## What you should know about Statins

#### 03 Dec 2019

The pain was horrific. The fear, intense. Raymond Savoy was having a heart attack.



Raymond<sup>1</sup>, a 59-year-old electrician, had known for years he was at risk. High levels of cholesterol in his blood were causing harmful plaque to build up in his arteries. His doctor had prescribed a daily statin, the most effective medication available, but Raymond Savoy was not having it.

"I had seen television documentaries and articles on the web saying the pills were useless, or even harmful," Savoy

later said. "And I actually believed them. It was such a dumb mistake. It almost cost me my life."

"There is more and more medical misinformation today masquerading as 'fact'," said Doctor Francois Schiele, chief cardiologist at University Hospital of Besancon, France. "The false reports circulated about statins are not only misleading, they're outright dangerous."

Statins, often referred to as the "gold standard" for treating high levels of harmful cholesterol, or LDL (low density lipoprotein), are one of the most widely used drugs in the world. First dispensed in 1987, they are used daily by more than 200 million people worldwide and have proven safe and effective in at least 27 large randomised, clinical trials, each involving at least 1,000 patients. A published meta-analysis found that for every 40mg/dl reduction in LDL, there was a 21 percent reduction in cardiovascular death, heart attack or stroke each year<sup>2</sup>. So important and trusted are these medications that one of the most common statins is even on the 2019 edition of the World Health Organisations List of Essential Medicines<sup>3</sup>.

And yet, in the Age of Information, statins have fallen victim to the Age of Misinformation. Contrarians, eager for publicity any way possible, make ever more preposterous claims against this class of medication.

"The real tragedy here is that people's lives are being placed in jeopardy by impostors whose claims have been proven bogus, time and again, through years of extensive research" said Professor Ulrich Laufs, chairman of Cardiology at Leipzig University Hospital.



Some of the misleading claims, and the proven facts:

### CLAIM: Cholesterol is not bad for us. It is a fundamental fat needed to make our cells. We can't live without it.

FACT: Cholesterol per se is indeed essential for life<sup>4</sup>. But LDL cholesterol in the blood produces fatty deposits called atherosclerotic plaques. These plaques restrict blood flow which can damage organs or lead to a heart attack or stroke<sup>5</sup>. Nearly 3 million deaths worldwide are linked each year to high levels of LDL cholesterol<sup>6</sup>.

# CLAIM: Eating foods high in cholesterol (e.g. eggs or butter) does not kill you. Therefore, cholesterol is not a problem but a myth of the pharmaceutical industry designed to sell us drugs.

FACT: Eating eggs or butter in reasonable amounts does not increase cholesterol in the blood. An estimated 85 percent of cholesterol circulating in the body is produced by the liver, independent of what we eat, and that is where the focus should be. As for claims that the pharmaceutical industry is getting rich from selling statins, the vast majority of these drugs are no longer covered by patents. They are generics sold for cents.

### CLAIM: There is no link between a population's LDL-cholesterol levels and the frequency of heart attacks.

FACT: Globally, about 33% of coronary heart disease cases can be attributed to high cholesterol<sup>7</sup>. More than half of Europeans (54%) have high LDL cholesterol. For adults between the ages of 35 and 55, even if they are otherwise healthy, every decade that they live with high cholesterol increases their chances of developing heart disease by 39%<sup>8</sup>. Germany has one of the highest cholesterol levels in the world<sup>9</sup> and is ranked second amongst high income countries in the rate of deaths caused by ischemic heart disease<sup>10</sup>.

**CLAIM:** High LDL cholesterol is less dangerous than many other factors, including inactivity, smoking and obesity. Changing those things in our lives is where we need to act first. FACT: "All those factors are contributors to the risk of heart disease," said Professor Stephan Gielen, past president of the European Association of Preventive Cardiology. "It is indeed critical to stop smoking, be physically active and watch one's diet. But lifestyle changes typically reduce cholesterol levels by only 5 to 10 percent. For people with high levels of LDL cholesterol, more is needed," he said. "Combining exercise and statin therapy substantially reduces the mortality risk and is potentially the ideal combination."

#### CLAIM: The side effects of statins are not worth the risk.

FACT: The most common side effect reported by statin users is muscle aches (myalgia), which occurs in less than 1 percent of patients and are often alleviated by switching to another brand of statin<sup>11</sup>. Claims of more severe side effects, including Type 2 diabetes, Alzheimer's, and cancer have been occasionally reported, but the evidence is weak or misinterpreted. Statins can indeed raise blood sugars slightly. But one would have to have significant pre-diabetes to develop Type 2 diabetes because of a statin. This occurs in only about 1 percent of patients with pre-diabetes taking the medication.



On Alzheimer's disease, a study recently published in the *Journal of the American College of Cardiology* found no association between statin use and a decline in memory or thinking ability. Indeed, patients who take statins for heart disease and have a genetic predisposition to Alzheimer's disease actually scored better on some memory tests<sup>12</sup>. The lead author of the study, Doctor Katherine Samaras, a professor of medicine at the University of New South Wales, Australia said, "If you are experiencing memory problems while taking statins, don't stop. Talk to your doctor. You may have other factors for that memory loss."

### CLAIM: Those taking statins should simply stop taking them.

FACT: Published studies have shown that patients who are taking statins and at risk for cardiovascular disease, increase that risk if they stop taking the medicine. One alarming study of 28,000 patients found that 3 in 10 stopped taking their statins because they presumed the aches and pains they were experiencing were due to the drug. The result: 8.5% suffered a heart attack or stroke within just four years, compared to 7.6% who continued taking the drugs<sup>13</sup>. And there is good evidence that the benefits of statin use continue well into old age<sup>14</sup>.

"There is absolutely no question that the benefits of statins far outweigh any risk," heartattack patient Raymond Savoy now says. "You owe it to yourself to see for yourself – to review the many published, peer-reviewed studies, from reputable institutions. The stakes are simply too high to do otherwise."

By Lee Kamlet, freelance journalist.

### References

<sup>1</sup> Name has been changed to protect his privacy

<sup>2</sup> <u>https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(16)31357-5/fulltext</u>

<sup>3</sup> <u>https://apps.who.int/iris/bitstream/handle/10665/325771/WHO-MVP-EMP-IAU-2019.06-eng.pdf?ua=1</u>

<sup>4</sup> <u>https://www.health.harvard.edu/heart-health/the-status-of-statins</u>

<sup>5</sup> <u>https://www.mayoclinic.org/diseases-conditions/high-blood-cholesterol/symptoms-</u> <u>causes/syc-20350800</u>

<sup>6</sup> <u>https://www.who.int/gho/ncd/risk\_factors/cholesterol\_text/en/</u>

<sup>7</sup> <u>https://escardio.app.box.com/s/flr21bwfypicqnctg2sl5jsp0o5fyff8</u>

<sup>8</sup> <u>Hyperlipidemia in Early Adulthood Increases Long-Term Risk of Coronary Heart Disease;</u> Circulation, 26 Jan., 2015

<sup>9</sup> <u>https://www.eurekalert.org/pub\_releases/2011-02/l-cbc020111.php</u>



- <sup>10</sup> <u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3819990/</u>
- <sup>11</sup> <u>https://academic.oup.com/eurheartj/article/39/27/2526/4987130</u>

<sup>12</sup> <u>https://www.acc.org/about-acc/press-releases/2019/11/18/13/24/statins-not-associated-with-memory-or-cognition-decline-in-elderly-may-be-protective-in-some-patients</u>

<sup>13</sup> <u>https://academic.oup.com/eurheartj/article/37/11/908/2398344</u>

<sup>14</sup> <u>https://academic.oup.com/eurheartj/article/40/43/3516/5540819</u>

### Additional references:

- Interpretation of the evidence for the efficacy and safety of statin therapy
- <u>https://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2812%2960367-5/fulltext</u>
- <u>https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)31942-</u> <u>1/fulltext</u>
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