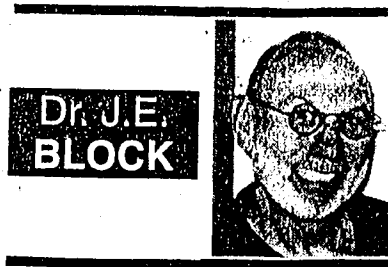


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## — All Things Medical —



### Aspirin Therapy

Aspirin is used to prevent blood clots within the blood vessel wall, be it in the heart vessels, where they can cause a heart attack, or in the neck and head vessels, where they can cause a stroke.

The basis for the use of low dose aspirin lies in its unique inhibitory effect on a single key enzyme. This is COX-1 (cyclooxygenase-1). Actually, there are two forms (isoform) of COX. The other is known as COX-2. The latter is inducible and undetectable in most normal tissues but, under certain conditions such as inflammatory processes, becomes elevated. Therefore, a high dose of aspirin (10 grains or 2 adult tablets), which is an antiinflammatory, and other medications such as ibuprofen, quell the COX-2 and the inflammatory process. As a consequence of this, the good effects of COX-2, which gives protection of the stomach and kidneys are lost and problems with this,

such as ulcers, gastrointestinal bleeding, kidney failure, fluid retention and high blood pressure can occur with the higher dosage.

A brief exposure to a small dose of aspirin (80-100 mg) inactivates virtually all the platelet COX for its lifetime, which is ten days. The platelets are small elements found in the blood which cause the blood to clot.

On the other side of the coin, the blood vessel wall has a COX-2 enzyme (thromboxane A<sub>2</sub> or PGI<sub>2</sub>). This enzyme counters the prothrombic effect of the platelets. Higher doses (more than 10 grains or two adult size tablets) of aspirin stop this good effect.

A study published in late 1999 revealed that, after a surgical procedure, folks who took more than 10 gm (650 mg) of aspirin had a higher incidence of both strokes and heart attacks.

In the European Congress of Cardiology in September 1999, a paper was delivered indicating that with 300 mg (one adult aspirin), patients with congestive heart failure were more likely to die or have a heart attack or stroke compared to patients on another anticoagulant, Warfarin, or a placebo. So, in my book, high doses of aspirin are out.

More about this next week.