

Statins- Cholesterol Lowering Drugs

Statins are world's most prescribed drugs and are used to reduce cholesterol. The reason statins are so popular is because heart disease is the world's second biggest cause of death after cancer. Therefore, reducing cholesterol if high will greatly reduce the risk of heart disease and death. In Ireland in 2000, heart disease was the leading cause of death being responsible for 41% of all deaths.

Cholesterol is a lipid (fat). It is made by the liver from the fatty foods that we eat, and plays a vital part in allowing the body to function normally. While the body needs a certain amount of cholesterol to function, too much of it can increase the risk of heart disease.

There are three main types of cholesterol. These are 1. Low density lipoprotein (LDL) which is often known as *bad cholesterol* and is thought to cause heart disease 2. High density lipoprotein (HDL), often referred to as *good cholesterol*, and is thought to prevent heart disease and 3. Triglycerides, which is mainly found in dairy products, meat and cooking oils and has been shown to increase risk of heart disease. High triglyceride levels are more common in those who are overweight, have a diet that is high in fatty or sugary foods, or drink a large amount of alcohol.

Apart from diet, the biggest cause of high cholesterol is our genes. Cholesterol tends to run in families, so if you have a family member with cholesterol, you will be more at risk.

A cholesterol level above 6 mmol/litre is considered high, and a risk factor for heart disease. Experts recommend a level of 5.2 mmol/litre or below to prevent heart disease. Evidence strongly indicates that high cholesterol levels can cause narrowing of the arteries (atherosclerosis), heart attacks, and strokes. The risk of coronary heart disease also rises as blood cholesterol levels increase. If other risk factors, such as high blood pressure and smoking, are present, the risk increases even more.

Treatment

If you have been diagnosed with high cholesterol, the first method of treatment will usually involve making some changes to your diet (adopting a low fat diet), and ensuring that you take plenty of regular exercise.

There is some scientific evidence of the benefit of lecithin in reducing cholesterol. Lecithin reduces cholesterol by binding cholesterol and fats to water in your intestinal tract, hence reducing the absorption of cholesterol. Whelehans Lecithin 1200mg capsules are only €6.99 per 90 and you take one or two per day.

After a few months, if your cholesterol level has not dropped sufficiently, you will usually be advised to take cholesterol lowering medication.

More detailed information on cholesterol can be obtained in Whelehans or at www.whelehans.ie.

Cholesterol lowering medication

There are several different types of cholesterol lowering medication which work in different ways.

The most commonly prescribed cholesterol drugs are called statins. There are several types of statins on the market, but they all work in the same way.

Examples of statins available on the market and their brand names are as follows:

- Atorvastatin (ie) **Lipitor**[®]
- Pravastatin (ie) **Lipostat**[®], **Pravatin**[®]
- Rosuvastatin (ie) **Crestor**[®], **Rosuva**[®]
- Simvastatin (ie) **Zocor**[®], **Inegy**[®], **Sivatin**[®]

Statins are only available with doctor's prescription in Ireland. However, simvastatin has recently become available over the counter in pharmacies in the UK; however they are sold under strict guidelines.

Clinical trials show that statins are very effective at reducing cholesterol and hence heart disease. Statins are one of the major reasons for the significant fall in death rate from heart disease in Ireland over the last 20 years. Statins work by blocking the enzyme HMG-CoA reductase, which plays an important role in the production of cholesterol in the liver. They are therefore useful in preventing and treating atherosclerosis (blockage of coronary arteries) which can cause chest pain, heart attacks, strokes and cardiac deaths.

Most statins must be taken at night, as most cholesterol is made while we sleep. In fact, the only statin which does not have to be taken at night is Lipitor[®], which can be taken morning or night. Statins are more effective in reducing LDL cholesterol than other cholesterol medication. However, they are less effective than fibrates in reducing triglycerides. Fibrates are another type of cholesterol lowering medicines which are not used as often as statins. They are more associated with gastrointestinal side effects such as nausea (eg gemfibrozil (Lopid[®])). Other non-statin drugs used to lower cholesterol include ezetimibe (Ezetrol[®]) which reduces the absorption of cholesterol and is used instead of a statin if a statin is not tolerated or in addition to a statin if a statin is not reducing cholesterol sufficiently. Omega 3 supplements such as Omacor[®] are now available on prescription to lower triglycerides and are usually added to statin therapy when triglycerides are high.

How effective are statins?

A study published in the British Medical Journal in 2003 showed that on average, statins reduce LDL cholesterol by 1.8 mmol/litre. This resulted in a 60% reduction in the risk of cardiovascular events such as heart attacks, clots and sudden cardiac death and a 17% reduction in the risk of stroke.

Which statin is best?

There is no major study to show which statin is most effective. However the CURVES study in America in 1998 showed that atorvastatin is more effective than other statins at lowering cholesterol. However, another study published in the American Heart Journal in 2006 showed that there was no significant difference between atorvastatin and other statins (simvastatin and pravastatin) at reducing heart disease.

Who should be prescribed statins?

In Ireland, over 20% of adults are at risk of coronary heart disease due to high cholesterol.

There is some controversy on who should be prescribed statins. The general guideline for people who have no previous heart problems is that they should be used if cholesterol is high (over 6mmol/litre) and there is a cardiovascular risk of greater than 20% over the next 10 years. Your cardiovascular risk over 10 years is your risk of having any cardiovascular event such as stroke or heart attack over the next 10 years. It depends on many factors such as your age, sex, weight, blood pressure, cholesterol, family history of heart disease, whether you smoke or are diabetic. Your doctor can calculate your cardiovascular risk. In Whelehans, we calculate cardiovascular risk as part of our heart screening service.

For those who have already suffered a cardiovascular event such as a stroke, statins are recommended if total cholesterol is over 3.5mmol/l. Guidelines state that they should be considered in all diabetic patients over 40. Statins are very frequently prescribed in the elderly as elderly patients generally have a higher risk of heart disease.

Side effects

Like all medication, statins can cause side effects. The most serious side effect of statins is a muscle complaint called myalgia. It is characterised by muscle pain and weakness. If it occurs the statin should be stopped as it can lead to a potentially fatal condition called rhabdomyolysis. It is estimated that one in 1000 people using statins may suffer from myalgia and one in 10,000 may suffer from rhabdomyolysis. You should report to your doctor immediately if you suffer from muscle pain, tenderness or weakness while taking a statin.

Statins can also raise liver enzymes which can lead to liver problems. It is very important that doctors do a liver function test for those starting statins. Current guidelines are to get a liver function test before starting a statin, 3 months after starting and again after 12 months.

Gastrointestinal effects (nausea, indigestion, constipation, diarrhoea and flatulence) are the most common side effects of statins. Headache, dizziness and rash occur less frequently. Sleep disturbance can occur, although it seems to be more of a problem with simvastatin and atorvastatin. The good news is that the majority of people who take statins have no problems and they are proven to save lives by preventing heart disease.

All statins apart from Lipitor now have equally effective but less expensive generics available. Whelehans stock all these generics. Always ask your pharmacist for the generic version. A generic version of Lipitor is due for release in November 2011.

Preventing Side Effects

Statins reduce Co Enzyme Q10, a vital nutrient in almost every cell of the body. Reduction in the level of Co-enzyme Q10 is a reason for many of the side effects of statins. Whelehans own brand Co Enzyme Q10 contains 100mg of Co Enzyme Q10 so helps prevent side effects of statins such as:

- Headaches
- Tired aching muscles
- Muscle cramps
- General fatigue

If you currently take a statin and experience a side effect such as headache, I would advise trying Co Enzyme Q10. I have seen Co Enzyme Q10 stop the side effects of statins in many people. Whelehans own brand Co Enzyme Q10 is an affordable option and unlike many Co Enzyme Q10 supplements, it only needs to be taken once daily. If you have high cholesterol, statins are a very important way of prolonging your life so it is important not to give them up if possible.

Disclaimer: Please ensure you consult with your healthcare professional before making any changes recommended

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