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Kaiser Permanente

Losing weight soon after type 2 diabetes diagnosis doubles positive outcomes

First clinical study to show benefits remain even if patients regain weight

August 12, 2008 (Portland, Ore.) – People who lose weight soon after a diagnosis of type 2 diabetes have better control of their blood pressure and blood sugar, and are more likely to maintain that control even if they regain their weight, according to a Kaiser Permanente study published online in *Diabetes Care*, the American Diabetes Association journal.

This is the first clinical study to show that benefits remain even if patients regain their weight. The study followed more than 2,500 adults with type 2 diabetes for four years. Those who lost weight within an average of 18 months after diagnosis were up to twice as likely to achieve their blood pressure and blood sugar targets as those who didn't lose weight. Those benefits can prevent diabetes-related heart disease, blindness, nerve and kidney damage, and death.

"Our study shows that early weight loss can reduce the risk factors that so often lead to diabetes complications and death," says Dr. Adrianne Feldstein, MD, MS, the study's lead author, a practicing physician and an investigator at Kaiser Permanente's Center for Health Research in Portland, Ore. "We've known for a long time that weight loss is an important component in diabetes treatment and prevention. Now it appears there may be a critical window of opportunity following diagnosis in which some lasting gains can be achieved if people are willing to take immediate steps toward lifestyle changes."

More than 20 million Americans have type 2 diabetes and most of them are overweight or obese.

Funded by the National Institutes of Health, the four-year study conducted by Kaiser Permanente in Oregon and Washington followed 2,574 patients with type 2 diabetes between 1997 and 2002. Scientists followed the weight gain and loss patterns of these patients for three years, and then in the fourth year compared glucose control tests and blood pressure readings.

Most patients remained at about the same weight during the first three years of the study, but a small group of 314 patients lost an average of 23 pounds. This group was more likely to meet blood pressure and glucose targets during the fourth year even though, by that time, most of them had regained their weight.

"We don't know if the initial weight loss increased the body's sensitivity to insulin, or if the sustained lifestyle changes were the reason for the long-term health benefits," said Gregory A. Nichols, Ph.D., a study co-author at Kaiser Permanente's Center for Health Research. "But we do know that losing weight reduces the risk factors that often lead to heart disease, blindness, nerve and kidney damage, amputations, and death in type 2 diabetes patients."

Although the study didn't examine specific methods for weight loss, prior studies conducted at Kaiser Permanente's Center for Health Research have demonstrated effective weight loss strategies. One recent study reported that diabetic patients who had nutritional counseling were about twice as likely to lose weight. Another study found that people who keep food diaries lose twice as much weight as those who don't, and that people who attend support groups also lose more weight.

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This study -- The Weight Change in Diabetes and Glycemic and Blood Pressure Control study -- was supported by a grant from National Institute of Diabetes and Digestive and Kidney Diseases at the National Institutes of Health. Study authors include: Adrianne C. Feldstein, MD, MS; Gregory A. Nichols, Ph.D.; David H. Smith, RPh, MHA, Ph.D.; Victor J. Stevens, Ph.D.; A. Gabriela Rosales, M.S. and Nancy Perrin, Ph.D. of the Kaiser Permanente Center for Health Research, and Keith Bachman, MD, of the Northwest Permanente Medical Group.

Weight Loss Tips for People with Pre-Diabetes or Diabetes

- Choose whole grains, brown rice and vegetables instead of french fries, white bread and white rice
- Avoid the hidden calories in processed foods: Eat fresh foods without hidden fats or added sweeteners whenever possible
- Skip soda and fruit juice: opt instead for sugar-free soda, tomato juice or water, or eat a piece of fruit
- Don't drink your calories: Except for 1% or non-fat milk, get your calories from foods
- Establish consistent eating times, including breakfast

- Write down everything you eat so you avoid mindless eating and control how much you eat, at home and away: a recent Kaiser Permanente study showed that people who keep food diaries lose twice as much weight as those who don't.
- Educate yourself: find a registered dietitian or nutrition class -- a recent Kaiser
 Permanente study showed that diabetic patients who had nutritional counseling were about twice as likely to lose weight
- Visit kp.org/diabetes and kp.org/weight for more information on pre-diabetes, diabetes and weight management, in English and Spanish

Source: Kaiser Permanente www.kp.org

About the Kaiser Permanente Center for Health Research (http://www.kpchr.org)

Kaiser Permanente's Center for Health Research, founded in 1964, is a nonprofit research institution dedicated to advancing knowledge to improve health. It has research sites in Portland, Ore., Honolulu, Hawaii and Atlanta.

About Kaiser Permanente Research

Kaiser Permanente's eight research centers comprise one of the largest research programs in the United States and engage in work designed to improve the health of individuals everywhere. KP HealthConnect™, Kaiser Permanente's electronic health record, and other resources provide population data for research, and in turn, research findings are fed into KP HealthConnect to arm physicians with research and clinical data. Kaiser Permanente's research program works with national and local health agencies and community organizations to share and widely disseminate its research data. Kaiser Permanente's research program is funded in part by Kaiser Permanente's Community Benefit division, which in 2007 directed an estimated \$1 billion in health services, technology, and funding toward total community health.

About Kaiser Permanente

Kaiser Permanente is America's leading integrated health plan. Founded in 1945, the program is headquartered in Oakland, Calif. Kaiser Permanente serves 8.7 million members in nine states and the District of Columbia. Today it encompasses Kaiser Foundation Health Plan, Inc., Kaiser Foundation Hospitals and their subsidiaries, and the Permanente Medical Groups. Nationwide, Kaiser Permanente includes approximately 159,000 technical, administrative and clerical employees and caregivers, and 14,000 physicians representing all specialties. The



organization's Labor Management Partnership is the largest such health care partnership in the United States. It governs how more than 130,000 workers, managers, physicians and dentists work together to make Kaiser Permanente the best place to receive care, and the best place to work. For more Kaiser Permanente news, visit the KP News Center at:

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