



Aspirin

Wonder Drug or Wondering About the Drug

By Narendra Singh, MD

Aspirin is one of the oldest drugs in medicine and originates from the willow tree.

Reengineered by Bayer pharmaceuticals in 1897 it has been used for many purposes. Aspirin has important anti-inflammatory properties and is used in many arthritic conditions. It also works as a pain reliever and is used for the treatment of headaches and other discomforts. Aspirin's greatest use, however, has been as a blood thinner for cardiac patients.

Recently, concerns have been raised as to whether the regular use of aspirin has any preventive value. Previous studies had suggested that it could reduce your risk of a heart attack or stroke and therefore millions of Americans have been routinely taking a baby aspirin daily.

This year a number of large clinical trials have forced us to revisit whether or not aspirin is of value. The first trial, ARRIVE, looked at individuals who had risk factors such as hypertension, high cholesterol, smoking, or a family history of heart disease but no personal history of heart disease. Low dose aspirin showed very little clinical benefit in terms of reducing cardiovascular events and no benefit in terms of reducing cancer events. It was associated with a two-fold increase in gastrointestinal bleeding.

The second study, ASCEND, specifically focused on diabetic patients who did not have coronary artery disease; the study showed that while aspirin had some mild benefit in terms of reducing cardiac events, this was offset by the amount of bleeding.

The ASPREE study looked at healthy elderly individuals who did not have dementia or coronary artery disease; the results showed no benefit to the use of aspirin and in fact a trend towards increased harm. Based on these trials, the use of aspirin for **primary** prevention should not be routinely recommended.

However, before throwing away the aspirin bottle it is important to understand that in **secondary** prevention, aspirin is very useful. Anybody who has had a heart attack or stroke or has peripheral vascular disease benefits greatly from the use of aspirin either alone or in combination with a second blood thinner. In the past, the most common combination was to use aspirin in conjunction with a second antiplatelet agent such as clopidogrel (Plavix), prasugrel (Effient) or ticagrelor (Brilinta). If you have a stent, this is still the favored combination for the first year.

A recent study, COMPASS, showed that in patients with a history of coronary artery

disease or peripheral vascular disease the use of aspirin in combination with low dose rivaroxaban (Xarelto) was markedly better than aspirin alone. For the first time, a combination of blood thinners has been able to show a survival benefit. In addition to reducing heart attacks, strokes, and lower limb amputations, this combination also reduces the chances of dying by 22% in less than 2 years. Combination therapy, however, does increase the risk of bleeding and therefore these medications should only be taken upon the advice of your physician.

While aspirin may have lost some of its luster, it is still a remarkable compound and, if used appropriately, can be an important component of improving your heart health. As with any health-related decision, it is important that you consult with your physician prior to starting any regimen. ■

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