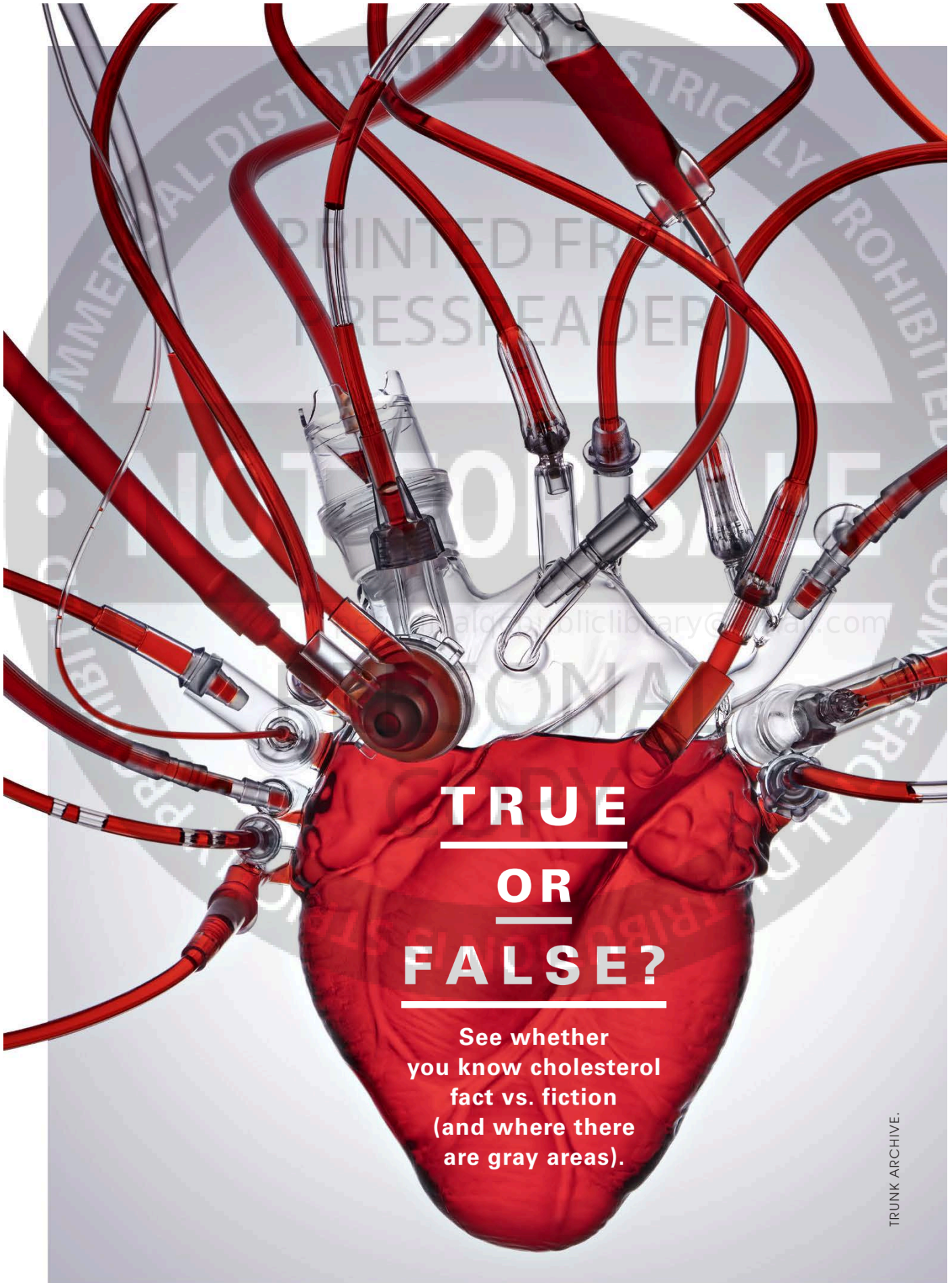


- Cholesterol



TRUE
OR
FALSE?

See whether
you know cholesterol
fact vs. fiction
(and where there
are gray areas).

TRUNK ARCHIVE.

Cholesterol is super important for the brain and the body.

▶ TRUE

■ The adult body has some 30 trillion cells, and every one uses cholesterol to maintain its shape and function. Cholesterol is also involved in manufacturing important hormones and vitamin D. Awash in the substance as well are our brains, where cholesterol assists cells.

Much of the body's cholesterol is made in the liver, after which it is carried through the bloodstream to cells, transported via particles called lipoproteins—that's what the second "L" in LDL (low-density lipoproteins) stands for. The cholesterol the brain requires is actually manufactured there, as the blood-brain barrier prevents cholesterol-rich blood from entering.

Cholesterol is so necessary that even calling LDL "bad" cholesterol is a misnomer, says Stephen Kopecky, M.D., a preventive cardiologist at the Mayo Clinic in Rochester, MN, and the author of *Live Younger Longer*. All forms of cholesterol are important for your cells, so "if you didn't

have LDL, you'd be dead," he says.

That said, it doesn't usually follow that *lowering* cholesterol causes harm, as some online influencers claim.

Lowering cholesterol triggers other health problems.

▶ MOSTLY FALSE

■ Prior to the introduction of statins four decades ago, some scientists reported correlation of low cholesterol with other health conditions. People with lower cholesterol were more likely to have depression, cancer, cognitive decline, diabetes, and other issues. But since the 1990s, better-quality studies have demonstrated that low cholesterol does not directly cause these problems. "Concerns that very low cholesterol can be harmful are not supported by rigorous scientific data," says Laurence Sperling, M.D., a preventive cardiologist and the founder of Emory University's Center for Heart Disease Prevention.

One study involving nearly 20,000 people, for example, found no link between low cholesterol and increased depression; other research

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concluded that low cholesterol didn't cause cancer, liver disease, or other disorders. Very low levels of LDL don't cause Alzheimer's, either, as have been posited—this makes sense given that blood cholesterol doesn't cross the blood-brain barrier. In an article in the *European Heart Journal* several years ago, Dr. Sperling and his coauthors concluded that even LDL levels under 30 mg/dL (typically achieved through taking potent medications) are not harmful and that this could be a beneficial target for people living with or at high risk for heart disease.

Cholesterol medicines are not totally risk-free, however. Like any other drug, they can have side effects, especially muscle pain or weakness (which may be improved by changing brands or by taking a supplement of coenzyme Q10). And kidney and liver problems have been known to occur, though rarely, in those who take them.

One concern that has proven to be valid: People who take statins have a modestly greater likelihood of crossing the threshold for a diagnosis of diabetes, but researchers have found that this primarily occurs in people whose glucose levels were borderline high before they started statins. "There is evidence that statins can nudge people who have prediabetes or the genes for diabetes to a higher blood glucose range," says Dr. Sperling. But rather than being a signal to avoid statins, "it's a reason to intensify efforts to focus on diabetes prevention and heart disease prevention

in a higher-risk population," he explains.

You want to be Goldilocks with your cholesterol levels: "There's a sweet spot; you don't want it too high or too low," Dr. Kopecky says. Guidelines from the American Heart Association (AHA) recommend that people with a history of heart attack or stroke who are on a cholesterol-lowering medication aim to at least halve their LDL levels to get to 70 mg/dL or lower, while Dr. Kopecky advises those who already have heart disease to get theirs into the 25 mg/dL to 50 mg/dL range.

The dangers of high blood cholesterol are **overblown**.



▶ FALSE

■ Studies over many decades have confirmed that people with high cholesterol who lower it significantly (see "Know Your Numbers" on page 51 for healthy ranges) have fewer heart attacks and strokes and are less likely to die from cardiovascular disease than those who don't. This was shown in one of the first major trials of statin drugs in the 1990s and in more recent studies of other medicines.

"Our arteries were not made to be storage receptacles for cholesterol," explains Dr. Kopecky. When the body sees that there's too much, it fights back



GALLERY STOCK.

HEALTH

with inflammation, which ultimately damages arteries. Posts on Instagram and YouTube claiming that it's fine to have total blood cholesterol levels of 300 or higher are simply wrong, he says.

Of course, high cholesterol isn't the only contributor to heart disease. Other important risk factors you should focus on controlling include high blood pressure, diabetes, other blood-fat conditions, and lifestyle issues such as smoking.

Too many people are on statin drugs.

▶ FALSE, BUT

WITH CAVEATS

■ Most doctors use a heart disease risk calculator to determine your 10-year odds of developing heart disease. Based in part on that risk assessment, they decide whether you require medication for elevated cholesterol. In addition to cholesterol levels, the calculator considers

factors like whether you smoke or have diabetes and whether your kidneys are healthy. (Impaired kidneys make the heart work harder, further straining arteries.)

But two years ago, the American Heart Association made its calculator more precise, taking into account newer science. As of this writing, some 17 million American adults for whom a statin drug was previously recommended no longer need to take one, including 4 million people currently on such meds, according to a study published in *JAMA Internal Medicine* last June.

But the same study found that 16 million people who were eligible for a statin based on the newer criteria were not currently taking one, which means more people overall could

potentially benefit from taking a statin. If you know your current cholesterol numbers, you can calculate your risk in the Prevent calculator (find it by going to heart.org and searching for “prevent”)—share the results with your health care provider.

Meds aren't the only way to nudge cholesterol numbers into a healthy range (more on this below). But if you do need extra help, statins are not the only meds prescribed for high cholesterol. For those with certain types of heart disease and LDL cholesterol that remains at 70 mg/dL or above, the American Heart Association calls for adding a nonstatin drug to a statin. Such drugs, which let the body clear away much of its LDL cholesterol, include Zetia and newer meds called PCSK9 inhibitors (e.g., Praluent and Repatha). Down the road, GLP-1 agonists like Ozempic might possibly be used to improve cholesterol levels.

Medicine is the best way to **lower cholesterol.**

▶ IT DEPENDS

■ “In societies with high longevity, the people who live longest generally do

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regular physical activity, eat plant-based diets, and have good social connections—and they have lower cholesterol levels to show for it,” says Dr. Spatz. This is why experts suggest that most people try to lower their cholesterol levels with healthy lifestyle changes before turning to medication.

Effective strategies include doing moderate aerobic exercise for at least half an hour most days and stopping smoking. Changing your diet is also key. Experts now know that eggs, which are high in cholesterol, don't raise blood cholesterol levels. But certain fats are a problem, so it's smart to completely remove trans fats from your diet and keep saturated fats to less than 6% of your total calories.

It's also good to incorporate core foods from what's known as the portfolio diet, which studies show can lower LDL cholesterol by up to 30%. These include soy products, nuts, viscous soluble fiber (think oats, psyllium, barley, eggplant, and berries), and plant stanols found in enriched spreads like Benecol. Other steps recommended by the AHA include limiting alcohol, sleeping enough, and getting your weight to a healthy level.

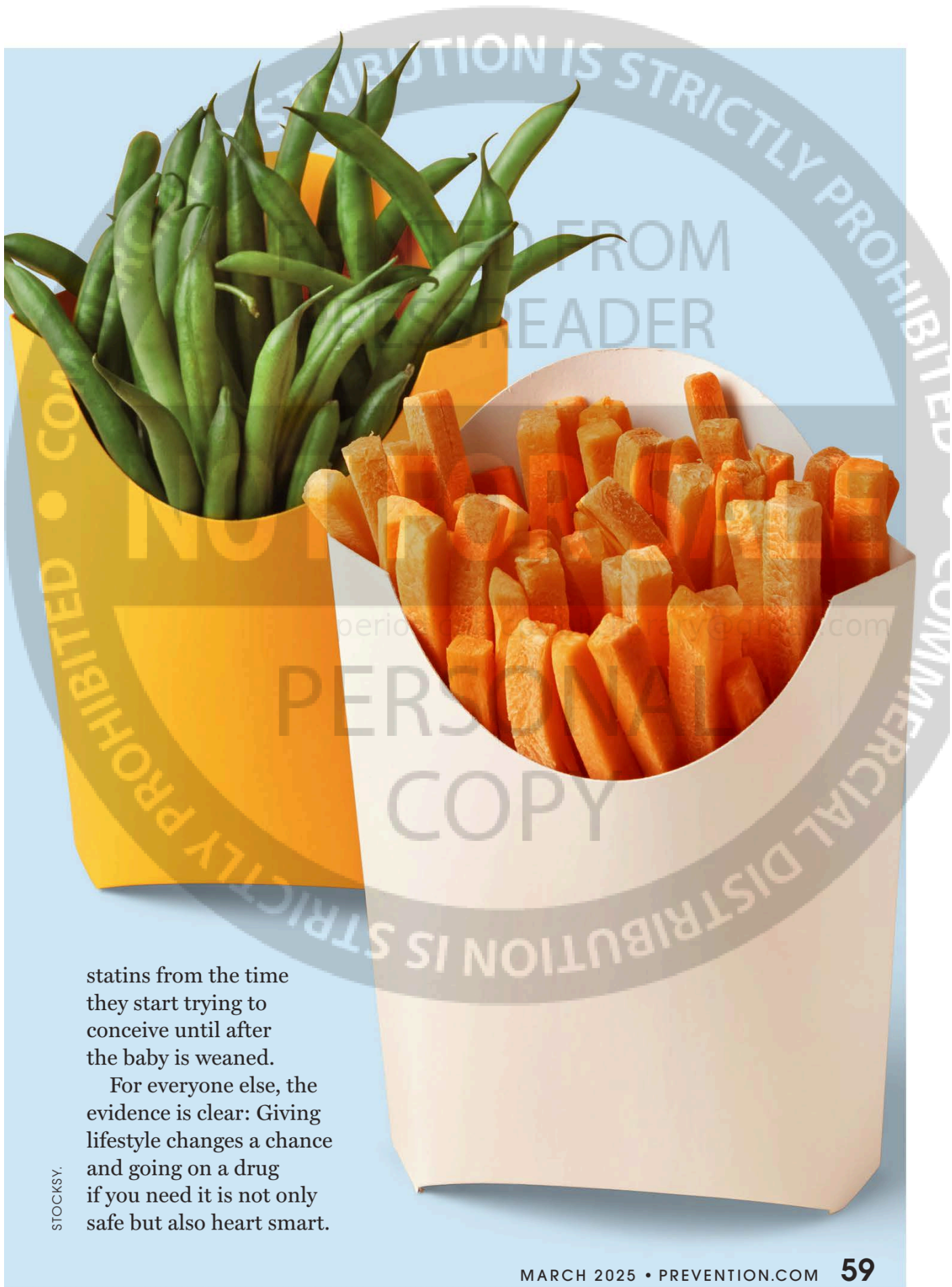
Expect it to take six to nine months for these changes to affect your cholesterol level, Dr. Kopecky says. If your levels remain high after that, consider adding medication, but keep up the healthy lifestyle for the best effect.

We know everything about cholesterol-lowering meds.

▶ FALSE

■ Statins have been on the market for nearly 40 years and PCSK9 inhibitors for almost 10 years, so scientists know an awful lot about them. Still, as with any medication, surprises can pop up. “It took 20 years after statins were introduced to find out that they were associated with increased diabetes, because you need hundreds of thousands of people taking the medicine to see something like that,” Dr. Kopecky says. Dr. Spatz adds, “Though some patients have concerns about very low LDL levels, we have not seen any signal of harm. We need more research on the longer-term effects of very low LDL, especially because some people will be at those levels for decades.” Still, “There already is a lot of data that this is a safe strategy,” she says.

Also unclear is the safety of statins for pregnant women. A study nearly 20 years ago found a possible connection between low LDL and preterm birth, which is why women are generally told to stop taking



statins from the time they start trying to conceive until after the baby is weaned.

For everyone else, the evidence is clear: Giving lifestyle changes a chance and going on a drug if you need it is not only safe but also heart smart.

STOCKSY.