



RETURNS FOR ILLINOIS

A SPECIAL SERIES ON C-FAR RESEARCH

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Higher Protein Diets Improving Health of Illinois Citizens

Groundbreaking research enabled by C-FAR

Obesity is a major public health problem in the United States with approximately 119 million of adult Americans considered overweight or obese. About 17 percent of children and adolescents ages 2–19 years are also considered overweight. In 2005, Illinois ranked 22nd in the nation in highest rate of adult obesity at 23 percent, and ranked 24th in highest rate of obese and overweight adults combined at 60 percent. Being overweight or obese increases the risk of many diseases and health conditions, including high blood pressure, type 2 diabetes, coronary heart disease, stroke, gallbladder disease, osteoarthritis, sleep apnea, respiratory problems, and some cancers (endometrial, breast, and colon).

Research supported by the State of Illinois through the Illinois Council on Food and Agricultural Research (C-FAR) has provided considerable insight into the role diet plays in combating obesity and related diseases. Donald Layman, a professor of nutrition at the University of Illinois at Urbana-Champaign, is internationally known for his work in protein metabolism, particularly his contributions in evaluating the role of dietary protein intake in maintaining health and optimal body composition. Layman's research has demonstrated the importance of essential amino acid and protein intake for normal muscle function and metabolism and helped define the current understanding of dietary protein requirements in adults.

Layman's studies have demonstrated that eating more high quality protein increases the amount of the amino acid leucine in the diet, helping a person maintain muscle mass and reduce body fat during weight loss. Consuming moderately high amounts of protein also appears to enhance the body's ability to stabilize blood sugar and correct abnormal symptoms associated with obesity and type 2 diabetes. "Traditionally, people have built a diet around low-fat foods, instead of high quality protein foods. My studies have shown that individuals who follow a moderately high protein diet lose fat, maintain muscle mass, and have an improvement in total blood cholesterol level. They are also less hungry between meals than those following a more traditional diet."

"Dr. Layman's research has brought real science to understanding weight loss, which has been plagued by confusion, fads, and potentially misleading anecdotal reports. His studies have demonstrated that an optimal weight loss diet should have higher protein and lower carbohydrates than currently recommended by the Food Guide Pyramid, the National Institutes of Health, and most medical societies," said Samuel Klein, M.D., chief of the Division of Geriatrics and Nutritional Science at Washington University in St. Louis School of Medicine and past-president of the North American Association for the Study of Obesity.

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Reaching out to Illinois citizens, Layman trained 170 staff members of the Expanded Food and Nutrition Education Program (EFNEP) and Family Nutrition Program (FNP) on the basics of his Sensible Solutions program. His dietary protocol was also adapted into a nutritional program for low-income individuals. Thirty-four EFNEP staff members who struggled themselves with being overweight and diabetic volunteered to participate in a yearlong study following the plan. At the end of the study, all of the participants' health indices improved – on average, they lost 10% of their body weight, began regular exercising, and all decreased their dependence on insulin. Four individuals had greater than 20% loss of body weight. The success improved the overall credibility of the staff and the program as they assisted others in improving their health.

“Rarely does a researcher gain the respect and adoration of the public. Dr. Layman has it with my staff. He helped them find successful ways to improve their personal health and the health of the communities in which they live and work. This is the epitome of what the land grant mission is about; integrating research with practical community solutions,” said Robin Orr, University of Illinois Extension specialist and coordinator for EFNEP and FNP.

“With his extensive experience and breakthrough research, Dr. Layman is a passionate and influential professional dedicated to improving the

lives of others through food and nutrition education,” said Mary Young, vice president of nutrition for the National Cattlemen’s Beef Association.

“C-FAR gave us the opportunity to explore this important health issue. While established federal funding programs saw no reason to explore higher protein diets, C-FAR did. C-FAR funding has also enabled us to form strategic partnerships with industry partners,” said Layman.



Illinois Council on Food and Agricultural Research
1101 W. Peabody Drive Urbana, IL 61801 • 217.244.4232 • www.ilcfar.org

