Ask the Expert Webinar

The Role of Cholesterol and Lipids in Preventing and Managing Heart Disease

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Supplemental Q&A

For someone on a statin, how often should one's cholesterol typically be checked – annually, twice a year?

There are two answers to this question. Any time a new cholesterol medication is added or a dose is changed, it should be checked at the four to 12-week mark to see if there is improvement. If the predefined goals are not met, additional changes can be made at that time. If patients are on a stable dose, then it should be checked yearly to ensure there have been no major changes and patients are still meeting their goals.

What about apple cider vinegar and/or turmeric?

Sadly, there are no great supplements that work. There is no real data on apple cider vinegar and no real benefit to turmeric. While some people may have mild lowering of cholesterol numbers, there are two factors to consider. The first is that the reduction is not guaranteed or uniform. These are unregulated supplements that change batch to batch. Therefore, unlike with prescription medications, you don't really know what you're getting. Second, any reduction in cholesterol is very mild, and no data suggests that the use of these supplements gives a profound, durable reduction. Most importantly, none of them prevent heart attacks and strokes like the prescription-strength medications do.

Do you recommend a baby aspirin each day?

This is very patient dependent and requires a conversation with your primary care doctor. Patients with established heart disease and coronary artery disease should almost always be on aspirin. The exceptions to this are very nuanced and will need to be determined by a cardiologist.

For those who have not had a heart attack or do not have established heart disease, it really depends on risk. In general, unless you are high risk, the benefit to aspirin probably does not outweigh the risk of bleeding. The older data that aspirin was good for everyone was largely before the era of statins. In certain high-risk patients, especially patients with known coronary artery calcification, there may be a benefit to taking aspirin to prevent heart attacks.

Overall, this should be discussed with your provider.

Would Metamucil fiber be helpful?

Increasing fiber is definitely helpful. We know that most people do not get enough fiber and that adequate fiber intake can lower cholesterol. However you get your fiber is okay.

There are YouTube doctors (Dr. Gundy, etc.) saying oatmeal is death. Do you reject their concern?

I am not sure any food is death necessarily (I do realize certain foods have poisons that can be fatal). Oatmeal is a very mixed bag. If there is a lot of sugar in it or it is processed, then those additives are not great for you. Natural oatmeal is probably fine as part of a balanced, heart-healthy diet.

I understand Crestor® works differently from some of the other typical statin drugs. Is this more stressful on the body or hazardous than Lipitor®?

No, not necessarily. All statins actually work the same. They block the liver from making cholesterol. What is often heard is that some statins are a little more "muscle friendly." Rosuvastatin (Crestor) is one of them. Some people who cannot tolerate statins due to mild muscle aches sometimes due well on Rosuvastatin. That said, the data does not really confirm this. It is really just an observation, and I have plenty of patients who cannot tolerate Rosuvastatin but do tolerate other statins.

I had estrogen/progesterone-positive cancer and was put on estrogen-blocking letrozole. Will this increase my cholesterol?

Letrozole can cause increased cholesterol. It can also cause other heart disease. I highly recommend anyone who has had cancer treatment, especially if it can impact the heart, to seek care from a cardiologist who has experience seeing cardio-oncology patients. Your oncologist is the best one to ask about whether you have received this type of treatment. Ana Barac, MD, PhD, is the head of cardio-oncology at Inova and is wonderful.

Is having dinner at 7:30, i.e., eating later in the evening, bad for your cholesterol levels?

No, not really. There is a lot out there about the timing of cholesterol medications. Some of this comes from the fact that the body makes a lot of its cholesterol overnight. This has nothing to do with absorbing cholesterol from food, however. So, some people think you need to take your statin at night. For most statins, that is probably not the case. I prefer patients take their statins at a time when they will reliably remember to take the statin.

There is no particular problem with eating a late dinner in terms of your cholesterol. There may be other issues such as increased risk of heartburn or causing issues with sleep, but nothing cholesterol-wise.

Will vitamin K2 help prevent calcium buildup in the arteries and lower the calcium score?
No. Unfortunately, none of the supplements have been shown to lower cholesterol or prevent the accumulation of cholesterol in the arteries of the heart, which is responsible for the calcium buildup. Unfortunately, nothing will lower the calcium score. Calcium is a sign the cholesterol has been there for a while and that the body has tried to "wall it off" to prevent problems. We cannot really undo that process at this point.

Is the historical safety of the various drugs still based on tests of white male patients, or is there reliable data based on females and people of color?

This is a very fair and very sad question. It is true that a lot of the information we have about medications was done in trials that were overly biased toward white male patients. I will say that modern cardiology trials have tried to be more inclusive of different racial and ethnic groups as well as women.

A lot of the early statin trials did overenroll white men. A lot of the later trials were more racially diverse, but there was still underrepresentation of different ethnicities and women.

However, we have more than clinical trial data. Clinical trials are the best data, as people are randomly assorted to drug versus no drug to maximize the chance that any outcome seen is due to the intervention of the drug. However, we have a lot of other sources of data to suggest that the outcomes we see can be safely applied to females and other racial and ethnic groups.

Unfortunately, it is unlikely that we will ever go back and redo the older trials with a more inclusive population. But I can tell you that the newest cholesterol drug trial was gender balanced and inclusive. It is our hope that all trials going forward will represent the populations we care for.

Please comment on hypothyroid medication and statin interactions.

In general, a lot of medications, not just statins, can interfere with medications for hypothyroidism, including Synthroid®. The various combinations of statins and thyroid medications, as well as any other medications, can get complex quickly. I recommend discussing your particular case with your pharmacist. However, in general, I try to have patients take their thyroid medication several hours apart from the rest of the medications.

There are two other thyroid cholesterol interactions. The first is that severe, long-standing low thyroid can raise cholesterol levels. Therefore, when I see individuals with very high cholesterol, I check their thyroid level. If it is very low, this should be treated and then the cholesterol can be reassessed.

Additionally, some people with low thyroid levels are thought to be more susceptible to statin-associated muscle aches. There is no guarantee that treating the thyroid levels would improve those side effects, but it is something to have checked and consider.

What role does Lp(a) play in heart disease?

Great question, and I am sorry we did not get to discuss this last night.

Lipoprotein (a) is a low-density lipoprotein-like type of cholesterol. Using my cholesterol car analogy, Lp(a) is one of the cars that cause car crashes and lets cholesterol get into the arteries of the body. Moreover, it is a drunk driver. So, it is even worse than just the run-of-the-mill low-density lipoprotein cholesterol.

Lp(a) levels are genetically determined, and about 20% of the population has elevated levels.

Individuals with Lp(a) elevations are at up to four-fold higher risk of early-onset coronary disease, heart attacks and strokes.

The recommendations for who to treat are varied. In Europe, there is a recommendation for screening nearly everyone. I personally think this is reasonable. U.S.- based recommendations are to screen for it in those who have premature heart disease or a family history of premature heart disease. It can also be used as a "risk-enhancing factor" in deciding whether or not to start a statin. It is also a cause of "pseudoresistance" to statins, meaning that you take a statin but your cholesterol does not go down as expected.

Unfortunately, there are no drugs readily available that lower Lp(a) or that are approved to do so. Niacin is an old drug that does, but it has never been shown to be of value. The injectable medications can lower Lp(a) approximately 20 to 25%, although this is unlikely to provide meaningful reductions in terms of reducing risk.

The mainstay of treatment for elevated Lp(a) is to aggressively manage other risk factors. This includes lowering cholesterol overall and managing high blood pressure, diabetes, weight, etc.

What is the effect of stress and poor sleep on heart disease?

This is a very broad subject. Poor sleep is linked to all sort of heart-related issues. It can cause high blood pressure, lead to weight gain, lead to poor glycemic (diabetes-related) control, and can worsen all cardiac disease. That is why getting a good night's sleep is important.

Stress can similarly raise blood pressure, worsen glycemic control, lead to poor sleep, etc. The stress hormone known as cortisol can also raise cholesterol levels.

What is the track record of the injectables for cholesterol?

There are two types of injectable medications. Both are based on a French population that has genetically low cholesterol and has minimal heart disease in the population. Basically, both drugs knock out a part of the system that degrades the cholesterol receptor. This has the effect of keeping the cholesterol receptor around longer to pull cholesterol out of the blood. The genetic mutation in the French population effectively destroys that part of the system that degrades the receptor, leading to the same outcome.

One injection is given every two weeks at home. These drugs have been around at least a decade and were in trial before then. There have been a number of trials of these medications, and these trials have been extended to watch use for several years. Therefore, they have a very safe track record with no big signal for being harmful. Similarly, since they work to cause low cholesterol based on the science from the above population, we have every reason to believe the long-term safety will be the same as those who have a genetic mutation causing the same.

The other type of injectable is given in an office. This is a newer drug. While it has only been around a few years, the data has been very impressive, and it has shown good safety. As above, we have no reason to doubt that it is safe long term.

Tell me more about nutrition and cholesterol

This could be a whole webinar topic in and of itself.

Poor diet can certainly lead to high cholesterol and high triglycerides. Therefore, we know that improving diet can lead to improvement in cholesterol.

A very heart-healthy diet can be associated with a 20% reduction in cholesterol. This can be even more profound when accompanied by weight loss.

The best diets are those that are rich in healthy fats (vegetable fats) and low in saturated fats (animal fats or “trans” fats). Similarly, increasing fruits, vegetables and fiber is very beneficial. Sugar and sugar-sweetened foods and beverages, as well as processed foods, can all worsen cholesterol levels.

In terms of what diets work the best, it is not one size fits all. As a general rule, the DASH diet, the American Heart Association diet, and a Mediterranean-style diet are the best. More information can be found on the website of the National Lipid Association and American Heart Association. People should avoid a ketogenic diet because it can raise cholesterol.