

Researchers challenge new guidelines on aspirin in primary prevention

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According to the U.S. Centers for Disease Control and Prevention, more than 859,000 Americans die of heart attacks or stroke every year, which account for more than 1 in 3 of all U.S. deaths. Credit: Florida Atlantic University

The most recent guidelines for primary prevention recommend aspirin use for individuals ages 40 to 70 years who are at higher risk of a first cardiovascular event, but not for those over 70. Yet, people over 70 are at increasingly higher risks of cardiovascular events than those under 70. There has been considerable confusion from recently reported results of three large-scale randomized trials of aspirin in high risk primary prevention subjects, one of which showed a significant result, but the other two, based possibly on poor adherence and follow up, did not. As a result, health care providers are understandably confused about whether or not to prescribe aspirin for primary prevention of heart attacks or strokes, and if so, to whom.

In a commentary published online ahead of print in the *American Journal of Medicine*, researchers from Florida Atlantic University's Schmidt College of Medicine and collaborators from the University of Wisconsin School of Medicine and Public Health, and the Harvard Medical School and Brigham and Women's Hospital, provide guidance to health care providers and their patients. They urge that to do the most good for the most patients in [primary care](#), health care providers should make individual clinical judgements about prescribing aspirin on a case-by-case basis.

"All patients suffering from an acute heart attack should receive 325 mg of regular aspirin promptly, and daily thereafter, to reduce their death rate as well as subsequent risks of heart attacks and strokes," said Charles H. Hennekens, M.D., Dr.P.H., senior author, the first Sir Richard Doll Professor, and senior academic advisor in FAU's Schmidt College of Medicine. "In addition, among long-term survivors of prior heart attacks or occlusive strokes, aspirin should be prescribed long-term unless there is a specific contraindication. In primary prevention, however, the balance of absolute benefits, which are lower than in secondary prevention patients, and risks of aspirin, which are the same as in secondary prevention, is far less clear."

The researchers emphasize that, based on the current totality of evidence, any judgments about prescribing long-term aspirin therapy for apparently healthy individuals should be based on individual clinical judgments between the health care provider and each of his or her patients that weighs the absolute benefit on clotting against the absolute risk of bleeding.

The increasing burden of cardiovascular disease in developed and developing countries underscores the need for more widespread therapeutic lifestyle changes as well as the adjunctive use of drug therapies of proven net benefit in the primary prevention of heart attacks and strokes. The therapeutic lifestyle changes should include avoidance or cessation of smoking, weight loss and increased daily physical activity, and the drugs should include statins for lipid modification, and multiple classes of drugs likely to be necessary to achieve control of high blood pressure.

"When the magnitudes of the absolute benefits and risks are similar, patient preference assumes increasing importance," said Hennekens. "This may include consideration of whether the prevention of a first heart attack or stroke is a more important consideration to a patient than their risk of a gastrointestinal bleed."

Individual clinical judgements by [health care providers](#) about prescribing aspirin in primary prevention may affect a relatively large proportion of their patients. For example, primary prevention patients with metabolic syndrome, a constellation of overweight and obesity, hypertension, high cholesterol, and insulin resistance, a precursor to diabetes mellitus, affects about 40 percent of Americans over age 40. Their high risks of a first heart attack and stroke may approach those in survivors of a prior event.

"General guidelines for [aspirin](#) in [primary prevention](#) do not seem to be

justified," said Hennekens. "As is generally the case, the primary care provider has the most complete information about the benefits and risks for each of his or her patients."

According to the United States Centers for Disease Control and Prevention, more than 859,000 Americans die of [heart](#) attacks or [stroke](#) every year, which account for more than 1 in 3 of all U.S. deaths. These common and serious diseases take a very large economic toll, costing \$213.8 billion a year to the health care system and \$137.4 billion in lost productivity from premature death alone.

More information: Alexander Gitin et al, ASPIRIN IN PRIMARY PREVENTION: NEEDS INDIVIDUAL JUDGMENTS, *The American Journal of Medicine* (2020). [DOI: 10.1016/j.amjmed.2020.01.006](https://doi.org/10.1016/j.amjmed.2020.01.006)

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