HIGH CHOLESTEROL



Your action plan for lowering LDL cholesterol and related heart risks

Cholesterol is a waxy, fat-like substance that travels through the blood. Your body makes some cholesterol. We also get it from the foods we eat. Too much low-density lipoprotein, or LDL cholesterol - often called the "bad" cholesterol - can be dangerous.

Over time, fatty deposits can build up in the inner walls of the arteries that supply blood to the heart and other parts of the body (think of a clogged pipe). This can cause a narrowing of the arteries (atherosclerosis), which is a leading cause of heart and blood vessel disease, heart attack and stroke. In some cases, a small buildup of cholesterol also known as plaque can become inflamed and rupture and cause a sudden heart attack or stroke

Use this workbook to help track your cholesterol and come up with a plan with your care team to lower both your LDL cholesterol and your risk of having a related heart attack or stroke.

Cholesterol
and fat build up in
an artery (blood
vessel) going to
the heart.

Be sure to:

- Ask questions
- Share your goals for lowering your LDL and cardiovascular risk
- Talk openly about any concerns you have about your treatment plan, including any issues with your medications, being physically active, or getting to and from health visit
- Review prescription and over-the-counter medications at each visit and make note of any changes

Date:/		
Name:	Age:	
Most recent LDL cholesterol leve	l: mg/dL	
Goal LDL cholesterol level: (to help prevent a heart attack or		all heart and blood vessel health
> Your core health ca	re team	
	Name of clinic or clinician	Phone number
Primary care		
Cardiologist (heart doctor)		
Other specialist(s) you see regularly:		
Which clinician primarily checks Does anyone in your family (bro		
Yes If yes, who?NoI don't know		
I GOII t KIIOW		



If you've been told that your high LDL cholesterol is due to a condition passed down in families, your treatment will follow a different plan. To learn more about familial hypercholesterolemia, or FH, visit *CardioSmart.org/FH*.

Zeroing in on your personal goals for managing LDL cholesterol, lowering cardiovascular risk

Be sure to talk openly with your health care team about your concerns, goals and values. Knowing what is important to you can help guide your health care choices, including the type of treatment you might be comfortable trying.

Think about and write down what matters most to you. 1. What about your high cholesterol causes you the most concern, if anything? 2. What matters most to you when it comes to lowering your LDL cholesterol? 3. What's the main reason you want to see your LDL cholesterol number come down?

Managing LDL cholesterol levels

The end goal in bringing down your LDL cholesterol is to lower the chance of a first or future heart attack or stroke due to blockages in your arteries.

If you have had or are at high risk of cardiovascular events, stepping up efforts to lower LDL cholesterol is needed. This includes a greater commitment to make or maintain lifestyle changes and taking the highest dose (amount) of statins (sometimes called maximally tolerated statin therapy), most likely along with other medications that also lower LDL cholesterol and risk.

Steps for lowering LDL cholesterol levels and cardiovascular risk

Live a healthy lifestyle.

Regular physical activity and a healthy diet are important steps to improving your cholesterol and overall heart health.

Discuss risk factors that make major cardiovascular events more likely.

Knowing your risk will help decide the best treatment for you, including the need to strengthen statins or try combination therapies.

Keep in mind that risk and therapies change over time.



Start, switch or adjust medications.

Medicines - with statins as the mainstay - can help lower LDL cholesterol and the chance of a heart attack or stroke.

Monitor your response to treatment.

Cholesterol levels should be checked again 4-12 weeks after starting a statin or making a change to the dose to see the effect on LDL cholesterol.

Keep checking levels regularly over time.









Tip: Adopting a healthy diet, getting regular exercise and, in some cases, taking medication can go a long way to help lower your cholesterol and protect your heart.

Making lifestyle changes

Focus on making healthy lifestyle choices and speak up if you're unsure about where to start or if you need more help from your care team.



Eat a heart-healthy diet

There are several eating plans known to be good for the heart, including the Mediterranean diet and one with plant-based foods.

Start slowly when making changes so you'll be more likely to stick with them. For example, to start you can (choose 2-3):

- Limit salt (sodium) intake
- Pay attention to calories and portion sizes
- Fill your plate with fruits and vegetables (look up the plate method)
- Read food labels (to look for added sugars, salt, unhealthy fats)
- Choose lean meats (for example, skinless chicken, pork tenderloins)

- Limit, or do not eat, deli, processed or red meats
- Eat 1-2 serving of fish a week
- Bake, broil or grill instead of frying foods
- Use olive oil or vegetable oil instead of butter
- Cut back on sweets or desserts
- Choose water over sodas or sweetened drinks

Other helpful s	suggestions ((for example	e, referral to	a dietitian i	f needed):	



Be physically active

Physical activity lowers cholesterol and strengthens the heart. It can also help boost your energy level and mood.

•	Aim to get minutes of physica	al activity most days of the week.
	Write down the types of activities that y regular basis:	ou enjoy and that you are able to do on a
	WalkingSwimmingBikingJogging or taking a brisk walkDancing	☐ Gardening ☐ Taking a fitness class ☐ Other:
•	Try not to sit for a long time. If you do, throughout the day to do some activity	
•	Consider keeping a log of your weekly of steps they take each day to know ho their body.	activity. Some people count the number w much they are moving
pr be	/rite down other suggestions (for exampl rogram for people 65 and older, local wa ecause they are safe and climate controll igible, or physical therapy, if needed):	llking clubs which often take place in malls



Maintain a healthy weight

Carrying extra weight, especially around your waist, can hurt your heart health. Eating healthy foods, staying away from foods and drinks with empty calories, and being physically active can help you shed extra pounds.

	Current weight: pounds. Try to:
	Maintain your current weight.Lose pounds over the next months/year.
	Current waist measurement: inches
	In general, a waistline of over 40 inches for men and 35 inches for women is linked to a higher chance of heart disease, diabetes and other obesity-related health issues.
	Reduce stress and talk about your feelings
	Stress and anxiety can make the heart work harder. Find healthy ways to cope with the stress in your life. If you've had a heart attack or stroke, it's common to feel sad or anxious. But this can also slow down your healing.
	You can try:
	 Deep breathing exercises Yoga Music therapy Joining a support group
J	Avoid tobacco use
	Let your health care team know if you smoke and need help quitting. It's not easy, but there are resources to help. Try to stay away from secondhand smoke too.

Set a date to quit: _____



Get flu shot each year and stay current with other recommended vaccines

If you have heart disease, you are more likely to get very sick from the flu. Getting a flu shot once a year is the best way to protect yourself and your loved ones. Ask about other vaccines, too, including those to prevent COVID-19, shingles, and pneumonia.

As you get older, your immune system, which helps fight infection, gets weaker. Vaccinations are an important part of healthy aging.



Build your support network and avoid feeling isolated

Make sure you have trusted friends and advisers that you can reach out to when you need some extra support or encouragement - for example, family members, friends or other people you know who have heart disease. Your care team may also be able to connect you with support groups and other resources in your community.

Think about an caring and pos	e names of 2-3	people you can	rely on, who are
5 1			

LDL or "bad" cholesterol is just one piece of the puzzle

Be sure to talk with your care team about other conditions and habits that can make you more likely to develop heart disease.



Knowing your risk of a heart attack, stroke

High LDL cholesterol is one of many factors and conditions that can increase the chance of a heart attack or stroke. Risk can also change over time, so these conversations should be had more than once.

If you've had any of the following, you're already considered to be at high - or very high - risk of having a cardiovascular event and you would benefit from stepped up efforts to lower LDL cholesterol with medications in addition to healthy habits. Please check all that apply:

Hospitalization within the past year for chest pain or heart attack
Procedure to open blocked arteries
Heart attack (more than 1 year ago)
Stroke
Peripheral artery disease (PAD), or blockages in the arteries of the arms or legs
Familial hypercholesterolemia (FH) – a condition passed down from your parents and family that leads to very high LDL cholesterol levels



Family history

Do you have a family history of heart disease (heart attack, stenting or open-heart surgeries) or stroke at a young age (men younger than 55, women younger than 65) in parents, brothers, sisters or children?

Yes
100

□ No

I'm not sure

	Other factors that play a role or affect your risk
	Do you have any of the following conditions?
	High blood pressure
	☐ Diabetes or prediabetes
	Overweight or obesity
	Chronic kidney disease
	Autoimmune disorders (for example: lupus, rheumatoid arthritis, multiple sclerosis, HIV/AIDS)
	Depression or anxiety
	☐ Sleep apnea
	Current cigarette smoking or vaping
^ _	High use of alcohol (more than 1 drink a day for women, more than 2 drinks a day for men)
\bigcirc 11	
	Do you have high levels of these markers?
\bigcirc	High-sensitivity C-reactive protein (CRP) (2 mg/L or higher)
	Apolipoprotein B (Apo-B) (130 mg/dL or higher)
	Lp(a) (50 mg/dL or higher)
	l don't know (If you are unsure, ask your clinician.)
	Are you taking an aspirin each day?
	Yes
	□ No
	Previously

Medications

Below is a list of medications that are used to manage high LDL cholesterol and lower cardiovascular risk, along with information about how each works. On this chart, please:

- 1. Check off (✓) all of the medications you are currently taking to lower your LDL cholesterol and cardiovascular risk.
- 2. Draw a line through any medications that you have tried before that did NOT work for you.

You can use the "My medication list" on Pages 14-15 to write these down, as well as the names of any medications that you should start taking or that need to be changed or stopped based on your visit.

	How they work	How they are taken	Goal is to reduce LDL cholesterol by:	Possible side effects to be aware of*
Statin therapy		_		
High-intensity statin Atorvastatin (Lipitor), 40-80 mg Rosuvastatin (Crestor), 20-40 mg Moderate-intensity statin Atorvastatin (Lipitor), 10-20 mg Fluvastatin (Lescol), 80 mg Lovastatin (Altoprev), 40-80 mg Pitavastatin (Livalo, Zypitamag)1-4 mg Pravastatin (Pravachol), 40-80 mg Rosuvastatin (Crestor, Ezallor) 5-10 mg Simvastatin (Zocor), 20-40 mg	Reduces the liver's ability to make cholesterol Keeps plaques from breaking apart and forming clots that can move to the heart or brain Lowers triglycerides and boosts HDL cholesterol - known as the "good" cholesterol	By mouth daily	At least half 30% to 49%	Side effects can vary depending on the statin and dose, but may include: Headache, dizziness, mental fuzziness/ confusion, muscle pain, digestive problems These are rare, but if you have any issues, talk with your health care team.

■ Ezetimibe	Blocks the absorption of cholesterol in the gut	By mouth, usually once daily	Further lower by up to 25%	Diarrhea, stomach pain, muscle or join pain, runny or stuffy nose, feeling tired
Bempedoic acid (There is also a fixed-dose combination of bempedoic acid and ezetimibe)	Partially blocks the production of cholesterol in the liver	By mouth, usually once daily	By 15%-25% in clinical trials and up to 38% when combined with ezetimibe	Muscle spasms, back pain, pain in hands or feet
PCSK9-inhibitors Alirocumab (Praluent) Evolocumab (Repatha)	Helps to break down LDL cholesterol by blocking a protein in the liver (called proprotein convertase subtilisin kexin 9, or PCSK9)	Given under the skin by injection, 1-2 times a month	Additional 60% among people taking a statin	Skin reactions at the site of injection, allergic reactions, headache, influenza
lcosapent ethyl (Vascepa) (a purified omega-3 fatty acid, a fat found in fish oil)	Helps lower the amount of triglycerides and other fats made by the body	By mouth, usually 2 times a day	Mostly lowers triglycerides, but can add extra reduction in heart risks beyond statins	Muscle or joint pain, constipation, swelling of legs, ankles, o feet

^{*} These are just some of the potential side effects. Always be sure to read the package insert that comes with your medication for a full list of side effects and other instructions.

If you drew a line through any of the medications above, meaning that you tried that medicine before, but it didn't work, please write down why you stopped taking it here:
Please list any over-the-counter medications you take as some can be harmful and actually raise LDL cholesterol:



► LDL cholesterol and heart disease risk

My medication list

Use this page to record the medications you take to lower your LDL cholesterol and the risk of cardiovascular events. For example, note any new medications or changes to existing ones.

Drug type or name	Reason for taking	Start date	Starting dose (amount)	Target dose	How often (1 per day, 2 per day)	Time of day to take and how to take (with or without food)	What to do if I miss a dose	Side effects to watch for, report
High-dose statin								
(Lipitor) (40-80 mg)Rosuvastatin (Crestor)(20-40 mg)								
Moderate-dose statin								
Atorvastatin (Lipitor), 10-20 mg								
Fluvastatin (Lescol), 40 mg 2x/day or XL 80 mg								
Lovastatin (Altoprev), 40-80 mg								
Pitavastatin (Livalo,Zypitamag) 2-4 mg								
Simvastatin (Pravachol), 40-80 mg								
Rosuvastatin (Crestor, Ezallor) 5-10 mg								
Simvastatin (Zocor), 20-40 mg								

5 points to remember

- 1. Managing high LDL cholesterol and, in turn, lowering the risks to your heart and blood vessels is a journey that will last your whole life.
- 2. Statins are the first treatment for lowering high cholesterol and reducing your chance of having a heart attack or stroke or dying from one.
- 3. For many people at high risk of these events, a combination of medications is needed. Remember: It often takes time and patience to find the right statin and/or combination of medications for you.
- 4. Taking your medications as directed is important. Be sure to keep talking with your care team about questions, concerns or challenges. There is a lot of misinformation (bad information) about statins, so be sure to get the facts. Go to CardioSmart.org/StatinMyths.
- 5. All cholesterol-lowering medications work best when used along with a heart-healthy eating plan and regular exercise.



For people at high cardiovascular risk, combination medication therapy can lead to dramatic drops in LDL cholesterol.

Statin therapy

(at the highest dose you can take)

Start with high-dose statin with the

goal of cutting LDL cholesterol by 50% or in half

If moderate-dose statin is needed,

goal is to achieve 30%-49% reduction

in LDL cholesterol levels.

Non-statin therapies

Often added to a statin for added LDL and cardiovascular risk lowering

- Ezetimibe
- Bempedoic acid
- PCSK9-inhibitors
- Bile-acid sequestrants

Drops in LDL cholesterol

and risk of heart attack and stroke





Tip: Healthy lifestyle choices, including regular physical activity and heart-healthy foods and ways of cooking, are **important at every stage of treatment.**

Common questions about LDL medications

- Why are you recommending this medication?
- How much more will it lower my cholesterol and my risk for a heart attack or stroke?
- How will we know if the medication is working?
- Are there certain side effects I should watch for? What should I do if I notice any?
- How often do I need to have my cholesterol checked?
- What else can I be doing to lower my chances of having a stroke or heart attack?
- Why do I need to keep taking a statin if we are adding another medication that lowers LDL cholesterol?
- Will my insurance cover an add-on medication if I'm already on a statin?
- How can I stay on the statin that works best for me if my insurance coverage changes?



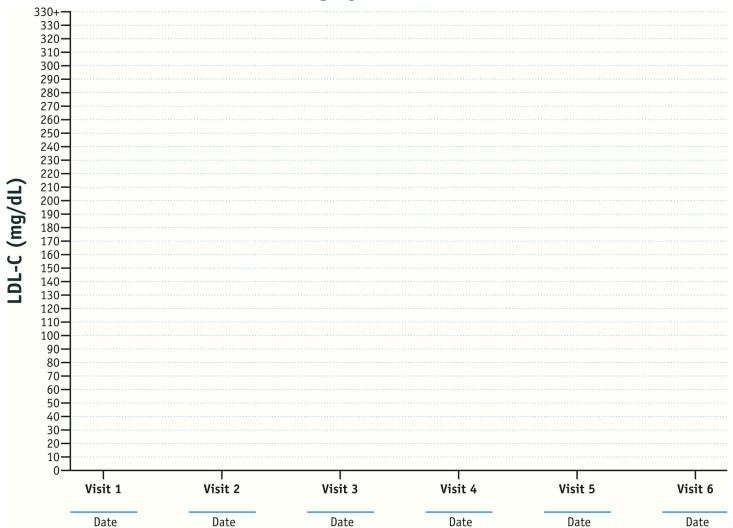
Neeping track of your cholesterol numbers

Use this chart to write down your lipid panel results, as well as your personal goals for LDL cholesterol and other cholesterol measures.

	Date / /	Date / /	Date / /	Date / /	Goal
LDL cholesterol level					
Triglycerides					
Total cholesterol					
High density lipoprotein (HDL) or the "good" cholesterol					

Use this chart to write down your lipid panel results, as well as your personal goals for LDL cholesterol and other cholesterol measures.

Tracking My LDL-C Levels





TIP: Always follow your care plan and stay in touch with your care team as questions come to mind. That will help make sure you get the most from efforts to lower your LDL cholesterol and protect your heart health.

Sticking with your care plan

Make sure you understand what is being recommended so that you can play an active role in managing your LDL cholesterol and cardiovascular risk.

At each visit, be ready to share:

- Any changes to your health history
- A current list of all the medications you take
- Any issues or questions about your medications (for example, side effects, cost)
- Other factors that make sticking with your care plan harder (for example, trouble getting to and from health visits, lack of health insurance, no safe place to exercise)

Use this this chart to write down what might make it hard for you to follow your treatment plan. Share this information with your care team so they can help you.

	What makes it hard	What seems to help
Eating heart healthy	(Example: not having healthy options to choose from)	(Example: when my family joins me in choosing healthy food options)
Getting regular physical activity or exercise	(Example: lack of time)	(Example: joining a group class)

Taking medications	(Example: fear of side effects, taking too many, not knowing why certain medicines are needed, not being able to open pill bottles, no pharmacy delivery, hard to read the labels)	(Example: using a pillbox, setting an alarm, asking about side effects)
Paying for medications		
Understanding how high cholesterol can affect my heart health		
Making it to my health visits or follow-up tests		
Other:		

Other important steps to take **Recheck your LDL cholesterol when needed.** Doing so can help tailor your treatment and will tell your care team: 1. How well your medication is working and/or 2. If the dose needs to be changed I should have my LDL cholesterol checked every: _____ months **Speak up** if you need more assistance with: Healthy eating TIP: LDL Getting regular physical activity cholesterol is Weight loss or maintaining a healthy weight usually checked Managing other health conditions again 4-12 weeks Quitting or staying away from tobacco after starting a Coping or managing stress new medication or Understanding how statins work and finding changing the dose. the right one for you • Other: Write down a list of questions and concerns to bring to each health visit.

From now until your next visit	
Write down 3 things you can do to help manage your cholesterol and improve your heart health. Set yourself up for success by choosing specific goals you can measure. For example, I will eat 5-7 servings of fruits and vegetables most days of the week.	
1	
2	
3	



More information and resources

Managing high LDL cholesterol and cardiovascular risk may seem overwhelming at times. The American College of Cardiology has developed information and tools with input from patients and experts to help you.

"High Cholesterol" information hub on CardioSmart.org CardioSmart.org/HighCholesterol

"Straight Talk About Statins" CardioSmart.org/StatinMyths

"Statins: What You Need to Know" CardioSmart.org/Statins

"Beyond Statins: What You Need to Know About Other LDL Cholesterol Treatments"

CardioSmart.org/Non-Statins

My Plan For Starting a PCSK9 Inhibitor CardioSmart.org/MyPCSK9Plan