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Treating Elevated Cholesterol and Heart Disease:

The Statins

Comparing Effectiveness, Safety, and Price

Our Recommendations

Statins are highly effective and generally safe medicines. In people at risk for heart disease or who have heart disease, they substantially lower the chances of a heart attack, stroke, and death.

The statins differ in their ability to reduce cholesterol, and there is stronger evidence for some statins when it comes to reducing your risk of heart attack or death from heart disease or stroke. The statins also vary in cost from \$33 a month (about \$1 a day) to \$162 a month (\$5.33 a day). (See page 2.)

Taking the evidence for effectiveness, safety, and cost into account, we have chosen two statins as Consumer Reports Best Buy Drugs:

- **Generic lovastatin** for people who need to lower their "bad" (LDL) cholesterol by less than 30 percent. This medicine, costing \$1 to \$1.88 a day, is substantially less expensive than other statins.
- Atorvastatin (Lipitor) for people who need to cut their "bad" (LDL) cholesterol by 30 percent or more, are at high risk of heart disease, or have already had a heart attack or stroke. This proven drug costs more (\$4 a day) than lovastatin but is a more potent cholesterol reducer.

A new drug called Vytorin (ezetimibe/simvastatin) is also an option for people at higher risk. It is a potent cholesterol reducer priced well at \$95 for a month's supply, or \$3.10 a day. However, it is a novel combination drug whose effectiveness and safety have not yet been fully evaluated.

Most people who need a statin should take the lowest dose possible. High doses of a statin pose greater risk of muscle and liver problems. But some people—such as those who have had heart attacks—might need higher doses. No matter what dose you take, if you experience muscle aches and pains, contact your doctor immediately.

Also ask your doctor about splitting your statin pills and switching to generics when they become available. Both can save you quite a bit of money.

This information was last updated in January 2006.

Go to CRBestBuyDrugs.org for the latest information on statins and the other drug classes we examine.

If you have high cholesterol or are at risk of heart attack or stroke, your doctor may prescribe a "statin"—the most widely used type of cholesterol-lowering drug. There are seven statins. One (lovastatin) is available as a less-expensive generic now, and two others (pravastatin and simvastatin) are scheduled to become available as generics in 2006.

To help you and your doctor choose the statin that is right for you, *Consumer Reports* has evaluated the drugs in this category based on their effectiveness, safety, and cost. This two-page brief is a summary of a 17-page report you can access at CRBestBuyDrugs.org. You can also learn about other drugs we've analyzed on this free Web site. Our independent evaluations are based on scientific reviews conducted by the Oregon Health and Science University-based Drug Effectiveness Review Project. Grants from the Engelberg Foundation and National Library of Medicine help fund *Consumer Reports Best Buy Drugs*.

DO YOU NEED A STATIN?

You probably do not need to take a statin if your cholesterol is only marginally elevated and you're not at risk for heart disease, heart attack, or stroke. Dietary and lifestyle changes might be enough to lower your "bad" (LDL, or Low Density Lipoprotein) cholesterol. But if your LDL levels are too high and/or you are at risk for heart disease and stroke for other reasons (for example, if you have diabetes, smoke, or have coronary artery disease), or your doctor judges that diet and exercise are not likely to bring your LDL down, he is likely to recommend a statin.

Latest advice on LDL cholesterol reduction

Risk level and criteria¹	Reduce LDL to: ²
Low - No current heart disease - No or only one risk factor	- Below 160mg/dl - Below 130mg/dl better for some people
Moderate - No current heart disease - Two risk factors	- Below 130mg/dl - Below 100mg/dl better for some people
Moderate High - Two or more risk factors	- Below 130mg/dl - Below 100mg/dl is better
High - Known heart or blood-vessel disease - Diabetes - Multiple risk factors	- Below 100mg/dl - Below 70mg/dl is better

Source: Adapted from the National Cholesterol Education Program, National Institutes of Health, July 2004; Circulation (July 13, 2004): Vol.110, pages 227-239

⁽¹⁾ The most important risk factors for heart disease, heart attack, and stroke are cigarette smoking; diabetes, high blood pressure; elevated LDL or low HDL cholesterol. Other risk factors include being overweight, getting little or no exercise; a family history or early heart disease, and elevated triglycerides.

⁽²⁾ mg/dl stands for milligrams per deciliter of blood. Your doctor can explain this measure.

Statins - comparative effectiveness and cost¹

	Sidilis comparative effectiveness and cost						
	Generic name and dose per day	Brand name ²	Average monthly cost ³	Average expected LDL reduction	Reduces the risk of heart attack?4	Mortality reduction?	
	Atorvastatin	Lipitor			yes	yes	
BEST BUY	Atorvastatin 10mg	Lipitor	\$85	34% to 38%			
BEST BUY	Atorvastatin 20mg	Lipitor	123	42% to 46%			
BEST BUY	Atorvastatin 40mg	Lipitor	124	47% to 51%			
	Ezetimibe/simvastatin	Vytorin			yes⁵	yes ⁵	
	Ezetimibe/simvastatin 10mg/10mg	Vytorin	95	45%			
	Ezetimibe/simvastatin 10mg/20mg	Vytorin	95	52%			
	Fluvastatin	Lescol			likely	likely	
	Fluvastatin 20mg	Lescol	69	22%			
	Fluvastatin 40mg	Lescol	67	25%			
	Lovastatin				yes	likely ⁶	
BEST BUY	Lovastatin 10mg	Generic	33	21%			
BEST BUY	Lovastatin 20mg	Generic	37	24% to 27%			
BEST BUY	Lovastatin 40mg	Generic	57	31%			
	Lovastatin 10mg	Mevacor	43	21%			
	Lovastatin 20mg	Mevacor	83	24% to 27%			
	Lovastatin 40mg	Mevacor	130	31%			
	Lovastatin 20mg long acting	Altoprev	98	30%	yes ⁷	likely ⁷	
	Lovastatin 40mg long acting	Altoprev	101	36%			
	Pravastatin	Pravachol			yes	yes	
	Pravastatin 20mg	Pravachol	108	23% to 29%			
	Pravastatin 40mg	Pravachol	162	26% to 34%			
	Pravastatin 80mg	Pravachol	159	30% to 37%			
	Rosuvastatin	Crestor			likely	likely	
	Rosuvastatin 10mg	Crestor	99	43% to 50%			
	Rosuvastatin 20mg	Crestor	96	52% to 55%			
	Rosuvastatin 40mg	Crestor	95	55% to 60%			
	Simvastatin	Zocor			yes	yes	
	Simvastatin 10mg	Zocor	87	26% to 33%			
	Simvastatin 20mg	Zocor	152	30% to 40%			
	Simvastatin 40mg	Zocor	154	35% to 45%			

⁽¹⁾ For space reasons, this table does not contain all dosage forms. For a full list, please see the full 17-page statin report at CRBestBuyDrugs.org. (2) "Generic" indicates drug sold by generic name, lovastatin. (3) Prices reflect nationwide retail average for October 2005, rounded to nearest dollar; data provided by NDCHealth, a health-care information

company.

(4) Nonfatal and fatal heart attack plus deaths attributed to heart disease.

(5) The combination of these two drugs has not been proven but simvastatin has. The benefit is assumed for the combination.

(6) Lovastatin has not been proven to reduce deaths, but the evidence strongly points in that direction.

(7) Based on the results for shorter-acting versions of the drugs.