

The Most Dangerous Drug

A quick question for those of you who might be medically oriented: What do a twenty-five year-old construction worker with an ulcer, a man in his late eighties with ugly red blotches on his arms, and a sixty-two year old woman with congestive heart failure have in common? Stumped? I'll give you the answer below, so read on.

It's hard to turn on the television these days without seeing an ad for aspirin. The latest thing seems to be Bayer Advanced Aspirin. It's hyped as a new wonder drug—or so you'd be led to believe if you don't read the fine print. Don't be fooled. Aspirin as we know it was first formulated in 1853, and was patented by the German firm Bayer in 1900. It's been around for way over a century. Bayer Advanced is little more than micro-sized aspirin particles that are absorbed more rapidly, and are hence touted as relieving pain “twice as fast as before.” The whole idea is not new; Goody Powders have been available for years and basically follow the same concept while throwing in a little caffeine and acetaminophen (Tylenol®) for extra kick.

If you have had a prescription filled in recent years you are familiar with the Drug Information Sheets that are handed out with most medicines. They are mandated by Federal law, and supposedly inform the consumer (read “patient”) about all the side effects one can suffer from taking the drug. But they represent a two-edged sword. Yes, they do provide necessary and helpful information (while incidentally helping shield the pharmacy, pharmacist, physician and drug company from lawsuits), but they also tend to list every possible side effect that has ever been reported for the particular drug being dispensed. Any physician call tell you that patients often refuse to take a drug after reading the possible complications, not realizing that most occur rarely.

But what about aspirin? It's “safe,” available on the open market for generations, and



widely used. A sheet of risks and benefits is not shoved in our faces with every bottle. Yes, there is a bit of fine print on the label, but most of us swallow the pills with impunity, never having even glanced at the instructions. Let me make a controversial statement: If aspirin were invented today, there is a good chance that the Food and Drug

Administration (FDA), the folks in charge of approving new drugs and in turn protecting the public, would refuse to license it. The ingestion of aspirin carries significant risks, and there are

alternative drugs on the market that can do the same thing, often with fewer side effects and complications. If it were approved, it would likely be available only by prescription, and then with significant warnings.

Chemically, aspirin is acetylsalicylic acid, sometimes referred to as ASA. It's a member of the class of medicines known as non-steroidal anti-inflammatory drugs, or NSAIDs. The name Aspirin[®] was a trademark of Bayer, but they lost the patent in certain countries including the United States as part of the reparations demanded under the Treaty of Versailles at the end of World War I. (Interestingly, Heroin[®] was also another Bayer-patented product, but that's another story.) The use of salicylates to relieve pain and fever date back millennia, but they were often associated with gastric irritation and other side effects. The compound that Bayer named Aspirin[®] offered therapy with fewer problems, hence its success.

Bayer AG remains a multi-billion dollar German-based company with a large presence in the health care field. They are the force behind essentially all of the ads for aspirin. The compound itself is cheap and generic, costing a tiny fraction of a cent per tablet. But through slick sales promotions, many—perhaps most—associate the company name with aspirin of especially high quality. When people think of aspirin, they think of Bayer Aspirin. If the company can expand the market, it will get the lion's share of the increase. I'll say more about that in a moment.

Today, aspirin's primary use for the relief of pain and fever has been replaced by other, safer drugs. Over-the-counter NSAIDs such as naproxen (Aleve[®]) and ibuprofen (Motrin[®]) serve the same purpose. Tylenol[®], in a different class, often works as well. Remember "baby aspirin"? It was taken off the market when it was discovered to have an association with Reye's syndrome, an often fatal condition in children. Aspirin irritates the stomach and can cause gastritis and ulcers. It also acts to slow the clotting of blood, something that can have both positive and negative effects. Studies have shown that aspirin's use is associated with a significant increase in major bleeding episodes such as gastrointestinal hemorrhage and cerebral bleeding that can result in strokes.

From the viewpoint of a physician, aspirin's major use is in the prevention of recurrent heart attacks and strokes. It works well in selected patients, provided the calculated benefits outweigh the calculated risks. Now, back to television advertising. Bayer is currently running a series of ads featuring people who have "survived" heart attacks. They are surprisingly young,

surprisingly healthy, and seem totally shocked they—of all people—could have heart disease. Oh, and all of them were given aspirin.

In the US, the average age for a first heart attack is 66 for men, and 70 for women. Men carry a far greater lifetime risk of having a heart attack than do women. As for strokes, three-quarters of patients are over age 75 when the event occurs. Go to one of Bayer’s websites promoting aspirin use in cardiovascular disease. The written recommendations for aspirin use follow proper guidelines, BUT, the section promoting “Survivor Stories” is a different matter. About three-quarters are female, and the average age (when given) below 50 years. Aspirin users with cardiovascular disease seem to be a younger, female group.

Recent studies have shown a 55 percent increased relative risk for gastrointestinal bleeding, and a 54 percent increased risk for cerebral bleeding (stroke) in a large group taking aspirin for the purpose of preventing cardiovascular disease. But there is more: Chronic and/or excessive aspirin use can be associated with liver disease, kidney failure, chronic anemia, and significant drug interactions, to name a few of the potential problems that can occur. Overdoses, either accidental or deliberate, are often fatal.



The US guidelines for the use of aspirin in the prevention of cardiovascular disease are well established: For men, aged 45 to 79 to prevent heart attacks, for women aged 55 to 79 to prevent strokes of a certain type, but only “*when the potential benefit...outweighs the potential harm due to an increase in gastrointestinal hemorrhage.*” Beyond age 80, any benefits are uncertain. Aspirin is NOT recommended to prevent heart attacks in women, or stroke in men, unless there has been a previous cardiovascular event. Neither is it recommended in men less than 45 and women less than 55.

Now, back to the patients I mentioned at the start of this rant. The construction worker was taking daily aspirin because his father had had a heart attack and he had seen ads on television that implied heart attacks could be prevented if he did so. The aspirin most likely caused his ulcer. The man in his eighties with red blotches: Hemorrhage into the skin due to aspirin therapy. They went away in time when he stopped taking it. And the lady with congestive heart failure? She had been put on aspirin appropriately by her doctor, but having

read the Drug Information Sheets given out with her half-dozen or so pills, decided that the nausea she'd been experiencing was due to another prescription drug, which she stopped, sending her into heart failure. She couldn't believe that something sold over-the-counter, as safe as aspirin was supposed to be, could cause her symptoms. We stopped her aspirin, restarted her heart medicine and all was well.

The bottom line: Aspirin is a powerful drug that has a limited number of potential benefits as compared to alternative therapies, but is associated with very significant risks with regular use. Companies who stand to profit from the sale of aspirin, Bayer in particular, subtly promote it for the prevention of cardiovascular disease while not (in my opinion) fully informing potential users of the associated risks and complications.