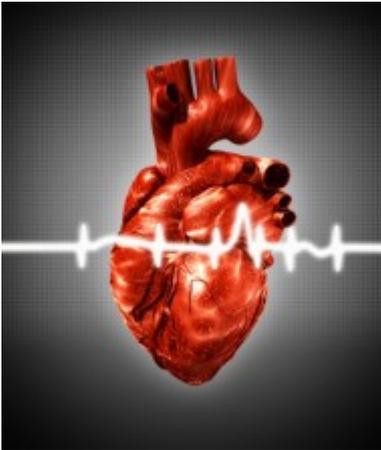


# Large retrospective VA study shows high mortality risk among patients on digoxin

By ACSH Staff — August 13, 2014



A new study published in the *Journal of the American College of*

*Cardiology* [1] seems to show a significantly elevated risk of death among patients with atrial fibrillation who have been prescribed the common heart drug, digoxin (one form of digitalis).

Atrial fibrillation (AF) is the most common irregularity of the heartbeat (arrhythmia), affecting about 6 million Americans. While the heart's output is usually not compromised and one can live a long and happy life with AF, it greatly increases the risk of stroke due to mobile clots (emboli) traveling from the heart to the brain. Blood thinners can help prevent those events; digoxin has been used for many decades to slow the heart in AF, and it's also used in heart failure to increase the strength of the heart's contractions.

Digoxin is used by approximately 2 million Americans yet given its long history, or perhaps because of it, it has never been subjected to the rigorous clinical studies that new drugs must pass to get on the market.

The current study was undertaken under the lead of Stanford University School of Medicine's Dr. Mintu P. Turakhia and colleagues, working with a huge VA System database, TREAT-AF. Carried out between 2004 and 2008, the retrospective analysis included over 122,000 patients with newly-diagnosed AF, among whom 23 percent (29,000) received digoxin. After controlling for other variables (confounders), the remarkable conclusion was: the cohort on digoxin had about a 21 percent higher risk of dying than their peers not taking the drug.

As told to the *N.Y. Times* [Anahad O'Connor](#) [2], the lead author Dr. Turakhia, said this: I don't want to say that every patient should come off this drug and every doctor should stop using it. But this data should make us take pause and really evaluate whether we should be using this drug as much as we do.

ACSH's Dr. Gil Ross had this comment: As with all such retrospective evaluations, before we leap

to conclusions, alternative explanations should be considered. While the authors strived assiduously to control for variables, there remains the possibility that sicker patients were more likely to be prescribed digoxin, rather than the obvious conclusion that the digoxin worsened the underlying illness. On the other hand, given the lack of solid evidence of its positive risk-benefit equation, its narrow therapeutic ratio (toxic levels close to effective levels), and the availability of good alternatives, I d agree with one of the people quoted in the Times article: I think the key message is that if patients are on digoxin, they need to be asking questions as to why.

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**Links**

[1] <http://content.onlinejacc.org/article.aspx?articleID=1895457>

[2] [http://well.blogs.nytimes.com/2014/08/11/new-concerns-about-an-old-heart-drug/?\\_php=true&\\_type=blogs&\\_r=0](http://well.blogs.nytimes.com/2014/08/11/new-concerns-about-an-old-heart-drug/?_php=true&_type=blogs&_r=0)