

# Aspirin in Heart Attack Prevention: How Much, How Long?

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A low dose of aspirin appears to be just as effective as a higher dose in preventing a heart attack, stroke or death among patients with stable cardiovascular disease, say researchers at Duke University Medical Center.

Scientists also found that taking aspirin as a prevention strategy doubled patients' risk of serious bleeding. Still, they say that for most of the patients, the protective benefits of taking aspirin daily far outweigh risk of any side effects.

"Aspirin is one of the most commonly prescribed drugs in the world and a mainstay in the treatment of heart attack," says Dr. Jeffrey Berger, a cardiologist at the Duke Clinical Research Institute, "but there is still considerable debate over the optimal dose people should be taking on a regular basis to prevent further problems."

The findings appear in the January issue of the *American Journal of Medicine*.

Berger and his colleagues sifted through 40 years' worth of clinical trials and found only six where researchers could extract data comparing a low dose of aspirin (50 to 325 milligrams) against a placebo in the treatment of patients with previous heart attack, angina or stroke.

In reviewing data from nearly 10, 000 patients enrolled in these trials, researchers discovered that those who took aspirin daily had a 25 per

cent reduction in the risk of stroke, a 26 percent reduction in risk of a second heart attack and a 13 percent lower risk of death, when compared with people who took a placebo. Overall, in considering all types of cardiovascular events, patients who took aspirin were 21 percent less likely to encounter potentially fatal problems than those who did not take it.

When the researchers looked more closely at the benefits gained from varying doses, they found no difference between those who were taking only 50 milligrams per day and those who were taking 325 milligrams per day.

They did note, however, that patients taking aspirin were twice as likely to develop serious bleeding as those who did not take it. "One in every 111 people who took low-dose aspirin on a regular basis suffered significant bleeding, so aspirin should be taken with caution," says Berger.

Although many doctors recognize that a lower dose of 81 milligrams of aspirin is just as effective – as well as safer – than a higher dose for the prevention of heart disease, Berger says most doctors are still prescribing 325 milligrams of aspirin at the first sign of a heart attack. "It's just not necessary; that's twice the amount patients really need," he says.

Aspirin helps protect a person from heart attacks because it can break up platelets in the blood that tend to clump together in clots that can block blood vessels and lead to chest pain or heart attack. But aspirin therapy is a two-edged sword: It's that same clot-busting ability that can lead to excess bleeding in some people – bleeding serious enough to warrant transfusion.

"This study tells us several things," says Berger. "First, even though aspirin is relatively cheap and easily obtained as an over-the-counter

medication, we need to remember that it is a very powerful drug, even in small doses."

At the same time, Berger says the study may give some clinicians renewed appreciation for a lowly, often overlooked aspirin tablet. "When you put aspirin up against much newer medications like the cholesterol-lowering statins or blood pressure-reducing ACE-inhibitors – which can be very expensive – you see a similar pattern of benefit," he says.

To illustrate, Berger says physicians would need to treat only 71 people with low dose aspirin to prevent a single death, but they would have to treat 83 patients with a statin or 91 patients with an ACE-inhibitor to achieve the same result.

"In these days, when everyone's budget is tight, it's good to know that good prevention strategies do not have to cost a fortune," Berger says.

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Source: Duke University Medical Center

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