

Negative news stories about statins are linked to people discontinuing treatment

1 December 2015

Researchers in Denmark have found that negative news stories about statins are linked to some people choosing to discontinue their statin treatment, which, in consequence, is associated with an increased risk of heart attacks and dying from heart disease.

The study, which is published today (Wednesday) in the *European Heart Journal*, shows that for every negative nationwide news story about the cholesterol-lowering group of medicines, there was a nine percent increased risk of [people](#) deciding to stop taking statins within six months of first being prescribed the drug.

"We found that exposure to negative news stories about statins was linked to stopping statins early and explained two percent of all heart attacks and one percent of all deaths from cardiovascular disease associated with early discontinuation of statins," said Professor Børge Nordestgaard, Chief Physician at Copenhagen University Hospital in Denmark.

"People who stop statins early have a 26% increased risk of a [heart attack](#) and an 18% increased risk of dying from cardiovascular disease when compared to people who continue to use them.

"Although we cannot say for sure that statin-related negative news stories cause the early discontinuation of statins, our findings suggest that this is likely. And although this type of association research cannot prove causality, our data suggest that early discontinuation of statins leads to unnecessary heart attacks and deaths from cardiovascular disease," he said.

Prof Nordestgaard and his colleague Dr Sune Nielsen, a senior scientist at Copenhagen University Hospital, identified 674,900 people, aged 40 and older, in the entire Danish population who were using statins between January 1995 and

December 2010, and they followed them up to the end of 2011.

They identified 1931 statin-related news stories from January 1995 onwards in the Danish newspapers, magazines, radio, television, websites and news agencies, and they graded them as negative (110 stories), neutral (1090 stories) and positive (731 stories).

Although statins are considered to be among the safest drugs, they can cause side effects particularly within the first six months. These can include muscle aches and, very rarely rhabdomyolysis (when skeletal muscle is broken down). These side effects can lead potentially to early discontinuation of the drugs. The researchers wondered whether exposure to negative news stories about statins might play a role in the patients' decisions about whether to continue or discontinue their medication.

In addition to looking at the link from news stories to statin discontinuation, they also looked at the link with having cardiovascular disease or diabetes at the time the statins were first prescribed, the calendar year (i.e. the passing of time), statin dose, being male, living in cities, and being of non-Danish ethnicity.

During the period from 1995 to 2010 the proportion of people on statins increased from less than one percent to 11%, while early statin discontinuation increased from six percent to 18%. The number of all statin-related news stories (positive, neutral and negative) increased from 30 per year in 1995 to 400 in 2009.

In addition to the [increased risk](#) from negative news stories, the researchers found that the risk of early statin discontinuation increased per increasing calendar year (4%), increased daily dose (4%), being male (5%), living in cities (13%) and for being of non-Danish ethnicity (67%). In contrast, the risk

of discontinuation decreased after exposure to positive news stories about statins (8%), and having cardiovascular disease or diabetes at the time the statins were first prescribed (27% and 9% respectively).

Prof Nordestgaard said: "Statins represent a success story in modern medicine, and currently they are the most effective way to prevent [cardiovascular disease](#). However, a prerequisite for this is that patients adhere to the prescribed therapy. In our study we find that close to one in six of individuals discontinue therapy at an early stage, and this represents a major problem for cardiovascular health.

"Our findings suggest a need to develop ways of increasing people's adherence to statin therapy during the first six months in particular.

"Positive news stories tend to be evidence-based, explaining how [statins](#) can prevent [heart disease](#) and early death, while this is often not the case for negative news stories, which tend to focus on relatively rare and moderate side effects. Considering how often there is a negative statin-related news story, we detected a surprisingly strong association: an increase of nine percent in early discontinuation for each nationwide story. If negative statin-related [news stories](#) did not exist at all, then early statin discontinuation would decrease by 1.3% in the whole of the population," he concluded.

More information: *European Heart Journal*, [dx.doi.org/10.1093/eurheartj/ehv641](https://doi.org/10.1093/eurheartj/ehv641)

Provided by European Society of Cardiology

APA citation: Negative news stories about statins are linked to people discontinuing treatment (2015, December 1) retrieved 2 May 2021 from <https://medicalxpress.com/news/2015-12-negative-news-stories-statins-linked.html>

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