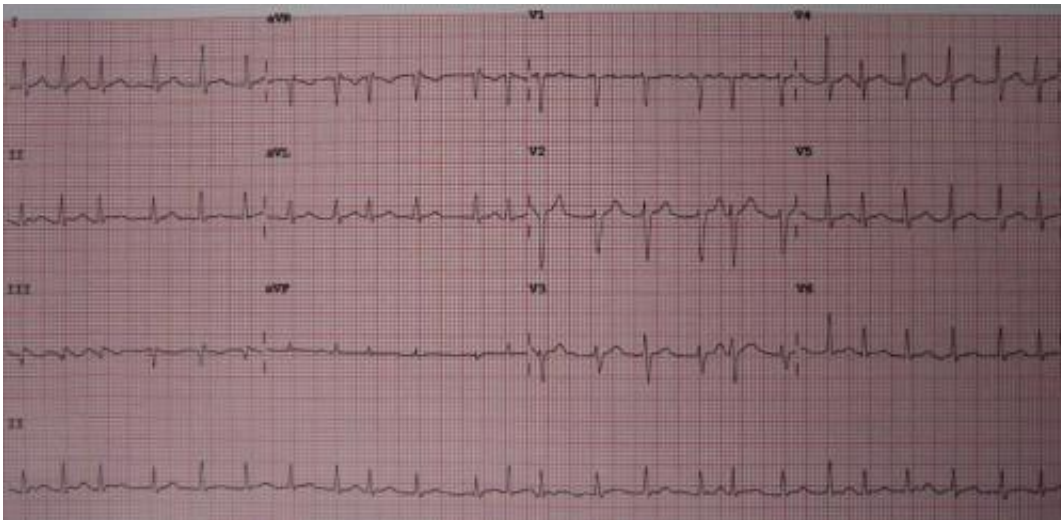


Omega-3 supplements could elevate risk of atrial fibrillation

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A 12 lead ECG showing atrial fibrillation at approximately 150 beats per minute.
Credit: James Heilman, MD/Wikipedia/CC BY-SA 3.0

Atrial fibrillation is the most common type of abnormal heart rhythm, causing the heart to contract irregularly and, sometimes, too quickly. It is estimated to affect 33 million people worldwide and can lead to blood clots, stroke, heart failure and other heart-related complications.

According to the 2012 National Health Interview Survey, it is estimated that 7.8 percent of American adults, almost 19 million people, take [fish oil supplements](#).

Recent research led by Christine M. Albert, MD, MPH, a professor of Cardiology and chair of the Department of Cardiology in the Smidt Heart Institute, suggested neither vitamin D nor the omega-3 [fatty acids](#) found in [fish](#) oil prevent the development of atrial fibrillation. However, other [clinical trials](#) conducted outside of Cedars-Sinai pointed to an elevated [risk](#) of developing atrial fibrillation in patients treated with omega-3 fatty acids, causing confusion among clinicians and patients alike.

To further explore the potential reasons for differences between the results of these studies, Albert and team performed a meta-analysis, which combines the results of multiple scientific studies. This analytical comparison between studies suggested that the risk of developing atrial fibrillation is dependent on the dose of omega-3 fatty acids.

Although there's strong evidence that omega-3 fatty acids can significantly reduce blood triglyceride levels and arthritis pain, most experts agree it's best to get omega-3 fatty acids from eating fish several times a week.

"Our goal was to bring clarity, answers and actionable information to the broader medical field and to patients," said Albert, the Lee and Harold Kapelovitz Distinguished Chair in Cardiology. "In this instance, the results suggest that there may not be a straightforward answer to, 'Is fish oil good or bad for atrial fibrillation?' but instead, the answer may depend on the dose."

Key highlights from the research study include:

- Data was reviewed from 81,210 patients enrolled in seven clinical trials, including one conducted at Cedars-Sinai. The average age of patients enrolled in these trials was 65 and 39% were women.

- Out of these patients, 72.6% were in clinical trials testing less than or equal to one gram of omega-3 fatty acids per day and 27.4% were enrolled in clinical trials testing more than one gram of the supplement per day.
- Patients who took more than one gram per day of omega-3 fatty acids had a 49% increased risk of developing atrial fibrillation, compared to just 12% of patients who took one gram or less of the supplement per day.

Treatment Recommendations

Now armed with this information, Albert has recommendations for clinicians, researchers and patients.

If clinicians offer high-dose omega-3 fatty [acid](#) supplements, Albert says they should first discuss the potential risk of developing atrial fibrillation, and patients should be informed about the potential signs and symptoms of the condition so an early diagnosis can be made and coupled with appropriate treatment.

Researchers, Albert says, should systematically monitor patients for atrial fibrillation and related adverse outcomes to better define risk-to-benefit ratios in studies examining the effects of omega-3 fatty acid supplements.

"For patients, the risk of developing atrial fibrillation appears to be relatively small for those taking one gram or less of fish oil per day," said Albert. "Taking more than one gram of fish oil per day is something you should only do following your doctors' advice."

The study, which combined previously published results, was unable to determine whether there are patients that might be more susceptible to developing atrial fibrillation when taking fish oil.

The risk of developing atrial fibrillation increases with age and is more common in men than in women. In addition to age and gender, additional risk factors include high blood pressure, coronary artery disease, heart failure, heart valve defects, obesity and diabetes.

The condition is also more likely to happen during an infection or right after surgery. Stress, caffeine and alcohol may also set off attacks. People who do a lot of repeated vigorous endurance exercises, such as running marathons, can also develop atrial [fibrillation](#). How fish oil may alter the risk of [atrial fibrillation](#) in marathon runners or in individuals with other risk factors remains unknown.

Provided by Cedars-Sinai Medical Center

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