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Statins Cause Muscle Damage

August 06, 2009 | 101,121 views

Statins drugs, which are medications widely used to lower cholesterol, may cause structural damage to the muscles of people experiencing muscle aches and weakness.

The damage may occur even when tests for a protein thought to signal injury are normal, and may persist even after statin use is halted.

About 10 to 15 percent of people taking statins report myalgia, or minor muscle aches and weakness. A smaller number have stronger, persistent pain, called myopathy. In a study, researchers biopsied leg muscle tissue from 83 patients: 44 were taking statins and had serious and persistent muscle pain, 19 were taking statins and had no myopathy, and 20 had never taken statins or suffered myopathy.

Biopsies showed that 25 of the 44 with myopathy had muscle damage.

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Dr. Mercola's Comments:

Muscle pain and weakness is actually the most common side effect of statin drugs, and is thought to occur because statins activate the gene atrogen-1 gene, which plays a key role in muscle atrophy.

In severe cases, a life-threatening condition called rhabdomyolysis, in which your muscle cells break down, can also develop.

However, muscle pain and weakness is often downplayed as a *minor* side effect of statin drugs, and one that typically goes away within a couple weeks of stopping the drugs.

In reality, as this new study points out, if you're experiencing any muscle pain when taking statin drugs, it could be

because structural damage is occurring, and this damage may occur even when tests for a protein thought to signal injury are normal.

Further, the damage may persist even after statin use is halted, meaning these drugs may cause permanent muscle damage.

Folks, this is in no way a *minor* side effect or nuisance. Muscle pain and weakness may be an indication that your body tissues are actually breaking down -- a condition that can cause kidney damage.

One thing is for sure. You should NOT ignore symptoms of pain and muscle weakness if you are taking statin drugs, as they can deteriorate into even more dangerous conditions, including death.

What makes this extreme risk even more unacceptable is the fact that statin drugs are almost always unnecessary.

Why You Should Avoid Taking Statin Drugs

Statin drugs used to lower cholesterol are the best-selling drugs in the United States. In 2008 alone they brought in \$14.5 billion in sales!

This is outrageous because if you are concerned about your cholesterol levels, taking a drug should be your absolute last resort. And when I say last resort, I'm saying the odds are very high, greater than 100 to 1, that you don't need drugs to lower your cholesterol.

To put it another way, among the more than 20,000 patients who have come to my clinic, only four or five of them truly needed these drugs, as they had genetic challenges that required it.

The other 19,995 of them were much better off without statins.

Statin drugs work by inhibiting an enzyme in your liver that's needed to manufacture cholesterol. What is so concerning about this is that when you go tinkering around with the delicate workings of the human body, you risk throwing everything off kilter.

Case in point, "statin drugs inhibit not just the production of cholesterol, but a whole family of intermediary substances, many if not all of which have important biochemical functions in their own right," say Sally Fallon and Mary G. Enig, PhD.

For starters, statin drugs deplete your body of Coenzyme Q10 (CoQ10), which is beneficial to heart health and muscle function. Because doctors rarely inform people of this risk, and advise them to take a CoQ10 supplement, this depletion leads to fatigue, muscle weakness, soreness and eventually heart failure.

Then there is the issue of muscle damage, which we first discussed. Researchers have now discovered that there is more than one way this condition can arise as a result of taking statins, includin

- Depleting your body of Co-Q10, a nutrient that supports muscle function. In my view it is medical malpractice to prescribe a statin drug without recommending one take CoQ10, or better yet ubiquinol.
- Altering the ability of skeletal muscle to repair and regenerate due to the anti-proliferative effects of statins. In one recent study, the viability of proliferating cells was reduced by 50 percent at a dose equivalent to 40 milligrams of Simvastatin -- the dose per day used in some patients. This could clearly have a negative effect on your skeletal muscles' ability to heal and repair themselves, and could lead to eventually becoming more or less incapacitated.
- Activating the atrogen-1 gene, which plays a key role in muscle atrophy. The breakdown of skeletal muscle tissue can in turn also lead to kidney failure.

Other serious and potentially life threatening side effects include, but are not limited to:

- An increase in cancer risk

- Potential increase in liver enzymes, so patients must be monitored for normal liver function

The Shocking “Secret” About Cholesterol You Probably Don’t Know

Most people don’t stop to think twice about taking statins to lower their cholesterol, because the public has been largely brainwashed to believe that cholesterol is the enemy.

But cholesterol is actually your friend and is crucial for a wide variety of vital functions in your body.

It’s an integral part of your cell membranes, and it’s also the precursor (the raw material) your body uses to make your steroid hormones -- one of which is vitamin D. Your skin contains cholesterol, and when UVB rays from the sun hits your skin it converts that form of cholesterol to vitamin D3, which is then transported to your blood. Your body then further converts it into the active form of vitamin D.

Further, the major reasons your body makes cholesterol in the first place, and why you have LDL (the so-called “bad” cholesterol), is to take the cholesterol to the tissue so you can make new cells or repair old damaged ones -- an extremely important process.

But that’s not all. When your cholesterol levels go too low, a host of negative events occur in your body.

To get the details on why cholesterol is so important, I strongly encourage you to read the excellent article by Ron Rosedale, MD, Cholesterol is NOT the Cause of Heart Disease.

How to Safely Lower High Cholesterol

First you need to find out if your cholesterol is actually too high to begin with. Personally, I believe anything above 330 is likely too high. But another powerful way to determine if you’re at risk from abnormal cholesterol metabolism is to check your ratio of HDL, or “good” cholesterol, and your total cholesterol.

Your HDL percentage is a very potent heart disease risk factor.

Simply divide your HDL level by your cholesterol. That percentage should ideally be above 25 percent. Typically, the higher the better, as there are no known side effects of having too high good cholesterol.

If your ratio falls below 15-20 percent you are at high risk, and below 10 percent, it’s a significant indicator of risk for heart disease.

Next, please realize that simply lowering your dietary cholesterol intake is not an effective primary strategy.

Why?

Because 75 percent of your cholesterol is produced by your liver, which is influenced by your insulin levels. Therefore, if you optimize your insulin levels, you will also regulate your cholesterol levels.

One of the most powerful ways you can do that is by exercising, and paying attention to the foods you eat. Foods that increase your insulin levels will also contribute to high cholesterol by making your liver produce more of it.

With that in mind, here are my primary recommendations for safely lowering and regulating your cholesterol levels:

- First, normalize your insulin levels by eliminating sugar and grains.
- Second, you can take a high-quality krill oil that is chock full of beneficial omega-3 fats.
- Eat the right foods for your nutritional type, and eat a good portion of your food raw.
- Additionally, if you are a man, or a woman who is in menopause, you should check your iron levels, as elevated levels of iron can cause major oxidative damage in the blood vessels, heart and other organs. Excess iron is also one of the major contributing factors of cancer risk.

- Regular exercise is another important tool that can help. When you exercise you increase your circulation and the blood flow throughout your body. The components of your immune system are also better circulated, which means your immune system has a better chance of fighting an illness before it has the opportunity to spread.
- Address your emotional challenges using the Meridian Tapping Technique (MTT).
- Avoid smoking and drinking alcohol excessively.

And remember this important point: if you choose to continue taking statin drugs, it is absolutely vital to supplement with coQ10. Unfortunately, many doctors fail to inform their patients of this fact.

If you're over 40, meanwhile, I would highly recommend taking a reduced form of coenzyme Q10 called ubiquinol, because it's far more effectively absorbed by your body.

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How Statin Drugs Wreck Your Muscles

February 19, 2008 | 158,386 views

Statins, a popular set of drugs used to lower cholesterol, can result in muscle weakness and pain, and even debilitating and life-threatening muscle damage. A new study offers the first evidence that a gene known as atrogenin-1 plays a key role in statin-related muscle toxicity.

Statins such as Lipitor, Zocor, Pavacol and Mevacor lower cholesterol by inhibiting HMG-CoA reductase, a key enzyme in cholesterol synthesis. But they may also activate the gene atrogenin-1 gene, which plays a key role in muscle atrophy.

Three separate tests showed that even at low concentrations, statin drugs led to atrogenin-1 induced muscle damage. As the concentration was increased, the damage increased as well.

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Dr. Mercola's Comments:

Statins, which are a class of drugs used to lower your cholesterol, are among the most commonly prescribed medications in the world, and I believe, one of the most unnecessary drugs there is.

With at least 12 million Americans taking statins, and experts' recommendations that another 23 million "should" be taking them, it's important to remain educated on this issue. Especially since statin drugs are linked to many, many dangerous side effects.

Are the Benefits Worth the Risks?

There are several different statin drugs currently available on the U.S. market. If you, or anyone you love takes any of these drugs, I highly recommend you review their prescribing information by clicking on the drug brand below. These "package inserts" will also tell you some (but surely not all) of the most common side effects associated with them.

- Lipitor (atorvastatin) - Pfizer
- Zocor (simvastatin) - Merck
- Pravachol (pravastatin) - Bristol-Myers Squibb
- Mevacor (lovastatin) - Merck
- Crestor (rosuvastatin) - AstraZeneca

Statins have been known to cause muscle weakness and pain, but no one knew exactly why. This latest study sheds some valuable information on the subject and adds to your arsenal when discussing whether or not you really need to be taking a statin drug with your doctor.

There are a small group of people with genetic enzyme defects that have cholesterol levels above 325-350. These are about the only individuals in my experience, who seem to benefit from statins. In my clinical experience over more than two decades and thousands of patients, there have been a grand total of three patients that required statins to control this genetic problem.

One thing is for sure. You should NOT ignore these symptoms, as they can deteriorate into even more dangerous conditions, including death. For example, Bayer's statin, Baycol, was pulled from the market in 2001 after 31 people died from rhabdomyolysis, a condition in which muscle tissue breaks down resulting in kidney failure.

Other serious and potentially life threatening side effects include, but are not limited to:

- An increase in cancer risk
- Immune system suppression
- Serious degenerative muscle tissue condition (rhabdomyolysis)
- Potential increase in liver enzymes so patients must be monitored for normal liver function

Why Statins are One of the Most Unnecessary Drugs in Medicine

Statin drugs work by preventing the formation of cholesterol, and reduce LDL cholesterol, which is considered the "bad" cholesterol.

There is no argument that these drugs do work very well at lowering your cholesterol levels. However, they in no way, shape or form, treat the cause of your problem. They are nothing more than a potentially toxic band-aid.

So just what is the problem with statins, and why don't you need them to manage your cholesterol levels?

Well, first of all, you need to understand that there is no such thing as "good" or "bad" cholesterol. Both HDL and LDL cholesterol perform vital functions in your body, which is why it's actually dangerous to bring your LDL levels down too low.

HDL (high density lipoprotein) and LDL (low density lipoprotein) are actually **proteins that transport the cholesterol to and from your tissues**. Cholesterol in turn is a precursor to steroid hormones. For example, you can't make testosterone or estrogen, cortisol, DHEA or pregnenolone, or a multitude of other steroid hormones that are necessary for health, without cholesterol. Even more importantly, you can't make new cell membranes without cholesterol.

So, the major reasons your body makes cholesterol in the first place, and why you have LDL, is to take the cholesterol to the tissue so you can make new cells or repair old damaged ones.

However, there are different sizes of LDL particles and **it's the LDL particle size that is relevant**. Unfortunately, most people don't hear about that part, and very rarely, if ever, get it tested. Naturally, the drug companies really don't want you to know that part of the science, because it would severely limit the number of people going on cholesterol-lowering drugs, since **statins do not modulate the size of the particles**.

The only way to make sure your LDL particles are large enough to not get stuck and cause inflammation and damage is through diet. In fact, it's one of the major things that insulin does. If you eat properly, which is really the only known good way to regulate LDL particle size, then it does the right thing; it takes the cholesterol to your tissues, the HDL takes it back to your liver, and nothing gets stuck causing damage.

The second thing you need to know is that statins work by reducing the enzyme that causes your liver to make cholesterol when it is stimulated by high insulin levels. Again, you can achieve the same, or better, result by simply reducing your insulin levels by eliminating sugar and most grains.

Additionally, statins are *non-specific inhibitors* of not just one, but a number of very important liver enzymes. For example, not only do they block HMG coenzyme A reductase, they also block Coenzyme Q10.

CoQ10 is a vital enzyme that your body needs for energy and cardiovascular health. It is widely recommended to repair heart damage, boost the function of the heart and acts as a protectant against heart attacks and valve damage. Additionally, CoQ10 has been shown to be beneficial in heart and lung cancer, as well as maintain cognitive function. Thus, when you take statins your production of this enzyme is dramatically depleted and you do not reap the health benefits associated with it.

What's the Best Way to Normalize Your Cholesterol?

Just about every person, other than the tiny minority with the genetic enzyme defects mentioned above, can normalize their cholesterol levels with the Total Health Program, which includes modifying your eating habits based on your body's unique nutritional type.

If you truly want to normalize your cholesterol levels, following these simple lifestyle changes can get you there:

- First, normalize your insulin levels by eliminating sugar and grains.
- Second, you can take a high-quality krill oil or fish oil that is chock full of beneficial omega-3 fatty acids.
- Additionally, if you are a man, or a woman who is in menopause, you should check your iron levels, as elevated levels of iron can cause major oxidative damage in the blood vessels, heart and other organs. Excess iron is also one of the major contributing factors of cancer risk.
- Regular exercise is another important tool that can help.
- Energy Psychology methods such as Emotional Freedom Techniques (EFT) can also be helpful for cholesterol. Read this press release for the possibilities. Doctors Use New Acupressure Technique to Lower Cholesterol and Triglyceride Levels: Medications Unnecessary
- Stick to the Healthy Dietary Advice You Read in this Newsletter!

The pen is mightier than the sword, it's said, and one of my goals is to send out the message that statin drugs are clearly not the weapon of choice for high cholesterol. I urge you to share this information as well, by forwarding this article to your friends and family.

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Is Nerve Damage The Rule, Not the Exception With Cholesterol Meds?

January 25, 2012 | 139,132 views

By Dr. Mercola

Spending on cholesterol-lowering drugs like statins increased by \$160 million in 2010, for a total spending of nearly \$19 billion in the U.S., the IMS Institute for Healthcare Informatics reported in their [Use of Medicines in the United States: Review of 2010](#).

In all, more than 255 *million* prescriptions were dispensed for these drugs in 2010, making them the most commonly prescribed type of medication in the United States.

Unfortunately, this excessive use is an artifact of a medical system that regards prescribing pills to lower cholesterol as a valid way to protect one's heart health -- even though the low "target" cholesterol levels have not been proven to be healthy ... and cholesterol is actually NOT the underlying culprit in heart disease.

Worse still, these drugs, which are clearly *not necessary* for the vast majority of people who take them, are *proven* to cause serious and significant side effects, including, as new research shows, definite nerve damage.

Are You Taking Drugs You Don't Need ... and Getting Nerve Damage as a Result?

It must be understood that any time you take a drug there is a risk of side effects.

Oftentimes, these risks are not fully understood, especially when multiple drugs enter the equation, and appear only *after* a drug has already been taken by millions of

Story at-a-glance

A new study found treatment with statin cholesterol-lowering drugs caused a clinically silent but still definite damage to peripheral nerves when taken for longer than 2 years

At least 88 other studies further link statin drugs to neurotoxicity (nerve damage), including 12 studies on statin-induced peripheral neuropathy

A separate study published in the Archives of Internal Medicine revealed statins increase the risk of diabetes for postmenopausal women by 48 percent, adding to an already established body of research on their diabetogenic properties

More than <i>255 million</i> prescriptions were dispensed for cholesterol-lowering drugs in 2010, making them the most commonly prescribed type of medication in the United States; however, for the vast majority of people they are unnecessary, often causing more harm than good

Your body needs cholesterol, and using drugs to lower it as low as it will go is not usually beneficial for your health; you can <i>optimize</i> your cholesterol levels so they're working in the proper balance with your body using natural lifestyle modifications

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people.

Even once a drug has been FDA-approved, you are depending on a limited number of clinical trials to dictate a drug's safety ... but it's impossible to predict how a drug will react when introduced into your system, in a real-world setting.

Not to mention, the accuracy of medical research is dubious at best.

In many ways, any time you take a drug YOU are the guinea pig, and unforeseen side effects are the rule, rather than the exception. In terms of statin drugs, side effects are already clearly apparent; at GreenMedInfo.com you can see 304 conditions that may be associated with the use of these drugs, and this is likely only the tip of the iceberg. Among one of the more well-known risks is harm to your muscles and peripheral nervous system with long-term use. Indeed, new research on 42 patients confirmed that:

"... long-term treatment with statins caused a clinically silent but still definite damage to peripheral nerves when the treatment lasts longer than 2 years."

If You Take Statins for Two Years or More, Nerve Damage Appears to be the Rule

What does it mean when you sustain damage to peripheral nerves? As reported by the National Institute of Neurological Disorders and Stroke (NINDS):

"Symptoms are related to the type of affected nerve and may be seen over a period of days, weeks, or years. Muscle weakness is the most common symptom of motor nerve damage. Other symptoms may include painful cramps and fasciculations (uncontrolled muscle twitching visible under the skin), muscle loss, bone degeneration, and changes in the skin, hair, and nails."

At GreenMedInfo.com you can see 88 studies on statin-induced neurotoxicity (nerve damage), with 12 studies further statin drugs directly to neuropathy, including chronic peripheral neuropathy. As explained by NINDS:

"Peripheral neuropathy describes damage to the peripheral nervous system, the vast communications network that transmits information from the brain and spinal cord (the central nervous system) to every other part of the body. Peripheral nerves also send sensory information back to the brain and spinal cord, such as a message that the feet are cold or a finger is burned. Damage to the peripheral nervous system interferes with these vital connections. Like static on a telephone line, peripheral neuropathy distorts and sometimes interrupts messages between the brain and the rest of the body."

"Because every peripheral nerve has a highly specialized function in a specific part of the body, a wide array of symptoms can occur when nerves are damaged."

"Some people may experience temporary numbness, tingling, and pricking sensations (paresthesia), sensitivity to touch, or muscle weakness. Others may suffer more extreme symptoms, including burning pain (especially at night), muscle wasting, paralysis, or organ or gland dysfunction. People may become unable to digest food easily, maintain safe levels of blood pressure, sweat normally, or experience normal sexual function. In the most extreme cases, breathing may become difficult or organ failure may occur."

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Some forms of neuropathy involve damage to only one nerve and are called mononeuropathies. More often though, multiple nerves affecting all limbs are affected-called polyneuropathy."

One of the more disturbing implications of this finding is that since statins damage the peripheral nerves, it is also highly likely that they damage the central nervous system (which includes the brain), as well. One study published in the journal Pharmacology in 2009, found statin-induced cognitive impairment to be a common occurrence, with 90% reporting improvement after drug discontinuation. There are, in fact, at least 12 studies linking memory problems with statin drug use in the biomedical literature, indicating just how widespread and serious a side effect statin-induced neurological damage really is.

Lower Your Cholesterol and Increase Your Diabetes Risk by Nearly 50%

As mentioned, neurological damage is only one potential risk of statins. They are also being increasingly associated with increased risk of developing diabetes.

Most recently, a study published in the Archives of Internal Medicine revealed statins increase the risk of diabetes for postmenopausal women by 48 percent! Statins appear to provoke diabetes through a few different mechanisms, the primary one being by increasing your insulin levels, which can be extremely harmful to your health. Chronically elevated insulin levels cause inflammation in your body, which is the hallmark of most chronic disease. In fact, elevated insulin levels lead to *heart disease*, which, ironically, prevention of is the primary reason for taking a statin drug in the first place!

As written on GreenMedInfo:

"The profound irony here is that most of the morbidity and mortality associated with diabetes is due to cardiovascular complications. High blood sugar and its oxidation (glycation) contribute to damage to the blood vessels, particularly the arteries, resulting in endothelial dysfunction and associated neuropathies due to lack of blood flow to the nerves. Statin drugs, which are purported to reduce cardiovascular disease risk through lipid suppression, insofar as they contribute to insulin resistance, elevated blood sugar, and full-blown diabetes, are not only diabetogenic but cardiotoxic, as well."

A separate meta-analysis has also confirmed that statin drugs are indeed associated with increased risk of developing diabetes. The researchers evaluated five different clinical trials that together examined more than 32,000 people. They found that the higher the dosage of statin drugs being taken, the greater the diabetes risk. The "number needed to harm" for intensive-dose statin therapy was 498 for new-onset diabetes -- that's the number of people who need to take the drug in order for one person to develop diabetes.

In even simpler terms, one out of every 498 people who are on a high-dose statin regimen will develop diabetes. (The lower the "number needed to harm," the greater the risk factor is. As a side note, the "number needed to treat" per year for intensive-dose statins was 155 for cardiovascular events. This means that 155 people have to take the drug in order to prevent *one* person from having a cardiovascular event.)

The following scientific reviews also reached the conclusion that statin use is associated with increased incidence of new-onset diabetes:

- A 2010 meta-analysis of 13 statin trials, consisting of 91,140 participants, found that statin therapy was associated with a 9 percent increased risk for incident diabetes. Here, the number needed to harm was 255 over four years, meaning for every 255 people on the drug, one developed diabetes as a result of the drug in that period of time.
- In a 2009 study, statin use was associated with a rise of fasting plasma glucose in patients with and without diabetes, independently of other factors such as age, and use of aspirin or angiotensin-converting enzyme inhibitors. The study included data from more than 345,400 patients over a period of two years. On average, statins increased fasting plasma glucose in non-diabetic statin users by 7 mg/dL, and in diabetics, statins increased glucose levels by 39 mg/dL.

Side Effects Often Don't Show Up Immediately ...

Oftentimes statins do not have any *immediate* side effects, and they are quite effective at lowering cholesterol levels by 50 points or more. This makes it *appear* as though they're benefiting your health, and health problems that develop later on are frequently misinterpreted as brand new, separate health problems.

Again, the vast majority of people do not need statin drugs, and if you are one of them, taking them is only going to expose you to serious, unnecessary risks!

If your physician is urging you to check your total cholesterol, please be aware that this test will tell you virtually nothing about your risk of heart disease, unless it is 330 or higher. HDL percentage is a far more potent indicator for heart disease risk. Here are the two ratios you should pay attention to:

1. HDL/Total Cholesterol Ratio: Should ideally be above 24 percent. If below 10 percent, you have a significantly elevated risk for heart disease.
2. Triglyceride/HDL Ratio: Should be below 2.

To understand why most people don't need a statin drug, you first need to realize that cholesterol is NOT the cause of heart disease. Your body NEEDS cholesterol -- it is important in the production of cell membranes, hormones, vitamin D and bile acids that help you to digest fat. Cholesterol also helps your brain form memories and is vital to your neurological function. For more information about cholesterol, and why conventional advice to reduce your cholesterol to ridiculously low levels is foolhardy, please listen to this interview with Dr. Stephanie Seneff.



Urgent Information: If You Take Statins You Need CoQ10

It's extremely important to understand that taking a statin drug without also taking CoQ10 puts your health in serious jeopardy. Unfortunately, this describes the majority of people who take them in the United States.

CoQ10 is a cofactor (co-enzyme) that is essential for the creation of ATP molecules, primarily in your mitochondria,

which you need for cellular energy production. Organs such as your heart have higher energy requirements, and therefore require more CoQ10 to function properly (cardiac muscle cells have up to 200 times more mitochondria, and hence 200 times higher CoQ10 requirements, than skeletal muscle). Statins *deplete your body of CoQ10*, which can have devastating results.

As your body gets more and more depleted of CoQ10, you may suffer from fatigue, muscle weakness and soreness, and eventually heart failure. Interestingly, heart failure, not heart attacks, is now the leading cause of death due to cardiovascular diseases. Coenzyme Q10 is also very important in the process of neutralizing free radicals. So when your CoQ10 is depleted, you enter a vicious cycle of increased free radicals, loss of cellular energy, and damaged mitochondrial DNA.

If you decide to take a CoQ10 supplement and are over the age of 40, it's important to choose the "reduced" version, called ubiquinol. The reduced form is electron-rich and therefore can donate electrons to quench free radicals, i.e. function as an antioxidant, and is much more absorbable, as nutrients must donate electrons in order to pass through membrane of cells. In other words, ubiquinol is a FAR more effective form -- I personally take 200 mg a day since it has such far-ranging benefits, including compelling studies suggesting improvement in lifespan.

How to Optimize (Not Necessarily Lower) Your Cholesterol Without Drugs

Seventy-five percent of your cholesterol is produced by your liver, which is influenced by your insulin levels. Therefore, if you optimize your insulin level, you will automatically optimize your cholesterol! By modifying your diet and lifestyle in the following ways, you can safely modify your cholesterol without risking your health by taking statin drugs:

- Reduce, with the plan of eliminating, grains and sugars in your diet, replacing them with mostly whole, fresh vegetable carbs. Also try to consume a good portion of your food raw.
- The average American consumes 50% of their diet as carbs. Most would benefit by lowering their carb intake to 25% and replacing those carbs with high quality fats.
- Make sure you are getting enough high quality, animal-based omega 3 fats, such as krill oil.
- Other heart-healthy foods include olive oil, palm and coconut oil, organic raw dairy products and eggs, avocados, raw nuts and seeds, and organic grass-fed meats, as described in my nutrition plan.
- Exercise daily.
- Avoid smoking or drinking alcohol excessively.
- Be sure to get plenty of good, restorative sleep.

The goal of the tips above is not to necessarily *lower* your cholesterol as low as it can go; the goal is to *optimize* your levels so they're working in the proper balance with your body.

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900 Studies Show Statin Drugs are Dangerous

February 21, 2009 | 102,426 views

A new paper cites nearly 900 studies on the adverse effects of HMG-CoA reductase inhibitors, also called statins, which are a class of drugs widely used to treat high cholesterol. The review provides the most complete picture to date of reported side effects of statins.

Muscle problems are the best known of statin drugs' adverse side effects, but cognitive problems and pain or numbness in the extremities are also widely reported. A spectrum of other problems, ranging from blood glucose elevations to tendon problems, can also occur as side effects.

The paper summarizes powerful evidence that statin-induced injury to the function of the body's energy-producing cells, called mitochondria, underlies many of the adverse effects that occur to patients taking statin drugs. Statins lower levels of coenzyme Q10, a compound central to the processes of making energy within mitochondria and eliminating dangerous compounds called free radicals.

Higher statin doses and more powerful statins are linked to greater risk of developing side effects.

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Dr. Mercola's Comments:

Statin drugs, which are a class of drugs used to lower your cholesterol, are among the most commonly prescribed medications in the world, and I believe, one of the most unnecessary drugs there are.

Use of statins rose by a whopping 156 percent between 2000 and 2005, rising from 15.8 million people to 29.7 million people. Spending on these drugs jumped from \$7.7 billion to \$19.7 billion annually over the same period. This is a travesty in light of the **overwhelming evidence** – nearly 900 studies compiled in the review listed above -- showing the damage statins

inflict.

The Dangerous Side Effects of Cholesterol-Lowering Drugs

Statin drugs are some of the most unnecessary drugs on the market today.

Why?

Because their use is based on a misinformed notion that cholesterol is the nemesis of good health in the first place. I've said it before, but it bears repeating: Cholesterol is not the cause of heart disease.

Making matters worse, statins are also some of the most dangerous and are fraught with side effects.

Confusing matters, however, is the fact that statin drugs oftentimes do not have any *immediate* side effects, and they are quite effective, capable of lowering cholesterol levels by 50 points or more. This makes it appear as though they're benefiting your health, and health problems that appear down the line are frequently not interpreted as a side effect of the drug, but rather as brand new, separate health problems.

But there's an ever-growing body of evidence showing that potentially serious side effects begin to manifest several months after the commencement of therapy.

For starters, some of the possible consequences of taking statins in strong doses, or for a lengthy period of time, include:

- Cognitive loss
- Neuropathy
- Anemia
- Acidosis
- Frequent fevers
- Cataracts
- Sexual dysfunction

Other serious and potentially life threatening side effects include, but are not limited to:

- An increase in cancer risk
- Immune system suppression
- Serious degenerative muscle tissue condition (rhabdomyolysis)
- Pancreatic dysfunction
- Hepatic dysfunction. (Due to the potential increase in liver enzymes, patients must be monitored for normal liver function)

According to the latest review published in the American Journal of Cardiovascular Drugs, adverse effects are dose dependent, and your health risks are also amplified by a number of factors, such as:

- Drug interactions that increase statin potency
- Metabolic syndrome

- Thyroid disease
- Other genetic mutations linked to mitochondrial dysfunction

How Statin Drugs Destroy Your Muscles

The most common side effect is muscle pain and weakness, a condition called rhabdomyolysis. Unfortunately, many older adults are likely unable to distinguish between muscle pain related to a statin effect versus an effect of aging, and therefore adverse effects of statins in older adults may be grossly under-reported.

Researchers have now discovered that there is more than one way this condition can arise as a result of taking statins, including:

- Depleting your body of Co-Q10, a nutrient that supports muscle function. In my view it is medical malpractice to prescribe a statin drug without recommending one take CoQ10, or better yet ubiquinol.
- Altering the ability of skeletal muscle to repair and regenerate due to the anti-proliferative effects of statins. In one recent study, the viability of proliferating cells was reduced by **50 percent** at a dose equivalent to 40 milligrams of Simvastatin – the dose per day used in some patients. This could clearly have a negative effect on your skeletal muscles' ability to heal and repair themselves, and could lead to eventually becoming more or less incapacitated.
- Activating the atrogin-1 gene, which plays a key role in muscle atrophy.

The breakdown of skeletal muscle tissue can in turn also lead to kidney failure.

The industry insists that only 2-3 percent of patients get muscle aches and cramps but according to one study, **98 percent** of patients taking Lipitor and one-third of the patients taking Mevacor (a lower-dose statin) suffered from muscle problems!

Adding insult to injury, active people are actually **more** likely to develop problems from statin use than those who are sedentary. In a study carried out in Austria, only six out of 22 athletes with familial hypercholesterolemia were able to endure statin treatment. The others discontinued treatment because of muscle pain.

The Importance of CoQ10

There are no official warnings in the U.S. regarding CoQ10 depletion from taking statin drugs, and many physicians fail to inform you about this problem as well. Labeling in Canada, however, clearly warns of CoQ10 depletion and even notes that this nutrient deficiency *"could lead to impaired cardiac function in patients with borderline congestive heart failure."*

Coenzyme Q10 is an antioxidant compound that is central to the process of energy production within your mitochondria, and in the quenching of free radicals.

Statin have been found to impair mitochondrial function, which leads to increased production of free radicals.

At the same time, statins also lower your CoQ10 levels by blocking the pathway involved in cholesterol production – the same pathway by which Q10 is produced. Statins also reduce the blood cholesterol that transports CoQ10 and other fat-soluble antioxidants.

The loss of CoQ10 leads to loss of cell energy and increased free radicals which, in turn, can further damage your mitochondrial DNA, effectively setting into motion an evil circle of increasing free radicals and mitochondrial damage.

This explains why statins are particularly dangerous if you have *existing* mitochondrial damage, as your body relies on ample CoQ10 to bypass this damage.

High blood pressure and diabetes are linked to higher rates of mitochondrial problems, so if you have either of these conditions your risk of statin complications increases, according to the authors of this latest review.

Additionally, since statins can cause progressive damage to your mitochondria over time, and your mitochondria tend to weaken with age anyway, new adverse effects can develop the longer you're on the drug.

Said co-author Beatrice Golomb, MD, PhD:

"The risk of adverse effects goes up as age goes up, and this helps explain why. This also helps explain why statins' benefits have not been found to exceed their risks in those over 70 or 75 years old, even those with heart disease."

How to Lower Your Cholesterol Naturally

There's really no reason to take statins and suffer the consequences from these ill-conceived drugs. These simple guidelines have the power to lower your cholesterol naturally, without any dangerous side effects:

If you truly want to normalize your cholesterol levels, following these simple lifestyle changes can get you there:

- First, normalize your insulin levels by eliminating sugar and grains.
- Second, you can take a high-quality krill oil or fish oil that is chock full of beneficial omega-3 fatty acids.
- Eat the right foods for your nutritional type, and eat a good portion of your food raw.
- Additionally, if you are a man, or a woman who is in menopause, you should check your iron levels, as elevated levels of iron can cause major oxidative damage in the blood vessels, heart and other organs. Excess iron is also one of the major contributing factors of cancer risk.
- Regular exercise is another important tool that can help. When you exercise you increase your circulation and the blood flow throughout your body. The components of your immune system are also better circulated, which means your immune system has a better chance of fighting an illness before it has the opportunity to spread.
- Energy Psychology methods such as Emotional Freedom Techniques (EFT) can also be helpful for cholesterol. Read this press release for the possibilities. Doctors Use New Acupressure Technique to Lower Cholesterol and Triglyceride Levels: Medications Unnecessary
- Avoid smoking and drinking alcohol excessively.

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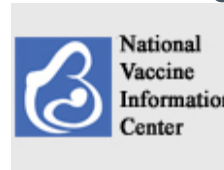
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Tendinous disorders attributed to statins: A study on

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[Arthritis Rheum.](#) 2008 Mar 15;59(3):367-72. doi: 10.1002/art.23309.

Tendinous disorders attributed to statins: a study on ninety-six spontaneous reports in the period 1990-2005 and review of the literature.

Marie I¹, Delafenêtre H, Massy N, Thuillez C, Noblet C; Network of the French Pharmacovigilance Centers.

Author information**Abstract**

OBJECTIVE: To date, **statins** have more often been considered a safe medication. However, with the wider use of **statins**, severe side effects have also been reported to occur in statin-treated patients, especially myositis and rhabdomyolysis. Currently, however, statin-associated tendon impairment has only been described anecdotally. The aim of this retrospective **study** was to evaluate tendon manifestations occurring in statin-treated patients.

METHODS: All **reports** in which a statin was listed spontaneously as a causative suspect medication of tendon complications in the network of the 31 French Pharmacovigilance Centers from **1990-2005** were included in this **study**. Data collection included patient characteristics and tendon adverse effects (time to onset of adverse effects, pattern, site of injury, and outcome). The percentage of the **reports** was further calculated for each statin.

RESULTS: Data were collected from 96 patients with a median age of 56 years; patients exhibited tendinitis (n = 63) and tendon rupture (n = 33). Tendinopathy more often occurred within the first year after statin initiation (59%). Tendon manifestations were related to atorvastatin (n = 35), simvastatin (n = 30), pravastatin (n = 21), fluvastatin (n = 5), and rosuvastatin (n = 5). Statin was reinitiated in 7 patients, resulting in recurrence of tendinopathy in all cases.

CONCLUSION: Our series suggests that statin-**attributed tendinous** complications are rare, considering the huge number of statin prescriptions. We suggest that prescribers should be aware of **tendinous** complications related to **statins**, particularly in risky situations, including physical exertion and association with medications known to increase the toxicity of **statins**.

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[Tendinopathy and statin use: the role of matrix metalloproteinases or eicosanoids? Comment on the letter by Beri and Khattri and the article by Marie et al. \[Arthritis Rheum. 2009\]](#)


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Cholesterol-Lowering Statins Tied to Tendon Woes

Mar. 24

By Ed Edelson
HealthDay Reporter

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FRIDAY, Feb. 29 (HealthDay News) -- Cholesterol-lowering statins could raise the risk for tendon problems, French researchers report.

However, "our series suggests that statin-attributed tendinous complications are rare, considering the huge number of statin prescriptions," wrote physicians at Rouen University Hospital.

Reporting in the March issue of *Arthritis Care and Research*, they drew on a national database of side effects reported in France between 1990 and 2005.

In those years, French doctors reported a total of 4,597 statin-related side effects. About 2 percent of those involved problems such as tendinitis or tendon tears, usually arising within eight months of beginning statin therapy. The year-by-year incidence of reported tendon side effects was small -- 13 of 446 statin-attributed side effects in 2003, 19 of 528 in 2004, and 11 of 421 in 2005.

But there have been other reports of unwanted side effects linked to statins, including an increased risk of brain hemorrhage in people taking the drugs after stroke. Most notably, one 2005 study found a higher incidence of muscle problems with Crestor, the newest and most powerful of the cholesterol-busting medications.

The problem with all such studies, including the new French survey, is that they depend on doctors' reporting side effects, said Dr. Richard Karas, director of the Preventive Cardiology Center and Women's Health Center at Tufts-New England Medical Center, who worked on the Crestor report.

"The proportion of events reported is small," Karas said. "If health-care providers don't consider a side effect to be a side effect, they don't report it."

However, the data reported by the French researchers agrees with that collected in the United States, Karas said. The risk for tendon trouble appears to hit men more often than women, he added. "There is a preponderance of men in both papers, about two to one," he noted.

"The importance of these findings is that they put the issue on the radar screen, so you can see if the risk is the same as in the general population," Karas said.

Another American study of statin side effects, about to be reported, finds that tendon problems are not common but do occur because the drugs impair the mitochondria, the energy-producing units of cells, said Dr. Beatrice Golomb, lead author of that study and an associate professor of medicine and of family and preventive medicine at the University of California at San Diego. This cellular impairment can also lead to muscle problems, she said.

It's impossible to give an overall number for incidence of the tendon problems linked to statin use because, "that depends on the dose of statins and the illness of the patient," Golomb said. "Older people with more medical problems tend to have more side effects."

"However you slice it, the tendon problems are less widely reported than muscle problems," she

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said.

Golomb and Karas differed on the importance of the adverse side effects of statins, which are among the most widely prescribed drugs in the world.

"I'm strongly in the camp that says there is overwhelming evidence that, overall, statins are safe and play an important role in our attempt to reduce heart attacks and stroke," Karas said. "The overall risk-benefit ratio is tilted strongly toward benefit."

But the balance of benefit over risk applies only "if you happen to be a middle-aged man with heart disease or at risk of heart disease," Golomb said. "For other groups, the risk outweighs the benefits."

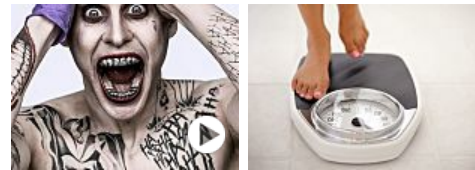
More information

There's more on cholesterol-lowering medicines at the [American Heart Association](#).

SOURCES: Richard Karas, M.D., director, Preventive Cardiology Center, Tufts-New England Medical Center, Boston; Beatrice Golomb, M.D., associate professor, medicine and family and preventive medicine, University of California, San Diego; March 2008 *Arthritis Care and Research*

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Tendon problems a possible side effect of statin therapy

Michael O'Riordan

March 03, 2008

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Rouen, France - A new review published this week suggests that tendon impairments might be another side effect associated with the use of statins [1]. Published online February 29, 2008 in *Arthritis & Rheumatism: Arthritis Care & Research*, the review suggests that clinicians be aware of the possibility of tendon complications, including tendonitis and even tendon rupture, especially in patients who might be at higher risk of developing these side effects.

Those who might be at greater risk, write lead investigator **Dr Isabelle Marie** (Rouen University Hospital, France) and colleagues, include patients with metabolic disorders, patients who exert themselves physically throughout the day, and patients taking other drugs that might increase the toxicity of statins, such as steroids or antibiotics like fluoroquinolone.

The authors stress, however, that statin-associated tendon impairments are extremely rare, and none have been reported in pre- and postmarketing studies, including all the large statin trials. Anecdotal reports, however, have been described in the literature. With the anecdotal evidence in mind, the group retrospectively sought to identify all tendinous disorders attributable to statin therapy over a 15-year period. From 1990 to 2005, 96 spontaneous reports of tendon complications were reported to 31 French Pharmacovigilance Centers.

The average age of those who experienced problems was 56 years. The median time to onset of the side effect was 243 days, although complications arose in one patient within 24 hours of taking the statin. Nearly one-third of those experiencing tendon complications had an associated condition that favored the onset of tendon side effects, such as diabetes, hyperuricemia, and participation in sports.

The most common complication was tendonitis, followed by tendonitis with tendon rupture and de novo tendon rupture. Marie and colleagues note that complications were serious enough for 17 patients to report to a hospital, and 19 patients had significant functional difficulties, such as problems walking, decreased flexion, bruising, and pain.

The researchers write that the tendon disorders could be reasonably attributed to statin therapy because "there was a temporal relationship between onset of tendinous signs and the initiation of statin therapy." The problems cleared up or improved after stopping the drugs and recurred in seven patients who were restarted on statins.

The authors note that the side effects occurred with all the statins—atorvastatin, fluvastatin, pravastatin, rosuvastatin, and simvastatin—but that there is no known reason why the drugs might produce these injuries. Current French recommendations include tendon disorders on the list of adverse effects of statins, but future studies are needed to confirm the relationship and to determine the prevalence and incidence of statin-associated tendinopathy, conclude the group.

References

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Statin therapy and musculoskeletal side effects

The use of 3-hydroxy-3-methylglutaryl coenzyme A reductase inhibitors, or statins, has had a major role in decreasing cardiovascular risk over the past three decades. Statins have become one of the most prescribed medication classes in modern medicine. However, the efficacy of statins is limited in part by statin discontinuation.

Juan P. Brito Campana, MBBS, of the Division of Endocrinology, Diabetes, Metabolism, and Nutrition at Mayo Clinic's campus in Rochester, Minnesota, says: "In some cohorts, half of all patients discontinue statin therapy within two years of their prescription. Discontinuation is frequently due to the development of musculoskeletal complaints. The incidence of these complaints is between 1 percent and 5 percent in randomized controlled trials and 10 percent in large observational studies. The key challenge for the clinician is to find a way to preserve the cardiovascular benefits of statins in patients experiencing musculoskeletal side effects attributed to statins."

A practical definition

Statin-associated musculoskeletal syndrome (SAMS) comprises musculoskeletal symptoms or signs (muscle or tendon discomfort, pain, or impaired function) that develop while the patient is taking statins, decrease the health-related quality of life of the patient and resolve after statin discontinuation. Most complaints are not associated with abnormalities of creatine kinase (CK), which is an imperfect marker of muscle damage.

Risk factors for SAMS

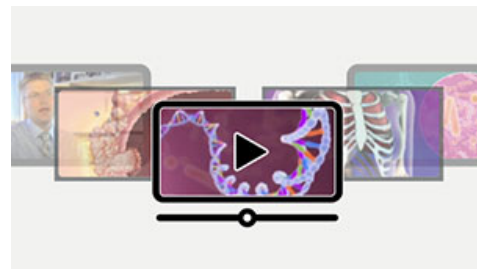
[Vinaya Simha, MBBS, M.D.](#), of the Division of Endocrinology, Diabetes, Metabolism, and Nutrition at Mayo Clinic in Rochester, Minnesota, explains: "A systematic review of 27,548 patients found

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a greater incidence of SAMS (odds ratio = 9.97; 95 percent confidence interval, 1.28 to 77.92) in patients receiving intensive-dose statin therapy compared with standard-dose therapy. In addition, the risk of SAMS may depend on the type of statin used.

"An article published in Cardiovascular Drugs and Therapy in 2005 about the Prediction of Muscular Risk in Observational conditions (PRIMO) study reported different rates of SAMS with fluvastatin 40 mg (5 percent), pravastatin 40 mg (11 percent) and simvastatin 40 to 80 mg (18 percent). A meta-analysis including 71,108 people, 36,062 on statins and 35,046 on placebo, reported the greatest risk of SAMS with atorvastatin and the least risk with fluvastatin.

"Different rates have been attributed to pharmacological differences between statins. For example, rosuvastatin and pravastatin are primarily metabolized by cytochrome 2C9, a site with fewer drug-drug interactions than cytochrome 3A4, which metabolizes simvastatin, lovastatin and atorvastatin. Drugs inhibiting glucuronidation, such as gemfibrozil, or drugs affecting cytochrome 3A4 activity, such as amiodarone, protease inhibitors, niacin, azole antifungals, macrolides and nondihydropyridine calcium channel blockers, affect the clearance and increase the blood levels of statins."

Other important risk factors for SAMS are:

- Age > 65 years
- Family or personal history of SAMS
- Unexplained muscle cramps
- Hypothyroidism
- Vitamin D deficiency
- Rare hereditary metabolic muscle diseases

Establishing the diagnosis of SAMS

Dr. Simha highlights: "The clinician needs to consider whether the patient complaint represents SAMS or an alternative diagnosis. After excluding alternative diagnoses, clinicians should determine the extent to which the musculoskeletal symptoms experienced affect the quality of life of the patient. This would include disruptions or impairments during work, recreation or sleep attributed to SAMS."

Assess and consider the potential benefit from statins

Clinicians and patients should review the potential value of statins. Using state-of-the-art risk communication tools, such as the Statin Choice Decision Aid, clinicians can explain to patients what the cardiovascular risk reduction means so that patients can consider whether the pursuit of this reduction is worth the work and potential side effects associated with therapeutic trials of other statins.



Approach to the patient with SAMS

Dr. Brito Campana notes: "Patients at very low cardiovascular risk will likely opt to focus their health efforts in areas other than lowering lipid fractions and cardiovascular risk. Clinicians should reassure these patients because some might have been mistakenly informed that they were at high risk of cardiovascular events. Patients at high cardiovascular risk who value the risk reduction afforded by statins and are willing to run the risk of SAMS to find the right statin will proceed with restarting statins. Patients at high risk who are less willing to experience SAMS may instead choose to focus on other ways to reduce cardiovascular risk."

Restarting statins

If the diagnosis of SAMS was correct and there were no risk factors to modify, SAMS will likely recur after the same statin is resumed at the same dose. Dr. Simha suggests: "Two modifications may reduce the risk of recurrence of SAMS: switching to another statin and decreasing the dose. The statins with the lowest rates of SAMS include pravastatin, fluvastatin and rosuvastatin. Using a low dose — either by reducing the daily dose or by reducing the frequency of administration — of any of these could achieve the goal of SAMS-free adherence to statins."

Conclusion

Dr. Brito Campana concludes: "Instead of taking a purely technical approach, we suggest that clinicians engage the patient in a dialog about the promised quantified benefits of statins in light of their potential to cause SAMS. Patients should recognize there are other interventions also capable of reducing their cardiovascular risk that they may have already implemented or may be available to them to use instead of statins. For patients who value the risk reduction with statins, clinicians should prescribe therapeutic trials with statins associated with low risk of SAMS and administered at lower doses or frequency. A close partnership with the patient may lead to a greater proportion of patients who are able to achieve their goals with therapies that do more good than harm."

For more information

Bruckert E, et al. [Mild to moderate muscular symptoms with high-dosage statin therapy in hyperlipidemic patients — The PRIMO study](#). Cardiovascular Drugs and Therapy. 2005;19:403.

[Statin Choice Decision Aid](#). Mayo Clinic.

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