

UPDATE

The Cooper Institute Focuses on Elders in Four-Year Study

The Cooper Institute has begun recruiting for a new four-year research project funded by the National Institute on Aging. Called the "LIFE" Study (Lifestyle Interventions and Independence for Elders), the project will involve 400 men and women ages 70 to 85 at four centers across the nation: Wake Forest University in North Carolina, the University of Pittsburgh in Pennsylvania, Stanford University in California and The Cooper Institute.

Jason Wallace, recruitment coordinator for The Cooper Institute, said they are looking for elders who have more difficulty doing their daily activities than they used to. Participants will include those who haven't been involved in a structured program of physical activity.

The goal of the study is to see whether physical activity is effective in the prevention of major disability or premature death in the elderly population. The LIFE Study will test two different programs that will help older adults enhance their quality of life and remain independent members of their community for a longer period of time.

One program focuses on fitness, strength, flexibility and balance training. The other program will provide lifestyle education programs and classes. Both groups will have regular contact with The Cooper Institute's staff for up to two years. To participate, contact The Cooper Institute at 972-716-7032.

New Center Increases Minority Research Participation

Since opening a satellite office at the Dallas-based Hampton Clinic in August 2002, The Cooper Institute has steadily attracted more minority research participants. According to Ruben Rodarte, site coordinator at the Institute's Oak Cliff Outreach Research Center, recruitment efforts for the center's first research project, "DREW" (Dose Response to Exercise in Postmenopausal Women Ages 45 to 75), have surpassed expectations—and the center will participate in upcoming studies.

"The thinking behind opening this facility is that it would increase the number of minority participants," said Rodarte, adding that the Institute also recruits for DREW at its north Dallas facility.

To date, 45 participants have either completed DREW or are currently enrolled at the Oak Cliff center. Only one woman dropped out of the study, says, Rodarte, and that's because she was moving.

Rodarte and his team are looking for sedentary women who have moderate to high blood pressure. They recruit by offering monthly health lectures to women in the community, going to health fairs and participating in special events.

Although some women enter the study in hopes of losing weight, it isn't designed to be a weight-loss program. The purpose of DREW is to evaluate whether this group of women experience health benefits after six months of exercise. To determine the optimum "dose" of exercise, DREW researchers are following four groups. One group is the control group; the other three groups are physically active for different durations (20 minutes, 40 minutes and 60 minutes, at least three times a week).

The women are required to exercise under supervision at the Oak Cliff Outreach Research Center. According to Rodarte, many participants have expressed that they needed some type of structure and supervision. "They feel that since they have this commitment, it is a lot easier for them to come in and be consistent," he said.

When they enter the study, the women go through a series of medical and health screenings to determine blood pressure, body composition, lipid levels (including cholesterol), heart rate variability, etc. They also complete questionnaires concerning their physical activity, food intake, health history, medication usage and quality of life issues. They repeat the tests at two months, four months and six months.

The Cooper Institute will analyze the data of all participants toward the beginning of

2005 to determine the optimum dose of exercise and to see whether the program has provided health benefits, Rodarte said.

Rodarte hopes the participants will stick with the program. In addition to limited time, many of them have reported safety concerns, which keeps them from walking alone in parks or doing other outdoor activities that they perceive could be dangerous. Finding ways to address these concerns can make exercise more enjoyable.

Thanks to the success of DREW, the Oak Cliff center recently began recruiting for the new "LIFE" Study (Lifestyle Interventions and Independence for Elders). Researchers will explore the impact of exercise on preventing major mobility disability in older adults and examine its effects on performance measures, cognitive function, quality of life and use of health-care services.



Ruben Rodarte (left), site coordinator at the Oak Cliff Outreach Research Center, trains staff members Ashley Harrison and Brian Terry, Dallas students who plan to pursue health-related careers.

Letter From the President & CEO

By Steven N. Blair, P.E.D.

How to Measure a Quality Research Program



Steven N. Blair, P.E.D.

At our annual Board of Trustees meeting in

November, I shared two methods that are often used to evaluate a research program: (1) Its

success in obtaining external funding for research projects; (2) its ability to get research published in scientific publications—and then to have other scientists cite the research.

Most funding to support biomedical research in the U.S. comes from the National Institutes of Health (NIH). The NIH has many ways to fund research, but the primary way is through investigator-initiated grant applications.

In this process, individual investigators from eligible institutions develop an in-depth proposal for submission to the NIH Center for Scientific Review. Administrators at the Center assign the application to one of the many initial review groups. This is called a peer-reviewed process because the reviewing scientists work in the same research area as the proposed research applicant.

Next, the review group discusses the application in detail, and then each member of the group assigns the application a score between 1.0 (outstanding) and 5.0. These scores are averaged and multiplied by 100 to give a “priority score” that falls between 100 and 500, and is placed in a distribution of priority scores from all review groups for the past three review cycles. Each score is then converted to a percentile rank. Under this system, an application with a

percentile rank of 10 would be better than 90% of the applications received.

The percentile rank follows the application as it is reviewed by NIH scientific staff and is further examined for administrative issues that might relate to funding, such as whether the institution complies with various federal regulations relating to research funding.

The proposal is then presented to a Scientific Advisory Committee (SAC) for the particular NIH institute to which the application has been assigned, such as the National Heart, Lung, and Blood Institute (NHLBI). The SAC does not evaluate each application in detail but observes the overall distribution of topics and listens to comments from the director of the appropriate NIH institute.

The SAC, in conjunction with staff, then establishes a “pay line,” which specifies the percentile ranks that will be awarded grants. In recent years this pay line has been at percentile ranks in the range of 20 to 25, meaning that the application is in the top fifth or fourth of all applications received.

Only the best scientists in the country submit NIH applications, and typically only about 20-25% of these are successful. Thus, an important measure of the quality of a research program is whether or not it receives NIH funding.

At The Cooper Institute, we currently have six investigators with NIH funding. These individuals hold 14 separate grants, with an additional five NIH-funded subcontracts on grants to colleagues at other institutions. About 80% of NIH-funded investigators hold only one grant, so you can see that our staff is in the select group that holds multiple grants. Less than 1% of NIH-funded investigators simultaneously hold four or more grants, and Dave Buller, vice president of our Denver office, currently is in this elite group.

Another indication of the quality of our research program can also be found in NIH grant data. The NIH identifies 205 research institutes that hold research grants. Our small organization, with only six investigators, ranked 75th on this list in 2003, and we have strong indications that we may well move into

the top 50 in 2004.

Scientific research usually leads to publication in scientific journals. An important indicator of the quality of a research report is whether other scientists are influenced by the work. This is evaluated by counting the number of times a scientific paper is cited by other scientists in their own papers. It may surprise you to learn that most scientific papers are never cited by other investigators. Any research paper that is cited in 10 or more other reports is considered above average.

We recently evaluated the number of citations received by papers from Institute scientists. Many of our papers are published in clinical medicine journals, which currently number about 900. During 1999-2000, our scientists published 33 papers in clinical medicine journals, and the average citation rate of these papers to date is 15.3 citations/paper. Only two papers received no citations, and three received more than 50 citations each, which is remarkable.

While the scope of The Cooper Institute’s research cannot be compared with the broad array of research found in major medical schools, the quality of our research is very high. Any medical research institution would be delighted to have an average of 15.3 citations/paper for papers published by their investigators.

I am very proud of our scientific staff. Not only are they creative and hard-working, but they are making important and influential contributions to preventive medicine and public health.

Although we have been quite successful in obtaining NIH-funded research projects, it is crucial that we raise additional funds to support new research initiatives, recruit new investigators and add to our research infrastructure.

If you are one of the many persons who has contributed to The Cooper Institute and helped us achieve our high level of excellence, I thank you most sincerely. You are critical to our success, and you can be assured that your contributions are being used to advance our cause of a healthier population.

Cooper Institute Takes Wellness Message to Central Market

Cooper Institute staff are making plans to teach a 20-week program at Central Market, a specialty grocery store in Dallas. Called *Active Living Every Day*, the program helps participants overcome barriers, set goals and work physical activity into their busy lives.

Active Living Every Day is the cornerstone educational course of the Active Living Partners program, developed by Human Kinetics Publishers. The Cooper Institute is a program partner.

The Active Living Partners program focuses on helping inactive adults fit physical activity into their lives in realistic ways. It is based on groundbreaking research conducted at The Cooper Institute that has resulted in two important discoveries about physical activity and health:

- Physical activity doesn't have to be strenuous or time-consuming to benefit health. Accumulating 30 minutes of moderate-intensity activity on most days of the week can result in significant health benefits.
- People are more likely to become and stay physically active when taught

appropriate lifestyle skills such as learning to fit physical activity into a busy schedule, increasing self-confidence and staying motivated.

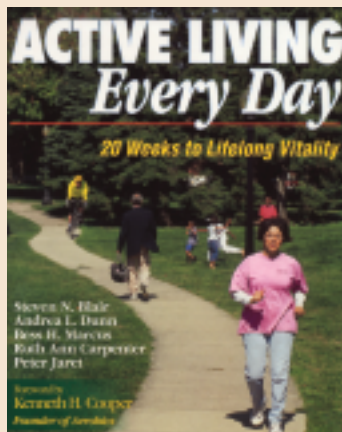
According to Jennifer Dodge, program manager at The Cooper Institute, Central Market expressed interest in working with the Institute to provide this course. The store's community rooms provide a good setting, and the Institute is delighted to have the opportunity to take this program to the Dallas community.

Although 38% of inactive Americans say they want to be more active, 50% drop out of exercise programs within six months. Dodge says the Institute hopes to help individuals "learn to adopt and maintain an

active lifestyle and to promote the important health benefits of physical activity."

The Cooper Institute plans to make *Active Living Every Day* courses available in a variety of venues, including churches, libraries, medical centers and fitness centers.

For more information, contact Jennifer Dodge at (972) 341-3291.



New Members of Board of Trustees

The Cooper Institute announced five new board members at its Board of Trustees annual meeting in November. They include the following:



Arthur M. Blank: Co-founder of The Home Depot; now serves as chairman of the Arthur M. Blank Family Foundation and owner and CEO of the Atlanta Falcons.



Joseph Goldstein, M.D.: Recipient of the 1985 Nobel Prize in Physiology or Medicine for discoveries concerning the regulation of cholesterol metabolism; current professor of Molecular Genetics and Internal Medicine at the University of Texas Southwestern Medical Center at Dallas.



Steven Reinemund: Chairman of the board and CEO of PepsiCo in Purchase, New York.



Louis Sullivan, M.D.: Former Secretary of the U.S. Department of Health & Human Services under former President George Bush; founder and former president of Morehouse School of Medicine.



Ken Troutt: Founder of Excel Communications; president and CEO of Mt. Vernon Investments.

"We are thrilled to have people of this caliber supporting the mission of The Cooper Institute," said Dr. Kenneth Cooper, chairman of the board.

Other members include: Lester M. Alberthal Jr., Steven Blair, Susan Dell, Ray L. Hunt, Drayton McLane Jr., Frederick R. Meyer, Neil O'Brien, Peter O'Donnell, Robert B. Palmer, Lee Posey and Roger Staubach.



In Brief...

- **Drs. Kenneth Cooper and Steven Blair plan to host a "Speakers Series" in key cities nationwide (including Texas cities Dallas, Houston and Austin), beginning in 2004.** The purpose is to create awareness and understanding of The Cooper Institute's mission and to generate support. Stay tuned for more details.
- **The Cooper Institute's Division of Education & Certification is in the process of developing two important publications:** a pocket exer-

cise and nutrition guide for the Air Force's "Fit to Fight" program, and a "Choose to Move" guide in association with the American Heart Association.

- **Education courses at The Cooper Institute have been approved for National Athletic Trainer Association continuing education credits,** and several of its courses are eligible for Texas Physical Therapy Association credit.

In the Spotlight: Orville Rogers



Orville Rogers

For the past 25 years, Dallas resident Orville Rogers has faithfully supported The Cooper Institute's mission. Because of his confidence in the Institute, he doesn't hesitate to mention

that the nonprofit organization is included in his will.

In 1968, Orville picked up Dr. Cooper's famous book, *Aerobics*, at a Chicago newsstand and nearly read it from cover to cover in one sitting. He was so inspired by Dr. Cooper's teaching that he began running the next day.

"I hadn't been doing much athletically for quite a few years and decided that, while his theories were not at that time proven, I would take them on faith," Orville says.

When Dr. Cooper founded The Cooper Institute, some people thought his medical hypotheses were outrageous, notes the 86-year-old former Braniff Airways pilot. However, Dr. Cooper believed that research was needed to bridge the gap between scientific legitimacy and faddism, and his willingness to launch research studies gained him respect from many professionals and patients such as Orville Rogers.

"The Cooper Institute is in the process of vindicating all the theories that Ken Cooper started out with and is helping to prove them—not only to people like me, but to the medical community at large," he says.

Orville began his exercise regimen by running a mile a day then gradually

increased it to two miles, then three. Within a short period of time, he noticed improvements in how he felt.

When he developed tendonitis in his Achilles tendon, Orville decided to schedule an appointment with Dr. Cooper, who had opened his medical practice in Dallas. Dr. Cooper recommended that Orville cut back and run on grass. He also prescribed some stretching exercises.

His advice worked, and soon Orville and his wife, Esther Beth, began going to Dr. Cooper for their physicals.

"The Rogers are a phenomenal couple—among our dearest friends," Dr. Cooper says.



Hooked on running...

Orville Rogers, an 86-year-old former Braniff Airways pilot, was inspired to run after reading Dr. Cooper's life-changing book, *Aerobics*, in 1968. He continues to run—about 18 miles a week—and says it has probably saved his life.

Physical activity is something that Esther Beth and Orville, married 60 years, both enjoy. In 1982, they climbed Mount Kilimanjaro in Tanzania. Orville made it to the top (elevation: 19,335 feet), and Esther Beth reached an impressive 15,000 feet. The guided climb took five days—three-and-a-half days to go up and one-and-a-half, down.

Orville recalls running in the annual Turkey Trot (5k and 10k race in Dallas) with three of their children about 20 years ago. Esther Beth won an award for being the oldest female participant.

Orville continues to run. His goal is to

log 18 miles a week—which totals over 900 miles a year. Esther Beth likes to swim for exercise and walks a couple days a week.

"Dr. Cooper has had a very distinct impact on my life," says Orville, praising Dr. Cooper for his moral and spiritual example. "When I first started running, it was only because he wrote the book, and I read it. I continued through the years, and it probably saved my life."

About 11 years ago, Dr. Cooper discovered a blockage in Orville's coronary arteries, which required six bypasses. "Undoubtedly, the deterioration in my coronary arteries would have done me in a lot sooner if I hadn't been active,"

he says.

"Orville Rogers is the epitome of fitness and an example for all of us," notes Dr. Cooper.

Orville piloted an aircraft for the last time four years ago, at age 82. Esther Beth, who had been his first passenger, was also his last. In addition to flying for

Braniff, Orville was a pilot for the Southern Baptists and flew missionaries, supplies and equipment all over East Africa. He also ferried 40 missionary airplanes around the world for Wycliffe Bible Translators.

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