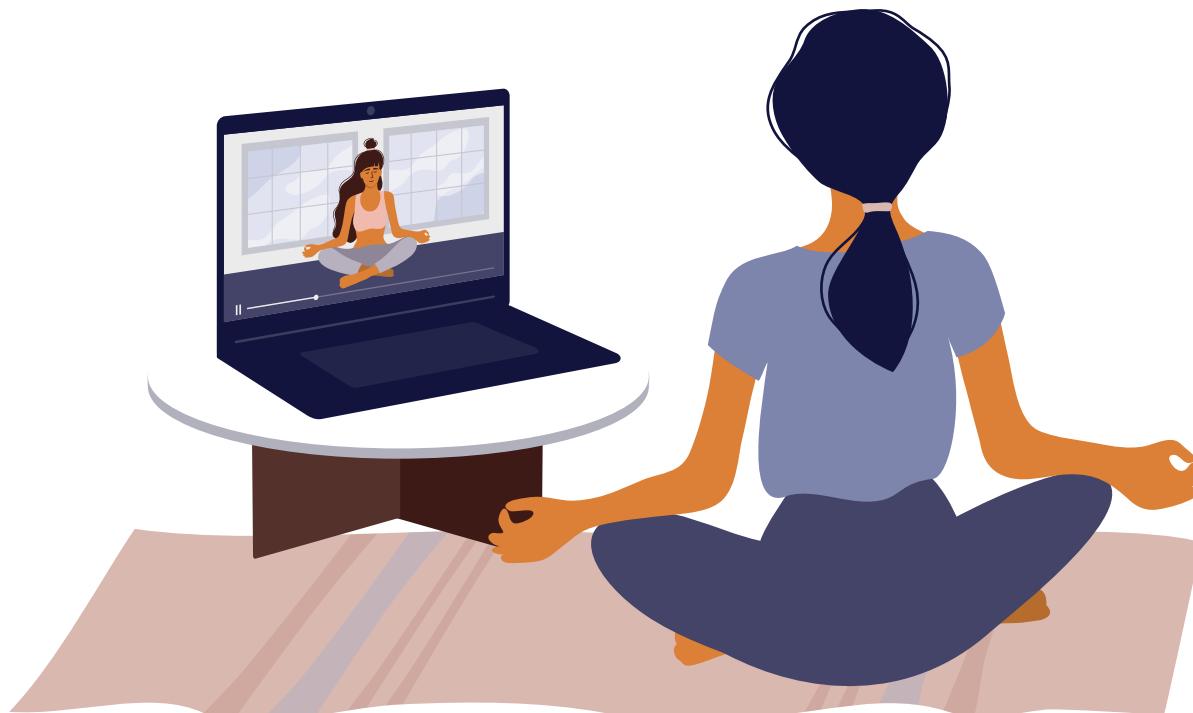
- The AHA also indicates that dyslipidemia, sometimes referred to as diabetic dyslipidemia in people with diabetes, is characterized by high triglyceride levels combined with low HDL-C and high LDL-C. This lipid profile is associated with insulin resistance, atherosclerosis, peripheral artery disease (PAD) and stroke.^{2, 6}
- The American Diabetes Association Standards of Care 2020 recommends treatment with a statin medication in addition to lifestyle therapy for primary prevention and a higher intensity statin for secondary prevention in people of all ages with diabetes and atherosclerotic cardiovascular disease (ASCVD).⁴
- Nonetheless, a study using National Health and Nutrition Examination Survey (NHANES) data from 2007 to 2014, showed that residual hypertriglyceridemia occurs in over one-fifth (5.5 million) of U.S. adults with diabetes, including those on statin therapy with well-controlled LDL-C.⁷
 - Elevated triglycerides have been associated with increased CVD in people treated with statins, including in people with diabetes.^{8,9}



What have we traditionally done to help our clients reduce their CV risk?

One of the major roles diabetes care and education specialists play is to help people with diabetes learn about and reduce their risk for complications. Cardiovascular disease risk lowering is essential to help them live long and fulfilling lives. Within the framework of the ADCES7 Self-Care Behaviors™, we often start with healthy eating as a lifestyle change with powerful impact. Decreasing sources of saturated fats and increasing foods with unsaturated fats decreases total cholesterol and LDL levels and influences CV outcomes beyond the total amount of fat in the diet. For this reason, foods rich in omega-3 fatty acids are recommended for people with diabetes.¹⁰

We also often encourage an increase in physical activity within the limits of what the individual can and is willing to do.



Additionally, many of our clients are prescribed statin medications, which are the drugs of choice for LDL cholesterol lowering and cardiovascular protection, primarily by lowering total cholesterol and LDL-C. Additional medications may be prescribed by the provider.¹¹



All these interventions contribute to lowering of risk. But are they enough?

Despite standard of care treatment, persistent cardiovascular risk (P-CVR) remains

Persistent CV risk means that despite treatment with statin-based standard-of-care therapy many patients are still at risk for a cardiovascular event. In recent cardiovascular outcome trials, in statin-treated patients who did not receive the study drug intervention, and had well managed LDL-C levels, approximately 15% to 35% suffered a major CV event within ~3-7 years.¹²⁻¹³ In other words, P-CVR remains despite effective LDL-C lowering.

Independent of LDL-C, elevated triglyceride levels can identify people at persistent cardiovascular risk. A recent study demonstrated a direct linear relationship between average TGs and CVD risk even at levels well below what would be considered “normal”, that is, 150 mg/dL.¹⁴

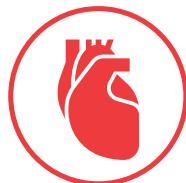
A recent CVOT trial studied the effects of standard-of-care treatment, including a statin, with or without the addition of a new drug intervention, to determine the effects of CV risk reduction in patients with TG levels ≥ 150 mg/dL.¹⁵



ADD TO YOUR CVD RISK LOWERING TOOLBOX

As a diabetes care and education specialist, you have a key role in helping clients understand their CV risk. You've probably discussed recommendations for heart healthy eating plans, the benefits of statins and regular physical activity. Now you have another tool in your toolbox that you can discuss with your clients to help them lower any persistent CV risk they may have. For more about CVD and diabetes, visit DiabetesEducator.org/CVD.





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Counseling your clients

Here are some talking points to use when discussing this topic with your clients.

- Understanding and reducing risk
- Diabetes puts you at a high risk of cardiovascular disease (i.e. heart attack, stroke, heart failure), but there are ways to reduce that risk.¹ This can be done with lifestyle modification as well as medication.^{2, 3}
- Lifestyle changes help lower blood fats
- Reducing risk involves optimizing levels of blood fats, including LDL (“bad cholesterol”) and triglycerides in addition to blood sugar levels.^{2, 4}

There are several lifestyle changes that can lower TG. Individuals can:²

- limit alcohol intake.
- avoid added sugar such as those in sugary beverages.
- limit intake of highly processed carbohydrates.
- increase activity.
- choose healthier fats.

Even making small changes in any of these areas will make a difference.





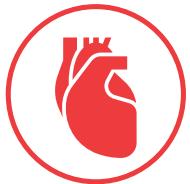
More about medications for lowering risk

You may need the help of medication to reach your goal. Choosing one with proven results is important.

Your diabetes care and education specialist can help you navigate through the evidence.

Here are some key points related to medications to lower CV risk:

- Statin medication is used to lower cholesterol, especially LDL.⁵
- Older prescription medications such as fibrates, used to treat high TG, have failed to show a significant reduction of cardiovascular risk on top of statin therapy.⁶
 - Therefore, fibrates are not FDA approved to lower the risk of cardiovascular disease on top of statin therapy.⁷
 - Additionally, the ADA does not generally recommend the use of fibrates in combination with a statin to reduce CV risk.⁸
- Prescription Omega-3 mixtures and non-prescription fish oil dietary supplements have failed to significantly reduce cardiovascular risk on top of current medical therapies, including statins, in multiple studies.⁹⁻¹¹
 - As a result, these products are not approved by the FDA to lower cardiovascular risk.^{12,13}
 - Additionally, the majority of fish oil dietary supplements consist of non-Omega-3 ingredients, often including saturated fats, and may not contain as much active product as stated on the label, whereas the FDA approved products follows strict manufacturing practices.^{14,15}
 - Fish oil dietary supplements should not be substituted for prescription products.



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