

# ACP recommends metformin to treat type 2 diabetes based on CE analysis of oral medications

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The American College of Physicians (ACP) recommends that clinicians add metformin as the initial drug treatment for most patients with type 2 diabetes when lifestyle modifications such as diet, exercise, and weight loss have failed to adequately improve high blood sugar.

ACP also recommends that clinicians add a second drug to metformin when treatment with metformin and lifestyle changes fail to control blood sugar levels. Citing insufficient evidence, ACP does not recommend one class of drug over another as a second medication.

The recommendations are part of a new ACP [clinical practice guideline](#) published today in [Annals of Internal Medicine](#), ACP's flagship journal. ACP developed the guideline based on an analysis of the comparative effectiveness and safety of different classes of oral diabetes drugs approved by the US Food and Drug Administration for the treatment of high blood sugar in people with type 2 diabetes: metformin, sulfonylureas, meglitinides, thiazolidinediones, DPP-4 inhibitors, and GLP-1 [receptor antagonists](#).

ACP evaluated the evidence of the impact of high blood sugar levels on clinical outcomes such as body weight, cholesterol and [triglyceride levels](#), all-cause mortality, cardiovascular disease and death, neuropathy, and kidney function.

"We found that most diabetes medications reduced blood sugar levels to a similar degree," said Amir Qaseem, MD, FACP, PhD, MHA, Director of Clinical Policy at ACP. "However, metformin is more effective compared to other type 2 diabetes drugs in reducing blood sugar levels when used alone and in combination with other drugs. In addition, metformin reduces body weight and improves cholesterol profiles."

For side effects, the risk for dangerously low [blood sugar levels](#) was higher with sulfonylureas than with other type 2 [diabetes drugs](#). Metformin was associated with fewer side effects than sulfonylureas.

The evidence was insufficient to show any difference in effectiveness between various medications across subgroups of adults, such as age, sex, or race.

## **Best Practice Advice**

The guideline includes a Best Practice Advice section to help clinicians practice high value, cost-conscious care. ACP recommends prescribing generic metformin because it has better effectiveness than the majority of the other medications; is associated with fewer adverse effects, including that it does not result in weight gain; and is less expensive.

## **Patient Education**

The guideline notes that good management of type 2 diabetes includes patient education. A patient summary of the guideline is available at <http://www.annals.org/content/156/3/I-36.full>.

Provided by American College of Physicians

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