Statins Shown to Nullify Benefits of Exercise

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By Dr. Mercola

Statins are now among the most widely prescribed drugs on the market with one in four Americans over 45 taking them, and are the number one profit-maker for the pharmaceutical industry, largely due to relentless and highly successful direct-to-consumer advertising campaigns.

In fact, a recent study assessing the effect of direct-to-consumer drug advertising concluded that TV ads for statins may be a driving factor of overdiagnosis of high cholesterol and overtreatment with the drugs.[1]

Statins are HMG-CoA reductase inhibitors, that is, they act by blocking the enzyme in your liver that is responsible for making cholesterol (HMG-CoA reductase).

The fact that statin drugs cause side effects is well established—there are over 900 studies proving their adverse effects, which run the gamut from muscle problems to increased cancer risk.

The biggest "sham" of all is that statin drugs, which millions are taking as a form of "preventive medicine" to protect their heart health, can have detrimental effects on your heart.

For example, a study published just last year in the journal *Atherosclerosis*[2], showed that statin use is associated with a 52 percent increased prevalence and extent of calcified coronary plaque compared to non-users. And coronary artery calcification is the *hallmark* of potentially lethal heart disease!

Now, researchers have uncovered yet another MAJOR problem associated with these drugs. One of the major benefits of exercise is the beneficial impact it has on your heart health, and exercise is a primary strategy to naturally maintain healthy cholesterol levels. Alas, if you take a statin drug, you're likely to forfeit any and all health benefits of your exercise.

As reported by *The New York Times*[3]:

> *"The drugs routinely are prescribed for those with high cholesterol and other risk factors for heart disease, and some physicians believe that they should be used prophylactically by virtually everyone over 50.*
>
> *... [P]eople who should benefit the most from exercise — those who are sedentary, overweight, at risk of heart disease or middle-aged — are also the people most likely to be put on statins, possibly undoing some of the good of their workouts.*
>
> *... In past studies, researchers have shown that statins reduce the risk of a heart attack in people at high risk by 10 to 20 percent for every 1-millimole-per-liter reduction in blood cholesterol levels (millimoles measure the actual number of cholesterol molecules in the bloodstream), equivalent to about a 40-point drop in LDL levels.*
>
> *Meanwhile, improving aerobic fitness by even a small percentage through exercise likewise has been found to lessen someone's likelihood of dying prematurely by as much as 50 percent.*
>
> *... But until the current study, no experiment scrupulously had explored the interactions of statin drugs and workouts in people. And the results, as it turns out, are worrisome."*

Statins Can Undo the Benefits of Exercise

The study, published in the *Journal of the American College of Cardiology*[4], discovered that statin use led to dramatically reduced fitness benefits from exercise, in some cases actually making the volunteer LESS fit than before!

The participants in the study included 37 overweight, sedentary men and women, all of whom had symptoms of metabolic problems, such as high blood pressure or excess abdominal fat. None of them had exercised regularly within the past 12 months, and most had slightly but not excessively elevated cholesterol levels.

Before the trial, muscle biopsies were taken from each participant to evaluate mitochondrial content, and their aerobic fitness was determined using treadmill testing. All participants were instructed to maintain their regular diet. The participants were then divided into two groups. One group was given a daily 40 mg dose of simvastatin (Zocor). The other group did not receive any medication. Both groups then began a supervised 12-week exercise program, walking or jogging on a treadmill for 45 minutes, five days a week. At the end of the three-month long trial, their aerobic fitness and muscles were retested. The results were astounding:

- On average, unmedicated volunteers improved their aerobic fitness by more than 10 percent. Mitochondrial content activity increased by 13 percent
- Volunteers taking 40mg of simvastatin improved their fitness by a mere 1.5 percent on average, and some had *reduced* their aerobic capacity at the end of the

Story at-a-glance

- Exercise is a foundational strategy to naturally maintain healthy cholesterol levels and optimize your heart health. However, research now shows that if you take a statin drug, you're likely to forfeit any and all health benefits of your exercise
- Volunteers taking a statin improved their fitness by just 1.5 percent, and some had reduced aerobic capacity at the end of a 12-week fitness program. Mitochondrial content activity also decreased by an average of 4.5 percent
- In comparison, unmedicated volunteers improved their aerobic fitness by more than 10 percent after the 12-week fitness program, and their mitochondrial content activity increased by 13 percent
- Statin drugs, which millions are taking as a form of "preventive medicine" to protect their heart health, can have detrimental effects on your heart

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According to senior study author John P. Thyfault, a professor of nutrition and exercise physiology at the University of Missouri[5]:

> *"Low aerobic fitness is one of the best predictors of premature death. And if statins prevent people from raising their fitness through exercise, then that is a concern."*

How Statins Might Undo Fitness Benefits and Make Your Heart Health Worse

The key to understanding why statins prevent your body from reaping the normal benefits from exercise lies in understanding what these drugs do to your mitochondria—the energy chamber of your cells, responsible for the utilization of energy for all metabolic functions.

The primary fuel for your mitochondria is Coenzyme Q10 (CoQ10), and one of the primary mechanisms of harm from statins in general appears to be related to CoQ10 depletion. This also explains why certain statin users in the featured trial ended up with *worse* aerobic fitness after a steady fitness regimen.

It's been known for many decades that exercise helps to build and strengthen your muscles, but more recent research has revealed that this is just the tip of the iceberg when it comes to the potential role exercise can play in your health. A 2011 review published in *Applied Physiology, Nutrition and Metabolism*[6] pointed out that exercise induces changes in mitochondrial enzyme content and activity (which is what they tested in the featured study), which can increase your cellular energy production and in so doing decrease your risk of chronic disease.

The researchers stated:

> *"Increasing evidence now suggests that exercise can induce mitochondrial biogenesis in a wide range of tissues not normally associated with the metabolic demands of exercise. Perturbations [changes] in mitochondrial content and (or) function have been linked to a wide variety of diseases, in multiple tissues, and exercise may serve as a potent approach by which to prevent and (or) treat these pathologies."*

Increasing mitochondrial activity is incredibly important because free radicals, which are toxic byproducts of metabolism as well as exposures to chemicals, pollutants and other toxins, can overwhelm your body's defenses, leading to oxidative damage to cells and tissues that can destroy cellular proteins, lipids and DNA, as well as lead to the loss of mitochondrial function. In the long-term, irreversible damage in the mitochondria can occur, leading to:

- Lower threshold for physical exercise
- Impaired ability to utilize carbohydrates and fat for energy
- Insulin resistance
- Excessive weight gain
- Accelerated aging

If You're on a Statin Drug, You MUST Take CoQ10...

If you take a statin drug without supplementing with CoQ10—or ideally, the reduced form, called ubiquinol, which is far more effective—your health is at serious risk. CoQ10 is used by *every* cell in your body, but especially your heart cells. Cardiac muscle cells have up to 200 times more mitochondria, and hence 200 times higher CoQ10 requirements than skeletal muscle.

Now imagine if you start straining your heart with exercise and not counteracting the CoQ10 depletion caused by the drug... it's no wonder, really, that statin users couldn't improve their fitness levels! There simply wasn't enough mitochondrial fuel in their system. This is why supplementing with ubiquinol or CoQ10 is so critical when you're taking a statin drug. A recent study in the *European Journal of Pharmacology*[7] showed that ubiquinol effectively rescued cells from the damage caused by the statin drug simvastatin, thereby protecting muscle cells from myopathies.

Premature aging is yet another side effect of statin drugs, and it's also a primary side effect of having too little CoQ10. Deficiency in this nutrient also accelerates DNA damage, and because CoQ10 is beneficial to heart health and muscle function this depletion leads to fatigue, muscle weakness, soreness and, ultimately, *heart failure*...

Again demonstrating the necessity of CoQ10 supplementation during statin therapy, a recent study[8] evaluating the benefits of CoQ10 and selenium supplementation for patients with statin-associated myopathy found that, compared to those given a placebo, the treatment group experienced significantly less pain, decreased muscle weakness and cramps, and less fatigue.

Statins also interfere with the mevalonate pathway, which is the central pathway for the steroid management in your body. This too could be a contributing factor as to why statins have such a detrimental impact on your ability to reap health benefits from exercise. As previously explained by Dr. Ron Rosedale:

> *"First and foremost, cholesterol is a vital component of every cell membrane on Earth. In other words, there is no life on Earth that can live without cholesterol. That will automatically tell you that, in and of itself, it cannot be evil. In fact, it is one of our best friends. We would not be here without it. No wonder lowering cholesterol too much increases one's risk of dying. Cholesterol is also a precursor to all of the steroid hormones. You cannot make estrogen, testosterone, cortisone, and a host of other vital hormones without cholesterol."*

Beware the Health Hazards of Statin Drugs!

First, if you are a woman, it's critical for you to know that statins are classified as a "pregnancy Category X medication" meaning, *it causes serious birth defects*, and should NEVER be used if you're pregnant or planning a pregnancy. Last year, the US Food and Drug Administration[9] (FDA) also announced it's considering additional warning labels for statin drugs. Among them are warnings that statins may increase your risk of:

- Liver damage
- Memory loss and confusion
- Type 2 diabetes
- Muscle weakness (for certain statins)

In all, statin drugs have been directly linked to over 300 side effects[10], including:

Cognitive loss	Neuropathy	Anemia
Acidosis	Frequent fevers	Cataracts
Sexual dysfunction	An increase in cancer risk	Pancreatic dysfunction
Immune system suppression	Muscle problems, polyneuropathy (nerve damage in the hands and feet), and rhabdomyolysis, a serious degenerative muscle tissue condition	Hepatic dysfunction (Due to the potential increase in liver enzymes, patients must be monitored for normal liver function)

Exercise Is Important for Heart Health

As mentioned in the featured article, improving your aerobic fitness by even just a small amount can cut your risk of premature death in half. Clearly, taking a drug that decimates your CoQ10 stores, thereby contributing to worsening heart health in the long run, while simultaneously obliterating the benefits of exercise, is *not* a wise move for the vast majority of people.

Regular exercise is a cornerstone of healthy cholesterol management. I strongly recommend incorporating high intensity interval exercises, as this also helps optimize your human growth hormone (HGH) production.

When it comes to exercise, more is *not* always better. As I've learned in more recent years, the opposite is frequently true—especially if you're seeking longevity and optimal health, opposed to winning athletic competitions. Granted, most people are not exercising enough, so this warning does not apply to most of you reading this. But it's still important to understand that not only is it possible to over-exercise, but focusing on the *wrong type of exercise* to the exclusion of other important areas can actually do you more harm than good.

Research emerging over the past several years has given us a deeper understanding of what your body requires in terms of exercise, and many of our past notions have simply been incorrect.

For example, there's compelling evidence showing that high-intensity interval training, which requires but a fraction of the time compared to conventional cardio, is FAR more efficient, and more effective. You can literally reap *greater* rewards in *less time*. The same can be said for the super-slow form of weight training, which mirrors many of the health benefits of high-intensity interval training. There's compelling evidence that the *best* fitness regimen is one that mimics the movements of our hunter-gatherer ancestors, which included short bursts of high-intensity activities, but *not* long-distance running.

How to Optimize Your Cholesterol Levels Naturally

The most effective way to optimize your cholesterol profile and prevent heart disease is via diet and exercise. 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 and reduce your risk of both diabetes and heart disease.

There is NO drug that can cure heart disease, as the underlying cause is insulin and leptin resistance and arterial wall damage—both of which are caused by eating excessive amounts of sugars, grains, and especially fructose. So, in addition to regular exercise, my primary recommendations for safely regulating your cholesterol and reducing your risk of heart disease include:

- Reduce, with the plan of eliminating grains and fructose from your diet. This is one of the best ways to optimize your insulin levels, which will have a positive effect on not just your cholesterol, but also reduces your risk of diabetes and heart disease, and most other chronic diseases. Use my Nutrition Plan to help you determine the ideal diet for you, and consume a good portion of your food raw.
- Start intermittent fasting, which will radically improve your ability to burn fat as your primary fuel and thus help improve your insulin and leptin signaling.
- Get plenty of high-quality, animal-based omega-3 fats, such as krill oil, and reduce your consumption of damaged omega-6 fats (trans fats, vegetable oils) to balance out your omega-3 to omega-6 ratio.
- Include heart-healthy foods in your diet, such as olive oil, coconut and coconut oil, organic raw dairy products and eggs, avocados, raw nuts and seeds, and organic grass-fed meats.
- Optimize your vitamin D levels by getting proper sun exposure or using a safe tanning bed.
- Optimize your gut flora, as recent research suggests the bacterial balance in your intestines may play a role in your susceptibility to heart disease as well
- Walk barefoot to ground yourself to the earth. Lack of grounding has a lot to do with the rise of modern diseases as it affects inflammatory processes in your body. Grounding thins your blood, making it less viscous. Virtually every aspect of cardiovascular disease has been correlated with elevated blood viscosity.

  When you ground to the earth, your zeta potential quickly rises, which means your red blood cells have more charge on their surface, which forces them apart from each other. This action causes your blood to thin and flow easier. By repelling each other, your red blood cells are also less inclined to stick together and form a clot.
- Avoid smoking or drinking alcohol excessively.
- Be sure to get plenty of good, restorative sleep.

Do You REALLY Need a Statin Drug?

That these drugs have proliferated the market the way they have is a testimony to the effectiveness of direct-to-consumer marketing, corruption and corporate greed, because the odds are very high that if you're taking a statin, you don't really need it. From my review, the ONLY subgroup that could benefit would be those born with a genetic defect called familial hypercholesterolemia, as this makes them resistant to traditional measures of normalizing cholesterol.

Remember, your body *needs* cholesterol for the production of cell membranes, hormones, and vitamin D, just to mention a few. Cholesterol is also vital to your neurological function. And there's strong evidence that having too little cholesterol increases your risk for cancer, memory loss, Parkinson's disease, hormonal imbalances, stroke, depression, suicide, and violent behavior.

Contrary to what pharmaceutical PR firms will tell you, statins have nothing to do with reducing your heart disease risk. In fact, this class of drugs can *increase* your heart disease risk—especially if you do not take Ubiquinol (CoQ10) along with it to mitigate the depletion of CoQ10 caused by the drug. To learn more about statins, please see my special report: Do YOU Take Any of These 11 Dangerous Cholesterol Drugs?

Poor lifestyle choices are primarily to blame for elevated cholesterol levels, such as too much sugar, too little exercise, lack of sun exposure and never grounding to the earth. These are all things that are within your control, and don't cost much (if any) money to address.

The fact that statins can effectively *nullify* the benefits of healthy lifestyle changes like exercise, which in and of itself is important to bolster heart health and maintain healthy cholesterol levels, is yet another reason to think twice before opting for such a drug.

Also remember that the BEST way to condition your heart and burn fat is NOT to jog steadily for an hour. Instead, it's to alternate short bursts of high-intensity exercise with gentle recovery periods. This type of exercise, known as interval training, can dramatically improve your cardiovascular fitness and fat-burning capabilities. You can still incorporate some of the endurance cardio into your routine, but make sure you take advantage of interval training. The new evidence suggests that this may actually provide MORE protection against heart attacks than long durational aerobic-type exercises.

If you're currently taking a statin drug and are worried about the excessive side effects they cause, please consult with a knowledgeable health care practitioner who can help you to optimize your heart health naturally, without the use of these dangerous drugs.

[+] Sources and References

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