

# New study finds that 75 percent of patients taking popular blood-thinners are getting wrong dose

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Cardiology researchers at the Intermountain Medical Center Heart Institute have found that approximately 75 percent of patients taking two common blood-thinning drugs may be receiving the wrong dosage levels, according to a new study.

This could put them at risk for serious problems like uncontrolled bleeding or developing blood clots.

Millions of Americans with [coronary artery disease](#) take one of the two drugs—[clopidogrel \(Plavix\)](#) and prasugrel (Effient)—to prevent harmful blood clots that can cause a stroke or [heart attack](#). Current guidelines recommend that all patients take the same standardized dose. But in this new study of 521 patients, researchers at the Intermountain Medical Center Heart Institute found that dose is not effective for all patients.

"There's a [sweet spot](#), an appropriate range for each patient. But we found that not many people are falling into that range," said [cardiologist Brent Muhlestein, MD](#), a cardiac researcher at the Intermountain Medical Center Heart Institute.

Dr. Muhlestein is presenting the group's findings on Nov. 6 at the [American Heart Association Scientific Sessions 2012](#) in Los Angeles.

"We showed that by performing a simple [blood test](#) to see whether or not

the blood is clotting properly, we can determine whether patients are getting an appropriate, individualized dose of the medications," he says. "The test is easy to perform, but not widely used."

The Intermountain Medical Center Heart Institute study could help lead to personalized treatment and improved results for millions of people taking the drugs. It may also help cut pharmacy bills for many patients. The annual cost for one of the medications is more than \$1,800. Finding the lowest effective dose for those patients could conceivably cut their bill in half.

Major findings of the study show that:

- Half of patients taking clopidogrel were getting too little of the drug to prevent clotting most effectively. A quarter were getting too much. Only a quarter were getting an accurate dose.
- Half of patients taking prasugrel are getting too much of the drug, which could lead to dangerous bleeding. A quarter were getting too little. Only a quarter are getting the appropriate dose.

The researchers also discovered that common indicators like age, gender, cholesterol levels, and history of heart problems were not good predictors for how a person would react to the drugs.

"That means there's not an easy way to predict how a person will react to these drugs. But the blood test is very effective," said Dr. Muhlestein. "In fact, a physician could have the test machine on his or her desk and perform the test right there in the office."

Provided by Intermountain Medical Center

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