

Low-carb diet effective at lowering blood pressure

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In a head-to-head comparison, two popular weight loss methods proved equally effective at helping participants lose significant amounts of weight. But, in a surprising twist, a low-carbohydrate diet proved better at lowering blood pressure than the weight-loss drug orlistat, according to researchers at Veterans Affairs Medical Center and Duke University Medical Center.

The findings send an important message to hypertensive people trying to lose weight, says William S. Yancy, Jr., MD, lead author of the study in the Jan. 25 [Archives of Internal Medicine](#), and an associate professor of medicine at Duke. "If people have [high blood pressure](#) and a weight problem, a low-carbohydrate diet might be a better option than a [weight loss](#) medication."

Yancy added, "It's important to know you can try a diet instead of medication and get the same weight loss results with fewer costs and potentially fewer side effects."

Studies had already indicated that a low-carbohydrate diet and prescription-strength orlistat combined with a low-fat diet are effective weight loss therapies. But the two common strategies had not been compared to each other, an important omission now that orlistat is available over-the-counter. In addition, few studies provide data on these treatments for overweight patients with chronic health issues.

That's what made these findings particularly interesting, says Yancy, a

staff physician at the Durham VA where the research was conducted. The 146 overweight participants in the year-long study had a range of health problems typically associated with obesity -- diabetes, high blood pressure, high [cholesterol](#) and arthritis.

"Most participants in weight loss studies are healthy and don't have these problems," he said. "In fact they are often excluded if they do."

The average weight loss for both groups was nearly 10 percent of their body weight. "Not many studies are able to achieve that," says Yancy, who attributes the significant weight loss to the group counseling that was offered for 48 weeks. In fact, he says "people tolerated orlistat better than I expected. Orlistat use is often limited by gastro-intestinal side effects, but these can be avoided, or at least lessened, by following a low-fat diet closely. We counseled people on orlistat in our study fairly extensively about the low-fat diet."

In addition to achieving equal success at weight loss, the methods proved equally effective at improving cholesterol and glucose levels.

But Yancy said it was the difference in blood pressure results that was most surprising.

Nearly half (47%) of patients in the low-carbohydrate group had their blood pressure medication decreased or discontinued while only 21 percent of the orlistat plus low-fat diet group experienced a reduction in medication use. Systolic blood pressure dropped considerably in the low-carbohydrate group when compared to the orlistat plus low-fat diet group.

"I expected the weight loss to be considerable with both therapies but we were surprised to see blood pressure improve so much more with the low-carbohydrate diet than with orlistat," says Yancy, who says the

mechanism is unclear. "While weight loss typically induces improvements in [blood pressure](#), it may be that the low-carbohydrate diet has an additional effect." That physiologic effect may be the subject of future studies.

The bottom line, says Yancy, is that many diet options are proving effective at weight loss. But it's counseling patients on how to best follow the options that appears to be making the biggest impact. "It is clear now that several [diet](#) options can work, so people can be given a choice of different ways to lose weight. But more importantly, we need to find new ways to help people maintain their new lifestyle."

Provided by Duke University Medical Center

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