

**If you have heart or vascular disease, your doctor may prescribe an “antiplatelet” drug.** They lower the risk of blood clots. Aspirin is the most famous antiplatelet, but there are three others: Aggrenox (dipyridimole plus aspirin), ticlopidine (Ticlid), and clopidogrel (Plavix).

To help you and your doctor choose a blood-thinning medicine if you need one, *Consumers Reports* has evaluated the drugs in this category based on their effectiveness, safety, and cost. This 2-page brief is a summary of a 16-page report you can access on the Internet at [www.CRBestBuyDrugs.org](http://www.CRBestBuyDrugs.org). You can also learn about other drugs we’ve analyzed on this *free* Web site. Our independent evaluations are based on scientific reviews conducted by the Oregon Health and Science University-based Drug Effectiveness Review Project. Grants from the Engelberg Foundation and National Library of Medicine help fund Consumer Reports Best Buy Drugs.

**DO YOU NEED AN ANTIPLATELET?**

If you have high blood pressure, high cholesterol, or diabetes, or you smoke, are overweight, or have a family history of early heart disease, you may already be taking medicines to lower your risk of heart disease and stroke. Your doctor is likely to advise that you take an antiplatelet drug, too, unless you have a history of internal bleeding, such as an ulcer. Likewise, if you have been diagnosed with heart disease, have had a heart attack or stroke, or have had blood clots in your legs, you are a candidate for treatment with an antiplatelet.

**Summary of Evidence on the Antiplatelet Drugs**

| Brand Name(s)           | Generic Name                          | Effective in Preventing Heart Attacks? | Effective in Preventing Strokes? | Effective for the Treatment of Peripheral Vascular Disease? |
|-------------------------|---------------------------------------|--|----------------------------------|---|
| Bayer, Bufferin, Others | Aspirin                               | Yes                                    | Yes                              | Yes   |
| Aggrenox                | Aspirin/extended-release dipyridamole | No evidence                            | Yes                              | No evidence   |
| Plavix                  | Clopidogrel                           | Yes                                    | Maybe                            | Probably  |
| Ticlid                  | Ticlopidine                           | Yes                                    | Maybe                            | No evidence   |

**Our Recommendations**

The antiplatelet drugs are among the most widely used in the world. They are used to lower the risk of heart attack and stroke under a variety of circumstances. They are highly effective in doing so.

For example, antiplatelets can help people who have had a heart attack lower their risk of a repeat attack by about 35 percent. The antiplatelets are also effective in treating people who have artery blockages in their legs.

The antiplatelet drugs work by decreasing blood clotting, which evidence now shows is directly linked to heart attack and stroke risk.

Taking the evidence for effectiveness, safety, side effects, and cost into account, we have chosen the following as *Consumer Reports Best Buy Drugs* for people in the following clinical circumstances:

- *Aspirin* – if you have multiple risk factors for heart attack and stroke (such as high blood pressure, smoking, diabetes, and/or high cholesterol) but have not been diagnosed with heart disease or had a heart attack, stroke, or mini-stroke (also known as a transient ischemic attack, or TIA)
- *Aspirin* – if you have been diagnosed with heart disease and so-called “stable” angina
- *Clopidogrel (Plavix)* – if you have been diagnosed with heart disease and have stable angina, but cannot take aspirin
- *Aspirin + clopidogrel (Plavix)* – if you have what is known as “unstable” angina or acute coronary syndrome, have had a heart attack, or have had angioplasty and a stent implanted in the previous year
- *Aggrenox* – if you have had a stroke or mini-stroke

It’s not possible to choose a *Best Buy* drug for people with peripheral vascular disease. Too few studies have compared the drugs in the treatment of this condition.

However, your doctor is likely to start treating you with aspirin if you have this condition.

Be sure to ask your doctor about generic clopidogrel, although availability of this drug may be limited due to patent litigation.

*This information was last updated in April 2007.*

## Your Treatment Choices with Antiplatelets

| Condition/Your Health Status   | Best Treatment <sup>1</sup>                 | Best Treatment if You Can't Take Aspirin <sup>2</sup> | Less Effective, Less Safe, or No Evidence For | Comments or Cautions  |
|--|---|---|---|---|
| Have Heart Disease Risk Factors Only <sup>3</sup>                                  | Aspirin                                     | Clopidogrel (Plavix)                                  | Ticlopidine, Aggrenox                         | Don't take aspirin as a heart attack preventive without consulting your doctor.                       |
| Have Heart Disease With "Stable" Angina <sup>4</sup>                               | Aspirin                                     | Clopidogrel (Plavix)                                  | Ticlopidine, Aggrenox                         | If chest pain worsens or starts to occur when you are not active, check with your doctor immediately. |
| Have Heart Disease with "Unstable" Angina, or Acute Coronary Syndrome <sup>5</sup> | Aspirin + clopidogrel (Plavix) <sup>6</sup> | Clopidogrel (Plavix)                                  | Ticlopidine, Aggrenox                         | Aspirin + clopidogrel should not be taken by people at higher risk of stomach bleeding or ulcers.     |
| Had a Recent Heart Attack  | Aspirin + clopidogrel (Plavix) <sup>6</sup> | Clopidogrel (Plavix)                                  | Ticlopidine, Aggrenox                         | Caution on excess risk of stomach bleeding with combination of aspirin + clopidogrel.                 |
| Had Angioplasty and Stent Placement  | Aspirin + clopidogrel (Plavix) <sup>6</sup> | Clopidogrel (Plavix)                                  | Ticlopidine, Aggrenox                         | Strong evidence for benefit of the combination of drugs .   |
| Have Had a Stroke or Transient Ischemic Attack (TIA)                               | Aggrenox                                    | Clopidogrel <sup>7</sup>                              | Ticlopidine                                   | Aspirin alone has been shown less effective than Aggrenox.  |
| Peripheral Vascular Disease <sup>8</sup>   | Aspirin or clopidogrel (Plavix)             | NA  | Aggrenox, Ticlopidine                         | Evidence gives slight advantage to clopidogrel as best initial treatment.                             |

(1) "Best Treatment" indicates best initial treatment for the majority of patients. Individual circumstances vary, however, and your doctor may advise another treatment course for good clinical reasons. (2) Some people are allergic to aspirin, or are particularly sensitive to its adverse effects on their stomachs, with a resultant higher risk of stomach bleeding and ulcers. (3) The major risk factors for heart disease or cerebrovascular disease are high blood pressure, high cholesterol, diabetes, and smoking. Other risk factors include being overweight, getting little or no exercise, having elevated triglyceride or C-reactive protein levels, and having a family history of early-onset heart disease. (4) Stable angina is when a person has angina symptoms – primarily chest pain – that are not severe and follow a predictable pattern. (5) Unstable angina is when a person has angina symptoms – primarily chest pain – that is more severe and frequent and occurs when they are inactive. Acute Coronary Syndrome indicates a heart attack may be imminent. (6) Except for people who are at higher risk of internal bleeding, for example from stomach ulcers. The combination in some people adds to that risk. It can also add to the risk of bleeding in the brain, which can trigger a kind of stroke called a hemorrhagic stroke. (7) Not strong evidence for clopidogrel in preventing secondary strokes; aspirin second best choice if you can take it. (8) Peripheral vascular disease mostly involves blood clots and vein blockages in the legs. This can occur in one leg or both legs.

## Costs of the Antiplatelet Drugs

| Generic Name and Dose                                     | Brand Name <sup>1</sup>              | Frequency of Use Per Day <sup>2</sup> | Average Monthly Cost <sup>3</sup> |
|---|--------------------------------------|---------------------------------------|-----------------------------------|
| Aspirin tablet 81mg-325mg                                 | Bayer, Bufferin, Others, and Generic | One                                   | \$3 or less                       |
| Aspirin/dipyridamole sustained release capsule 25mg/200mg | Aggrenox                             | Two                                   | \$161                             |
| Clopidogrel tablet 75mg                                   | Plavix                               | One                                   | \$150                             |
| Clopidogrel tablet 75mg <sup>4</sup>                      | Generic                              | One                                   | \$26-\$134 <sup>4</sup>           |
| Ticlopidine tablet 250mg                                  | Ticlid                               | Two                                   | \$180                             |
| Ticlopidine tablet 250mg                                  | Generic                              | Two                                   | \$66                              |

- (1) "Generic" indicates that this drug is sold as a generic.  
 (2) Frequency of use reflects usual frequency; some products may be used more or less frequently.  
 (3) Prices reflect nationwide retail average for November 2006, rounded to the nearest dollar; prices are derived by Consumer Reports Best Buy Drugs from data are provided by Wolters Kluwer Health, Pharmaceutical Audit Suite.  
 (4) Generic clopidogrel became available in August 2006. A legal dispute over the patent on the brand version, Plavix, now threatens to disrupt the supply of the generic in 2007. In the meantime, the generic has been available at widely varying prices. Our source on drug prices (Wolters Kluwer Health, Pharmaceutical Audit Suite) indicates an average nationwide monthly cost of \$134. We checked several U.S. based online pharmacies, however, and found it for sale at prices as low as \$26 and up to \$112 for a month's supply.