

**Benefits and harms of aspirin daily**

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## **Abstract**

In this report, we will discuss the benefits and harms of aspirin daily is widely used as pain killer and lower body temperature .The main constituent of aspirin tablets is acetylsalicylic acid ( $\text{CH}_3\text{COOC}_6\text{H}_4\text{COOH}$ ), is a non steroidal anti- inflammatory drug (NSAID), means they are not steroid, steroid often have similar benefits, but they can have unwanted side effects .

## **Introduction**

Aspirin is Reduces the risk of stroke, myocardial infarction or death by approximately 25% in patients with cardiovascular disease .it still one of the most widely used medication in the world. Is one of the most commonly used drugs for treating mild to moderate pain, fever and to prevent blood clots and myocardial infarction. Aspirin passes unchanged through the acidic condition in the stomach but is hydrolysed to the ethanoate ions and salicylate ions by the alkaline juices in intestines. Over doses of aspirin may even causes death .

## **Discussion**

Aspirin mechanism of action anti-platelet in low dose inhibits platelet cyclooxygenase, a key enzyme in thromboxane A<sub>2</sub> (TXA<sub>2</sub>) generation. Thromboxane A<sub>2</sub> triggers reactions that lead to platelet activation and aggregation, aspirin acts as a potent antiplatelet agent by inhibiting generation of this mediator. in high dose aspirin inhibit the activity of the enzyme now called cyclooxygenase (COX) which leads to the formation of prostaglandins (PGs) that cause inflammation, swelling, pain and fever. In the united states, tens of millions of adults take aspirin to reduce their risk of heart attack or stroke. A large-scale study of more than 600,000 people has shown that long-term aspirin use may significantly reduce the incidence of five types of cancers that affect the digestive system. The study compared cancer risk between people who had taken aspirin for at least six months (7.7 years on average) with non-aspirin users over a 10-year period. After accounting for a range of factors, the incidence reduction results were significant for five digestive system cancers:

- 47% reduction in liver and esophageal cancer.
- 34% reduction in pancreatic cancer.
- 24% reduction in colorectal cancer.
- 38% reduction in gastric cancer.

Researchers followed 86,206 women in the Nurses' Health Study from 2000 to 2012 and 43,977 men in the Health Professionals Follow-up Study from 2006 to 2012. Baseline aspirin use was recorded and then researchers followed up on aspirin use every two years after that. Reductions in overall mortality risks and mortality risk from cancer were observed at dosages of aspirin ranging from half a standard aspirin tablet per week to seven tablets per week. Benefits on cancer mortality were observed for people who took 0.5 to 1.5 standard tablets per week.

People who took two to seven tablets per week had an even greater risk reduction in cancer mortality. Aspirin appears to reduce risk of death, hospitalization for people with heart failure and diabetes. For people living with both Type 2 diabetes and heart failure, taking an aspirin each day appears to lower the risk of dying or being hospitalized for heart failure, according to research being presented at the American College of Cardiology's .

**Conclusion:**

- Prevent blood clots and myocardial infarction.
- Is one of the most commonly used drug for treating.

**References :**

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