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Aspirin can prevent liver damage that afflicts millions

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Simple aspirin may prevent liver damage in millions of people suffering from side effects of common drugs, alcohol abuse, and obesity-related liver disease, a new Yale University study suggests.

The study in the January 26 edition of *Journal of Clinical Investigation* documents that in mice, aspirin reduced mortality caused by an overdose of acetaminophen, best known by the brand name Tylenol. It further showed that a class of molecules known as TLR antagonists, which block receptors known to activate inflammation, have a similar effect as aspirin. Since these agents seem to work by reducing injury-induced inflammation, the results suggest aspirin may help prevent and treat liver damage from a host of non-infectious causes, said Wajahat Mehal, M.D., of the Section of Digestive Diseases and Department of Immunobiology at Yale School of Medicine.

"Many agents such as drugs and alcohol cause liver damage, and we have found two ways to block a central pathway responsible for such liver injury," Mehal said. "Our strategy is to use aspirin on a daily basis to prevent liver injury, but if it occurs, to use TLR antagonists to treat it."

Promising drugs that have failed clinical trials because of liver toxicity might be resurrected if combined with aspirin, Mehal said.

"This offers the exciting possibility of reducing a lot of pain and suffering in patients with liver diseases, using a new and very practical approach," Mehal said.