

Study: Celecoxib can cause arrhythmias

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U.S. medical researchers have determined the anti-inflammatory drug celecoxib (Celebrex) can adversely affect heart rhythm in fruit fly and rat models.

COX-2 inhibitors such as celecoxib have come under scrutiny due to adverse cardiovascular side-effects stemming from COX-2 reduction. But the new study found the drug-induced arrhythmia is independent of the COX-2 enzyme.

Satpal Singh and colleagues at the State University of New York at Buffalo tested various celecoxib doses on the heart rate of the fruit fly *Drosophila*. They found celecoxib reduced heart rate and increased beating irregularities.

The finding was a surprise, the researchers said, since *Drosophila* do not have COX-2 enzymes. Rather, the scientists said, celecoxib might directly inhibit the potassium channels that help generate the electric current that drives heartbeat.

Singh and colleagues note that since the arrhythmia effects bypass COX-2, it is unclear if other COX-2 inhibitors would yield similar results. They also stress it is too early to speculate on human effects.

The research appears in the *Journal of Biological Chemistry*.

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