

## **ODU Researchers Get \$600,000 Award for Diabetes Studies**

Sheri Colberg-Ochs, associate professor of exercise science in Old Dominion University's Darden College of Education, leads a team of researchers that has received a \$600,000 Clinical Research Award from the American Diabetes Association. Two other ODU faculty members, Steven Morrison from the College of Health Sciences and David Swain from the Darden College, are collaborating with her.

The project, "Protective Health Effects of Differing Types and Intensities of Exercise Training in Individuals with Type 2 Diabetes," is funded for three years and also involves researchers Dr. Aaron Vinik and Henri Parson from Eastern Virginia Medical School.

Regular physical activity can lower the risk of developing type 2 diabetes and many diabetes-related complications, said Colberg-Ochs. However, controversy still exists regarding the optimal amount of exercise needed for improved health and what type of exercise is most beneficial.

The researchers anticipate that their study will identify attainable exercise goals that will provide the most health benefits to anyone with diabetes. In addition, they expect to show which types and intensities of exercise are best for people with nerve damage in their feet who are more prone to foot ulcers, amputations, falls and early disability.

Two studies are planned involving a total of 120 subjects. In one test, a set of people with nerve damage to their feet and another set without the damage will be exposed to various types and intensities of aerobic exercises. Another study involves resistance exercises.

Colberg-Ochs, who is a diabetic as well as a diabetes researcher, is a prolific author on the subject of diabetes and exercise. Her latest book, "The Diabetic Athlete's Handbook," is due to be published later this year.

She turned an exercise guide she developed in the late 1990s into her first book, "The Diabetic Athlete: Prescriptions for Exercise and Sports" (2001). That book was followed by "Diabetes-Free Kids: A Take-Charge Plan for Preventing and Treating Type 2 Diabetes in Children" (2005) and "The 7 Step Diabetes Fitness Plan: Living Well and Being Fit with Diabetes, No Matter Your Weight" (2006).

"The Science of Staying Young" (2007), which Colberg-Ochs wrote with the St. Louis University gerontologist, Dr. John E. Morley, focuses more on exercise than diabetes. Her fifth book, "50 Secrets of the World's Longest Living People with Diabetes" (2007), is co-authored by Dr. Steven Edelman, an endocrinologist who directs the nonprofit organization Taking Control of Your Diabetes. Colberg-Ochs, who interviewed more than 50 people for "50 Secrets," said, "The more I learn about diabetes and exercise, the more convinced I become that exercise is absolutely essential for anyone living with diabetes or prediabetes-to prevent complications and enhance longevity."

Morrison, endowed professor of physical therapy, has research interests in motor control and biomechanics. One focus of his work is the effect of factors such as disease and aging on human balance control. He directs the School of Physical Therapy research laboratory.

Swain, University Professor of exercise physiology, is widely known for his research showing the benefits of vigorous exercise. That work was featured in an article in Newsweek magazine in 2007. He developed the concept of VO<sub>2</sub> Reserve, indicating the range of oxygen consumption between resting and maximum consumption, which has

been adopted by the American College of Sports Medicine for use in prescribing exercise regimes. Swain also directs the university's Wellness Institute and Research Center, which offers therapeutic exercise classes for people with various diseases, including diabetes, pulmonary disease and heart disease.

Vinik, director of the Strelitz Diabetes Research Institute at EVMS, is a leading diabetes researcher who recently garnered international attention in media and professional circles for his discovery of a gene that could lead to a cure for the disease. Parson directs the microvascular biology laboratory at the Strelitz Institute. She holds a doctorate in biomedical sciences from the joint program of EVMS and ODU.