

Transcript Details

This is a transcript of an educational program. Details about the program and additional media formats for the program are accessible by visiting: <https://reachmd.com/clinical-practice/cardiology/decaf-trial-does-eliminating-coffee-reduce-atrial-fibrillation-recurrence-in-symptomatic-patients/48690/>

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DECAF Trial: Does Eliminating Coffee Reduce Atrial Fibrillation Recurrence in Symptomatic Patients?

Dr. Wong:

Hello from AHA 2025 here in New Orleans. I'm Dr. Christopher Wong from the University of Adelaide in Australia, and I'm here today to share the key findings from the DECAF trial. Does eliminating coffee avoid fibrillation?

The background to this trial is that atrial fibrillation, or AF for short, is one of the most common heart-rhythm disorders to affect humans, affecting 1 in 3 people during their life. Similarly speaking, coffee and caffeine are one of the most commonly consumed beverages in our society. And importantly, coffee and caffeine has traditionally been considered to be pro-rhythmic and a cause for heart rhythm disorders. Patients frequently nominate coffee to be a trigger for their AF episodes, and we as physicians have always advised patients to consider reducing or even abstaining from coffee to improve their AF symptoms. However, to date, there has never been a randomized trial on coffee and AF.

The data to date derives from observational studies where people who have consumed coffee have been compared to those not consuming coffee. However, these are observational studies, and the results may be confounded given coffee drinking is associated with other factors. We therefore sought out to do this DECAF trial.

This was an international trial run both here in the United States at the University of California, San Francisco, and in Australia, the University of Adelaide, and in Sunnybrook in Canada. We recruited participants with atrial fibrillation undergoing cardioversion and randomized these participants to either consuming coffee, about one cup of caffeinated coffee per day, or randomized to abstain completely from coffee, which included both caffeinated coffee and decaffeinated coffee, and all other caffeine-containing products.

We then followed these individuals for 6 months in duration, during which we retrieved all their clinical data, including healthcare encounters, ECGs, Holters, and device data. And this was used to ascertain the primary endpoint, which was the recurrence of atrial fibrillation or flutter.

What we found during the follow-up period, to our surprise, is that those randomized to coffee consumption actually had a lower risk of recurrent AF and flutter.

Specifically, there was a 39% reduction in recurrent AF and flutter in the consumption group compared to the group randomized to abstinence from both coffee and caffeine-containing products. Our results were consistent across a range of sensitivity analyses, and what this exciting result really provides us with is confidence to now reassure patients that consuming coffee is likely to be safe and may even be beneficial for their health.

Important notes is that the average coffee consumed in this study was about 1 cup per day, and that we can't necessarily extrapolate our results to high doses of coffee or potentially other synthetic forms of caffeine like energy drinks which may have other harmful substances. This leads me to my other point, which is why did we see these results, and there are numerous possible mechanisms. It's possible that coffee with various antioxidants and anti-inflammatory effects may be beneficial for health. We also know that caffeine has other beneficial effects, such as increasing physical activity, which we know has beneficial effects on the body and the heart. Finally, at a mechanistic level, we know that caffeine blocks adenosine, and adenosine in other studies has been shown to increase the risk of the

heart becoming more irritable and susceptible to arrhythmias.

So in conclusion, Does Eliminating Coffee Avoid Fibrillation, or DECAF, trial was an exciting study that randomized patients with AF to either coffee consumption or coffee abstinence, and we found that coffee consumption was indeed associated with a lower risk of atrial fibrillation and flutter.

From AHA 2025, I'm Dr. Christopher Wong, and thank you for watching today.