HIGH CHOLESTEROL

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What are my treatment options beyond statins?

Are there new or emerging treatments for high cholesterol I should know about?

What kind of specific exercises will improve my heart health at my age and fitness level?

Which diet should I try to help improve my cholesterol levels?

Are there nutraceuticals that could help lower my cholesterol or risks like high blood pressure?

If so, should I take these in combination with medications?

STATS & FACTS

By Sonya Collins  Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor

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Use this guide to better understand your cholesterol status and options.

1 in 11 Number of adult Black men who have total cholesterol levels over 240 mg/dL.

1 in 4 Number of Black adults at high risk for atherosclerotic cardiovascular disease who take statins—medications that help lower cholesterol and prevent this type of heart disease.

1 in 10 Number of adult Black women who have total cholesterol levels over 240 mg/dL.

<1 in 4 Number of deaths of Black people caused by heart disease. High cholesterol is a risk factor for this.

100 mg/dL or lower Ideal level of LDL (“bad”) cholesterol.

60 mg/dL or higher Ideal level of HDL (“good”) cholesterol.

<200 mg/dL Ideal total cholesterol level.

WEBMD.COM
FALL 2023
This content is created and controlled by WebMD editorial staff.
I became aware of my cholesterol numbers for the first time at age 25. I was newly married and applying for life insurance. After doing the required bloodwork, my agent told me my rate would be increased because of my high cholesterol levels.

Still, I was young and naive, so I didn’t pay much attention. I assumed I was mostly healthy because I was thin. Looking back, I’m surprised I didn’t think to talk to my parents about it. My dad had his first heart attack when I was 12, and high cholesterol (along with high blood pressure) was the cause.

But about 10 years later, it was time to switch life insurance again, and again my application was flagged for “dangerously high” cholesterol. They asked if I’d spoken with a doctor, but I hadn’t. It was time.

I tried four different statins over the course of 6 years, and the side effects were debilitating for me. But despite the cramps, muscle pain, and stomachaches, I did also make lifestyle changes and lost 65 pounds. By the time my son was born when I was 37, I was the healthiest I’d ever been. Still my numbers weren’t coming down.

At my most recent checkup, I found out that I was still in the danger zone: my cholesterol was 394. It brought me to tears. Here I was doing everything—after all, I’m a health coach, I know how to eat and exercise—and still I couldn’t get my numbers down.

But when I saw the cardiologist, he explained it was quite literally in my blood. He diagnosed me with a type of hypercholesterolemia caused by a genetic condition. It was time to change interventions and try an injectable medication.

So much clicked into place: my father’s three heart attacks and my sister’s death from a heart attack at age 40. It also shifted how I started talking to Black women I coach. We think of heart disease as a White man’s issue, but it affects so many more groups than that.

Here’s why I’m facing my family history head-on

By Jessica Mitchell
Reviewed by Melinda Ratini, DO, MS, WebMD Medical Reviewer

TINKERING WITH TREATMENTS
My weight had crept up in the 10 years since my first bloodwork. But although my doctors had been encouraging me to lose 30 pounds both for my overall health and to help my chances of getting pregnant, there wasn’t much emphasis on lifestyle changes to help my cholesterol. Plus, my numbers were up in the 300s. So my doctor started me on statins right away.

I tried four different statins over the course of 6 years, and the side effects were debilitating for me. But despite the cramps, muscle pain, and stomachaches, I did also make lifestyle changes and lost 65 pounds. By the time my son was born when I was 37, I was the healthiest I’d ever been. Still my numbers weren’t coming down.

UNDERSTANDING THE CAUSE
At my most recent checkup, I found out that I was still in the danger zone: my cholesterol was 394. It brought me to tears. Here I was doing everything—after all, I’m a health coach, I know how to eat and exercise—and still I couldn’t get my numbers down.

But when I saw the cardiologist, he explained it was quite literally in my blood. He diagnosed me with a type of hypercholesterolemia caused by a genetic condition. It was time to change interventions and try an injectable medication.

So much clicked into place: my father’s three heart attacks and my sister’s death from a heart attack at age 40. It also shifted how I started talking to Black women I coach. We think of heart disease as a White man’s issue, but it affects so many more groups than that.

The struggle to lower your bad cholesterol can feel overwhelming

JESSICA’S LIFESTYLE TIPS

Start small. Get some movement in every day and don’t forget to strength train.
Cut saturated fats. Eat healthy fats instead (and lots of greens).
Shift your mindset. Regardless of the cause of your high cholesterol, change can happen.
For adults who, along with diet and a statin, need help lowering their bad cholesterol (LDL-C).

WHAT IS LEQVIO?
LEQVIO (inclisiran) is an injectable prescription medicine used along with diet and other cholesterol-lowering medicines in adults with high blood cholesterol levels called primary hyperlipidemia (including a type of high cholesterol called heterozygous familial hypercholesterolemia [HeFH]) to reduce low-density lipoprotein (LDL-C) or “bad” cholesterol.

IMPORTANT SAFETY INFORMATION
The most common side effects of LEQVIO were: injection site reaction (including pain, redness, and rash), joint pain, and chest cold.

These are not all the possible side effects of LEQVIO. Ask your health care provider for medical advice about side effects. You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch or call 1-800-FDA-1088.

Brief Summary of Prescribing Information on adjacent page.
What is LEQVIO?

LEQVIO is an injectable prescription medicine used along with diet and other lipid-lowering medicines in adults with high blood cholesterol levels called primary hyperlipidemia (including a type of high cholesterol called heterozygous familial hypercholesterolemia) to reduce low-density lipoprotein (LDL) or bad cholesterol.

It is not known if LEQVIO is safe and effective in children under 18 years of age.

Before you start taking LEQVIO, tell your health care provider about all your medical conditions, including if you:
• are pregnant. Tell your health care provider right away if you become pregnant while taking LEQVIO. You and your health care provider will decide if you should take LEQVIO while you are pregnant.
• are breastfeeding or plan to breastfeed. It is not known if LEQVIO passes into your breast milk. You and your health care provider should decide if you will take LEQVIO or breastfeed.

Tell your health care provider about all the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements.

Know the medicines you take. Keep a list of them to show your health care provider and pharmacist when you get a new medicine.

How should I take LEQVIO?

LEQVIO is an injection under the skin (subcutaneous), given by your health care provider to show your health care provider and herbal supplements.

Tell your health care provider about all the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements.

Know the medicines you take. Keep a list of them to show your health care provider and pharmacist when you get a new medicine.

What are possible side effects of LEQVIO?

The most common side effects of LEQVIO include injection site reaction (including pain, redness, and rash), joint pain, and chest cold. These are not all the possible side effects of LEQVIO. Call your health care provider for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

General information about the safe and effective use of LEQVIO.

Medicines are sometimes prescribed for purposes other than indicated. Do not use LEQVIO for a condition for which it was not prescribed.

This Patient Information leaflet summarizes the most important information about LEQVIO. If you would like more information, talk with your doctor. You can ask your doctor or pharmacist for information about LEQVIO that is written for health professionals.

For more information, go to www.LEQVIO.com or call 1-833-LEQVIO2 (1-833-537-8462).

What are the ingredients in LEQVIO?
• active ingredient: inclisiran sodium
• inactive ingredients: water for injection, sodium hydroxide and/or phosphoric acid
Even though Black adults have a lower rate of high cholesterol than White adults overall, certain risk factors unique to the Black community increase the impact of high cholesterol on heart health. These factors can be medical or nonmedical.

Nonmedical factors that influence health outcomes are called social determinants of health. These are the conditions that surround you and impact your well-being, such as the food available to you, medical care in your area, and the quality of the air, soil, and water around you.

Economic policies and social policies, racism, climate change, and political systems can all impact these conditions.

ACCESS TO CARE
The Affordable Care Act increased access to health insurance and medical care, but access to health care is still different between the races. For example, U.S. policies that segregated neighborhoods by race with unequal zoning practices impact medical facility availability for Black communities.

“Place matters,” says Anthony McFarlane, MD, a cardiologist with Lee Health in Fort Myers, FL. “The truth is, some communities will have higher quality and more abundant medical care choices than others. And when you lack financial means, you’re often limited to using what’s immediately around you.”

Neighborhoods that are primarily populated by people of color are less likely to have hospitals or even family care doctors.

“Preventative care is crucial in heart health, and in neighborhoods where health services are slim and resources sparse, this type of care is harder to come by,” McFarlane says.

GENETIC CONDITIONS
A genetic condition called familial hypercholesterolemia (FH) causes high cholesterol that can’t be controlled by lifestyle alone. You get it through genes from your mom or dad (or both). Treatment requires medication along with healthy diet and exercise.

Even though rates of FH are highest in the Black population, many diagnoses are missed.

“Familial hypercholesterolemia is often vastly underdiagnosed and untreated in Black Americans,” McFarlane says.

As a result, Black adults are diagnosed with FH at an older age than any other racial or ethnic group in America. This delays treatment and can lead to worse outcomes for heart health.

OTHER HEALTH CONDITIONS
Having type 2 diabetes and being diagnosed with obesity also increase your risk of having high cholesterol.

Research shows that high rates of obesity in the Black population—and diabetes—are directly related to factors such as inequities in stable and affordable housing, income, and access to quality education.

“Type 2 diabetes lowers the amount of ‘good’ cholesterol you have, your HDL levels, while raising your ‘bad,’ or LDL levels,” McFarlane says. Obesity does the same while also increasing your triglycerides, a type of fat in your blood.

CULTURAL FACTORS IN HEALTH CARE
Black adults are less likely to get a prescription for statins, the primary medical treatment for high cholesterol, than White adults are. Researchers are still studying the reasons for this, but a few factors include beliefs about the medical system, less frequency of care by a cardiologist, and socioeconomic status.

Research on statins has focused mainly on White men, which means there’s less information about how the drugs affect the Black community. Black participants account for less than 10% of enrolled patients in clinical trials across the United States.

“It’s critical that we increase the number of Black individuals involved not just in heart health research, but all medical research,” McFarlane says.
High cholesterol by itself doesn’t come with any symptoms. But high cholesterol is often linked to other health conditions, including diabetes, stroke, and heart disease, that may affect how you feel. Use this chart to help you know some signs to watch for and help you track any nagging symptoms or changes that may signal a related health problem.

<table>
<thead>
<tr>
<th>SYMPTOMS</th>
<th>YES/NO/MAYBE</th>
<th>QUESTIONS TO CONSIDER</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DIABETES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peeing a lot</td>
<td></td>
<td>Have I had my blood sugar checked lately?</td>
</tr>
<tr>
<td>Feeling thirsty</td>
<td></td>
<td>How much water am I drinking?</td>
</tr>
<tr>
<td>Blurred vision</td>
<td></td>
<td>How often am I using the bathroom?</td>
</tr>
<tr>
<td>Getting infections more often</td>
<td></td>
<td>Do I have any changes to my skin?</td>
</tr>
<tr>
<td><strong>HIGH BLOOD PRESSURE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Often has no symptoms</td>
<td></td>
<td>Have I checked my blood pressure?</td>
</tr>
<tr>
<td>Headaches</td>
<td></td>
<td>Am I short of breath or having nosebleeds?</td>
</tr>
<tr>
<td>Shortness of breath with minimal exertion</td>
<td></td>
<td>How is my stress level?</td>
</tr>
<tr>
<td><strong>ANGINA (CHEST PAIN)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burning, pressure, or squeezing in your chest</td>
<td></td>
<td>Does it feel like there’s a weight on my chest?</td>
</tr>
<tr>
<td>Pain in arms, neck, jaw, shoulder, or back</td>
<td></td>
<td>Do I notice chest pain with activity?</td>
</tr>
<tr>
<td>Dizziness, fatigue, or nausea</td>
<td></td>
<td>What about when it’s cold?</td>
</tr>
<tr>
<td>Shortness of breath with sweating</td>
<td></td>
<td>Am I having chest pains at random times?</td>
</tr>
<tr>
<td><strong>PERIPHERAL ARTERY DISEASE (PAD)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coldness, numbness, or weakness in legs or feet</td>
<td></td>
<td>Do my arms and legs hurt or feel numb?</td>
</tr>
<tr>
<td>Foot or leg sores that don’t heal</td>
<td></td>
<td>Do I see any other changes on my legs?</td>
</tr>
<tr>
<td>Erectile dysfunction</td>
<td></td>
<td>Am I having trouble getting or keeping an erection?</td>
</tr>
<tr>
<td><strong>STROKE OR MINISTROKE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sudden numbness or weakness on one side</td>
<td></td>
<td>What is my risk of having a stroke?</td>
</tr>
<tr>
<td>Confusion</td>
<td></td>
<td>Do I know the signs of a stroke?</td>
</tr>
<tr>
<td>Trouble speaking or understanding what people say</td>
<td></td>
<td>Have I had stroke-like symptoms that went away?</td>
</tr>
<tr>
<td>Trouble walking or balancing</td>
<td></td>
<td>Do I know when to call 911?</td>
</tr>
<tr>
<td>Sudden, severe headache</td>
<td></td>
<td>Am I eating poorly, drinking too much, or smoking?</td>
</tr>
</tbody>
</table>

“Cardiovascular disease, including heart disease and strokes, is the No. 1 cause of death among all Americans, but higher morbidity and mortality has been noted in non-Hispanic Black adults. Although the levels of LDL cholesterol are not necessarily higher in this population, there is evidence of less intensive treatment of associated risk factors including hypertension, diabetes, obesity, and physical inactivity [in this group]. The main driver of excess atherosclerotic cardiovascular disease in Black adults is a combination of social determinants of health and less utilization of evidence-based medicine versus any specific biological or genetic factor.”

KEITH C. FERDINAND, MD,
CARDIOLOGIST AT TULANE UNIVERSITY SCHOOL OF MEDICINE IN NEW ORLEANS