

# ADA Guidance No Longer Bars Low-Carb Diets

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New guidance from the American Diabetes Association gives a green light to the use of low-carbohydrate diets as a weight-control measure for patients with diabetes.

As part of the ADA's annual update of its clinical practice recommendations, the organization has dropped its formerly restrictive stance on low-carbohydrate diets.

The updated guidelines for 2008 also revise recommendations on prediabetes testing, metformin use, and hypoglycemia prevention, among other topics.

Although the ADA still does not endorse low-carbohydrate diets for weight loss or diabetes management, the association has updated the section of its guidelines that covers nutrition recommendations and interventions for diabetes to remove a specific recommendation against diets that restrict carbohydrates to less than 130 g/day. Now, for weight loss, the ADA says that either low-carbohydrate or low-fat calorie-restricted diets might be effective in the short term (up to 1 year). Previous language that recommended against low-carb diets was also removed from the 2008 section on nutrition recommendations for managing diabetes (secondary prevention).

For patients who are on low-carbohydrate diets, the ADA now advises monitoring of lipid profiles, renal function, and protein intake (in patients with nephropathy), as well as adjustment of glucose-lowering therapy as needed (*Diabetes Care* 2008;30[suppl. 1]:S61-78).

"The evidence is clear that both low-carbohydrate and low-fat calorie-restricted diets result in similar weight loss at 1 year. We're not endorsing either of these weight-loss plans over any other method of losing weight. ... It's important for patients to choose a plan that works for them, and that the health care team support their patients' weight loss efforts," guideline panel member and registered dietician Ann Albright, Ph.D., ADA President of Health Care and Education, said in a statement.

New data cited in the 2008 document are from the A to Z Weight Loss Study, a randomized trial that compared the Atkins, Zone, Ornish, and LEARN (Lifestyle, Exercise, Attitude, Relationships, and Nutrition) diets in a total of 311 overweight premenopausal women. At 1 year, those who followed the Atkins diet showed significantly more weight loss (-4.7 kg) than did the other three diet groups (-1.6 kg with Zone, -2.6 kg with LEARN, and -2.2 kg with Ornish). Secondary outcomes, including lipid profile, percentage of body fat, waist-hip ratio, fasting insulin and glucose levels, and blood pressure, were comparable or better with Atkins versus the other diet groups (*JAMA* 2007;297:969-77).

However, the ADA repeated a point it had made in 2007: The recommended daily allowance for digestible carbohydrate is 130 g/day, based on providing adequate glucose as the required fuel for the central nervous system without reliance on glucose production from ingested protein or fat.

"Although brain fuel needs can be met on lower-carbohydrate diets, long-term metabolic effects of very low-carbohydrate diets are unclear, and such diets eliminate foods that are important sources of energy, fiber, vitamins, and minerals that are important in dietary palatability," according to the 11-member writing panel, which was cochaired by Dr. John P. Bantle of the University of Minnesota, Minneapolis, and Judith Wylie-Rosett, Ed.D., a registered dietician, who is with Albert Einstein College of Medicine, New York.

Dr. Neil J. Stone, professor of clinical medicine at Northwestern University, Chicago, is similarly cautious. "The new guideline acknowledges that based on available data, there are choices when it comes to choosing a weight loss regimen for the short term. This is not an endorsement of lifelong marked carbohydrate restriction, and the general public as well as diabetics need to consider reasonable carbohydrate intake for nutritional balance, as [carbohydrates] can provide important sources of energy, fiber, vitamins, and minerals," he said in an interview.

But Dr. Eric C. Westman, director of the Lifestyle Medicine Clinic at Duke University, Durham, N.C., believes

that low-carb diets can play an important role in diabetes management. "Carbohydrates, especially sugar and starch, are the main factors in the diet that raise blood glucose. Carbohydrate-restricted diets are as effective, and sometimes even more effective, than medication therapy for type 2 diabetes.

"When obesity is present, carbohydrate-restricted diets have the advantage over medication because most people then lose weight, which then improves insulin resistance," Dr. Westman said in an interview.

Other revisions in the 2008 guidelines—some of which were previously published during 2007—include the following:

- ▶ New tables have been added that list screening recommendations and diagnostic cutpoints for gestational diabetes, summarize interventions and results of diabetes prevention trials, and summarize the evidence for statin therapy in people with diabetes.

- ▶ There is now a more explicit recommendation to consider testing for prediabetes (previously just for diabetes) in asymptomatic patients of any age who are overweight and have additional risk factors for diabetes.

- ▶ In addition to lifestyle counseling, metformin might now be an option in people considered to be at high risk (combined impaired fasting glucose and impaired glucose tolerance plus other risk factors) and who are obese and under 60 years of age.

- ▶ Continuous glucose monitoring might be a supplemental tool to self-monitoring of blood glucose for selected patients with type 1 diabetes, especially those with hypoglycemic unawareness.

Dr. Phillip Levy, a Phoenix endocrinologist, said the recommendations sounded pretty reasonable. "I don't think it matters what kind of diet patients use as long as they lose the weight," he said. Although increased cholesterol may occur with a low-carb diet, "I don't see that causing any permanent problems, because people don't stay on the diets" forever; instead they go off them once they lose the weight. ■

## Focus on Lifestyle, LDL Cholesterol in Metabolic Syndrome

BY MIRIAM E. TUCKER  
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COLUMBUS, OHIO — For patients with metabolic syndrome, the focus should be on the two "L" words: lifestyle and LDL.

That was the message from a talk given by former American Heart Association president Robert H. Eckel at a meeting on diabetes sponsored by Ohio State University. The term "metabolic syndrome" has become controversial since the September 2005 publication of a joint statement from the American Diabetes Association (ADA) and the European Association for the Study of Diabetes that called into question whether classifying the entity as a "syndrome" adds any clinical utility beyond its individual components (*Diabetes Care* 2005;28:2289-304).

With that debate still ongoing, Dr. Eckel was the lead author of a "call to action" from the ADA and the American Heart Association (AHA) in which both organizations expressed their strong commitment to prevention of cardiovascular disease and type 2 diabetes, and urged all health care providers to assess patients—especially those who are overweight or obese—for their CVD risk factors (*Diabetes Care* 2006;29:1697-9).

"The metabolic syndrome wasn't meant to be a global risk predictor for heart dis-

ease. It was meant to identify a cluster of risk factors that can be best modified initially by lifestyle," said Dr. Eckel, professor of medicine and the Charles A. Boettcher II Chair in Atherosclerosis at the University of Colorado, Denver.

Although data conflict somewhat as to whether metabolic syndrome does in fact increase the risk for CVD and death, a recent meta-analysis of 43 cohorts in 37 longitudinal studies comprising 172,573 patients found that metabolic syndrome conferred an independent relative risk of 1.54 after adjusting for all known cardiovascular risk factors (*J. Am. Coll. Cardiol.* 2007; 49:403-14).

In contrast to the disagreement on cardiovascular disease (CVD) risk, the data agree overwhelmingly on the benefits of lifestyle modification in patients with metabolic syndrome. Interventions that improve the quality of the diet, increase physical activity, and reduce weight often lead to improvements in a long list of cardiovascular risk factors, including reductions in waist circumference (a surrogate for visceral fat deposition), triglycerides, blood pressure, glu-

cose, and inflammatory markers, along with increases in HDL cholesterol. "Seems like the perfect therapy to me," Dr. Eckel remarked.

Still, diet specifics remain controversial. Although the key to weight reduction is clearly to expend more energy than is consumed, the importance of the carbohydrate/protein/fat ratio to the equation is still debated. Many people believe that low-carbohydrate plans such as the Atkins diet produce superior weight loss, but

Atkins fared no better at 1 year than did the low-fat, high-fiber Ornish regimen or other popular diets such as the Zone diet and Weight Watchers when compared in a head-to-head study (*JAMA* 2005;293:43-53).

Data supporting the medical benefits of lifestyle modification include an analysis of the landmark Diabetes Prevention Program. That study found that weight loss via lifestyle modification was the predominant predictor of reduced diabetes incidence in 1,079 program participants aged 25-84 years (*Diabetes Care* 2006;29:2102-7). And in the first year of the Look AHEAD (Action for Health in Diabetes), intensive lifestyle modification re-

sulted in an average 8.6% weight loss in 5,145 patients with type 2 diabetes, which was associated with a reduction in CVD risk factors and a reduced need for medication (*Diabetes Care* 2007;30:1374-83).

Yet, despite such strong evidence, an AHA survey of physicians found that fewer than 10% of cardiologists and fewer than 15% of family physicians even ask patients about their current diet and physical activity levels, let alone spend much time encouraging improvement in them. "As physicians we have to be engaged, informed, and passionate about lifestyle and how important it really is," Dr. Eckel said.

Beyond lifestyle, medications that address the various components of metabolic syndrome can affect other components as well. The weight-loss drugs orlistat and sibutramine both also reduce waist circumference, glucose, triglycerides, and C-reactive protein. Statins, besides lowering LDL cholesterol, also raise HDL cholesterol.

Although data strongly support blood pressure and glucose as primary targets of therapy beyond lifestyle in people with metabolic syndrome, the strongest data are those that support LDL lowering in patients with and without diabetes. "Let's not lose the importance of focusing on LDL lowering in patients with metabolic syndrome, even though it's not a part of the clustering of components," Dr. Eckel remarked. ■



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DR. ECKEL