



Fitness Helps Reduce Cancer Risk

Previous Cooper Institute research has shown that fitness is more important than fatness in decreasing the risk of heart disease. A recent study from The Cooper Institute reveals that fitness also trumps fatness in determining risk from all cancers among men.

“This is an important breakthrough to help improve men’s health,” said Steve Farrell, Ph.D., director of Professional Education at The Cooper Institute. “Traditional risk factors for cancer include tobacco use and poor diet, as well as environmental and occupational factors. This is the first paper that has examined the relation of cardiorespiratory fitness levels, different measures of adiposity and cancer mortality in men.”



The study, which appears in *Obesity*, involved 38,410 cancer-free men who completed a comprehensive exam at the
(continued on p.3)

State Results Confirm Alarming Trend

Texas is the first state to mandate a comprehensive physical fitness assessment of all students grades 3 through 12—and results from the first year’s evaluations are in. The major finding: Fitness levels decline with each passing grade level.

About 32% of third-grade girls and 28% of third-grade boys reached the “Healthy Fitness Zone,” meaning they met specific targets on six tests including a one-mile run, curl-ups, push-ups, trunk lift, shoulder stretches and a body composition test. By seventh grade, 21% of the girls and 17% of the boys met the same health standard. Only 8% of 12th-grade girls and 9% of 12th-grade boys achieved these results.

FITNESSGRAM, developed by The Cooper Institute (CI) in 1982 and now in its ninth revision, was the assessment tool chosen for use in public schools statewide. Approximately 2.6 million Texas students in grades 3-12 were tested.

“While the results may not be what we would have liked, the FITNESSGRAM gives districts the opportunity to work with parents to create a healthy lifestyle for every child,” said Texas Commissioner of Education Robert Scott.

Statewide, according to the *Dallas Morning News*, the FITNESSGRAM data showed a correlation between high poverty levels and poor fitness, particularly among the younger children. There wasn’t a strong connection between race and fitness. Regardless of students’ socioeconomic backgrounds, fitness scores were substantially lower among the older students.

“We must immunize children against obesity while in elementary school so that as they age, they are more likely to stay healthy and fit,” said CI chairman Kenneth Cooper, M.D., M.P.H. Sen. Jane Nelson, author of the legislation that instituted the physical fitness assessment, said she will consider future legislation in an effort to improve physical education requirements in all schools.

Students in kindergarten through fifth grade are required to have physical activity daily. This fall, students in sixth through eighth grade must participate in physical education for at least four of six semesters.

Based on a 2007 report from Trust for America’s Health, Texas ranked sixth among states with the highest obesity rate for children ages 10-17. At least 33% of Texas students are overweight, which increases their risk for diseases such as Type 2 diabetes.

“I am so concerned about childhood obesity and inactivity that I am trying to do something about it in Texas,” said Cooper, “and my belief is that the movement we launch in our state will spread across the country and even the world.”

Later this year, the Texas Education Agency hopes to compare fitness levels with students’ academic achievements, absenteeism, obesity, discipline problems and school lunch initiatives. No state funds were spent on the statewide physical fitness assessment. Cooper helped raise about \$2.5 million in private funds to cover the first two years of operation.

FITNESSGRAM®
Report for Parents

People come in all shapes and sizes, but everyone can benefit from regular physical activity and a healthy level of physical fitness. The FITNESSGRAM fitness test battery evaluates five different parts of health-related fitness, including aerobic capacity, muscular strength, muscular endurance, flexibility, and body composition. Parents play an important role in shaping children’s physical activity and dietary habits. This report will help you evaluate your child’s current level of health-related fitness and help you identify ways to promote healthy lifestyles in your family.

Joe Jigger
Grade: 6 Age: 13
Cooper Institute Elementary School

Instructor: Karla Tripp
Date: 05/22/2006 Height: 5’ 5” Weight: 140 lbs
Current: 08/18/2005 5’ 6” 135 lbs

| Needs Improvement | Healthy Fitness Zone |
|---|--|
| VO2Max | Current: 43 Past: 43 |
| Walk Time | Current: 1:45 Past: 1:45 |
| (Abdominal) Curl-Up | Current: 23 Past: 19 |
| (Trunk Extension) Trunk Lift | Current: 11 Past: 11 |
| (Upper Body) Push-Up | Current: 11 Past: 18 |
| (Flexibility) Back-Saver Sit and Reach R, L | Current: 12.00, 10.00 Past: 9.00, 10.00 |
| Percent Body Fat | Current: 22.32 Past: 19.38 |

Healthy Fitness Zone for 13 year-old boys = 42 - 52 ml/kg/min

MUSCLE STRENGTH, ENDURANCE, & FLEXIBILITY
These components of health-related fitness measure the overall fitness of the musculoskeletal system. A variety of tests are used to assess these different components. Importance: The fitness level of muscles is important for injury prevention and overall body function. Strength, endurance, and flexibility are important for maintaining good posture, low back health, and total body function.

Healthy Fitness Zone for 13 year-old boys
Curl-Up = 21 - 40 repetitions
Trunk Lift = 9 - 12 inches
Push-Up = 12 - 25 repetitions
Back-Saver Sit and Reach = At least 8 inches on R & L

BODY COMPOSITION
The body composition measure refers to the relative proportion of fat and lean tissue in the body. Body fat percentage can be estimated by skinfold calipers or other measuring devices. The Body mass index (BMI) is another indicator that determines if a person is at a healthy weight for his or her height. Importance: Overweight youth are at high risk for being overweight adults. Adult obesity is associated with a number of chronic health problems. Many of these health problems can begin early in life. It is important to begin healthy eating and regular activity early.

Healthy Fitness Zone for 13 year-old boys = 7.00 - 25.00 %

INTERPRETING THE FITNESSGRAM REPORT
Health-related fitness includes a variety of factors. With regular physical activity most children will be able to score in the Healthy Fitness Zone for most of the tests. It is important for all children to be physically active every day (a total of 60 minutes is recommended) even if they are already fit. If your child is in the Needs Improvement area on a particular test, it is important to provide additional opportunities to be active so they can improve their levels of fitness.

Please refer to the back page of the parent report for a description of the Healthy Fitness Zone and for tips on promoting physical activity in your family. © 2005 The Cooper Institute

Parental Report is provided in English or Spanish

Helping Children Reach Healthy Standards

By Marilu Meredith, Ed.D., National Fitnessgram Director

After the first year of mandated fitness testing in physical education classes throughout Texas, the message is loud and clear: Improvement is needed! Parents and educators can't afford to rest on their laurels. Now is the time to help children develop healthy lifestyles in order to circumvent obesity-related diseases and enjoy a better quality of life in the years to come.

I have worked with FITNESSGRAM for 26 years, and one of the lessons I have learned is that if parents value physical activity, their children are more likely to view it as an important part of their lives. If you have children or grandchildren, what message are you communicating about the importance of their physical education class? What kinds of activity do you regularly enjoy together? Do you take them to the park or community playground for exercise? Do you limit their television or video game time?

Over the years, studies have shown that active children more are more likely to have:

- Parents who exercise regularly or play sports with them.
- Parents who watch them do physical activities or sports.
- Parents who take them to sporting events or places where they can enjoy physical activity.
- Parents who feel it is important for them to take part in physical activities or sports.

It is not uncommon for children to lose interest in physical activity because they aren't athletic and feel that they can't compete with the athletes. Parents need to enforce the idea that every person can be active—and that they don't have to participate in sports to be fit. There are many, many activities available. The secret is to help children find the ones they enjoy.

The beauty of FITNESSGRAM is that the standards are based on *healthy fitness zones*, not on athletic achievement.

Some kids run at a slower pace than others, but they can still gain health benefits by running slowly or walking briskly for at least 30 minutes a day. They may be unable to do the splits or another gymnastic feat; but they can learn to achieve a healthy level of strength and flexibility, which will give them mobility and may help prevent injuries as they age.

Many schools have an exceptional physical education staff and are teaching their students to be personally responsible for managing their physical activity and physical fitness. On the other hand, there are many schools where funding has been cut and physical education programs have been eliminated or the teachers see students only once a week. This is inadequate. Schools need certified physical education teachers, and those teachers must be expected to conduct exceptional programs.

As a parent, here are some things to look for when assessing the P.E. program in your child's school or district, as provided by the National Association for Sport and Physical Education (NASPE):

- Is the class taught by a qualified teacher with a degree in physical education?
- Is the class size similar to other content areas to ensure safe, effective instruction?
- Is there adequate equipment for every student to be active?
- Are indoor and outdoor facilities safe and adequate?
- Does the program provide for maximum participation for every student (e.g., no elimination games, all students active at once, etc.)?
- Does the program help to systematically develop the physical, cognitive, social and emotional aspects of each student?
- Do the physical education teachers communicate with other educators, administration and parents on a frequent basis?
- Do the physical education teachers seek feedback for improvement from students, peers and parents as a means for program evaluation and improvement?

I encourage parents to find out as much as possible about the physical education program in their child's school. If there are any shortcomings, it is important for the parents, school and community to work together so that changes can be made.

Now that students across the state are obtaining information about their personal level of fitness, they are learning what areas they need to improve or maintain. Physical activity is good for the mind, just as it is for the body, and I am hopeful that within a few years, we'll see an increase in the number of children reaching the *healthy fitness zone*. The health of our children tomorrow depends on our action today.



KIDS' HEALTH IS THE GOAL

The Cooper Institute's second-annual "A Life Rx for Health Luncheon" will focus once again on childhood obesity and raise added support for the FITNESSGRAM school project in various DISD and Dallas-area private schools. The **February 27, 2009** event will feature Olympic gold medalist Mary Lou Retton as guest speaker at the Hilton Anatole Hotel in Dallas. Visit www.cooperinstitute.org for more details.



Mary Lou Retton catapulted to international fame by winning the All-Around Gold Medal in women's gymnastics at the 1984 Olympic Games in Los Angeles, becoming the first American woman to win a gold medal in the challenging all-around event. She also won two silver medals and two bronze medals for a total of five medals, which was the most won by any athlete at the '84 Olympics.

New Program Targets Women in Rural Illinois

The Cooper Institute (CI) has received a grant to help reduce cardiovascular disease risk among women in the southern seven counties of Illinois: Alexander, Hardin, Massac, Johnson, Pope, Pulaski and Union. These counties have among the highest rates of heart disease, hypertension, obesity and diabetes in the state.

The project, called "SSWICH" (Southern Seven Women's Initiative for Cardiovascular Health), is a collaboration involving the University of Illinois at Chicago Center of Excellence in Women's Health, Illinois Department of Public Health, Southern Seven Health Department and CI.

According to Rachel Huber, M.P.H., R.D., CI's associate director of Dissemination and Advocacy, the rural areas of Illinois have the lowest rates of physical activity and healthy eating. A modified version of Heart Smart for Women, developed by CI in 2001, will be delivered to an estimated 120 women and 600 individuals through a peer education program. The program includes 12 sessions on physical activity and healthy eating.

Women who complete the program will have an opportunity to serve as peer educators and deliver portions of the Heart Smart for Women curricula to friends and family through 15-minute "conversations." Peer educators will receive \$5 for each person they reach (up to 20 people) over the next six months. "Our goal is to get these women who go through the Heart Smart for Women program to help us reach more community members," Huber said. "We can't expect all of the women in the southern seven counties to attend the 12-week Heart Smart for Women program. But we can still try to deliver the program's important messages to them through these brief sessions."

SSWICH falls on the heels of a program called "WISEWOMAN" (Well-Integrated Screening and Evaluation for Women Across the Nation), which The Institute helped deliver over the past five years. Funded by the CDC and implemented by the Illinois Department of Public Health, WISEWOMAN involved 835 English-speaking women and 186 Spanish-speaking women, all between the ages of 40 and 64.

These women received 12 educational sessions on nutrition, physical activity and behavior change, and received free preventive services including blood pressure, blood glucose and cholesterol testing. The follow-up program consisted of regular postcards that reinforced the WISEWOMAN healthy eating and physical activity messages, periodic check-in phone calls, and face-to-face coaching sessions. Assessments were conducted at the 12-week, one-year and two-year mark. The data is currently being analyzed to show outcomes.

Heart disease is the leading killer of women in the U.S. According to the American Heart Association, the total direct and indirect cost of cardiovascular disease and stroke in the U.S. for 2008 is estimated at \$448.5 billion. Through programs such as WISEWOMAN and SSWICH, The Cooper Institute hopes to reverse these trends.



*Rachel Huber, M.P.H., R.D.
Helps implement the SSWICH Program*

(continued from p.1)

Cooper Clinic in Dallas between 1970 and 2001. There were 1,037 cancer deaths identified during an average of 17.2 years of follow-up.

Men in the highest fitness category had approximately one-half the risk of dying from cancer as compared to men in the lowest-fit category.

Farrell and his group also looked at cancer mortality rates between fit and unfit men, based on varying levels of adiposity. Regardless of their weight or adiposity levels, mortality rates were significantly higher in unfit men. Men in the lowest adiposity categories had approximately a 40% lower risk of dying from cancer compared to men in the highest adiposity categories.

Cancer is the second leading cause of death for U.S. men, accounting for some 285,000 deaths each year. The study shows, says Farrell, that health professionals should place at least as much emphasis on physical activity as on weight management in an effort to help curb deaths from cancers. Moderate activity, such as brisk walking, most days of the week may indeed help save lives.



In Brief...

- ♦ Tickets are available for two remaining events in the "2008 Preventive Medicine and Wellness Lecture Series." On September 23, Robert Abel, M.D., will speak on 21st century eyecare at the home of Rebecca & Jon Bayless in Dallas. On November 11, Helen Hobbs, M.D., will address issues related to heart disease and genetics at the home of Gina & Scott Ginsburg in Dallas. Call Barbara McGowan at (972) 341-3280 for tickets or information.
- ♦ Nearly 500 third- and fourth-graders and their families took part in the second-annual Super Saturday this spring at Carolyn G. Bukhair Elementary School in Richardson, Texas. The event featured bilingual interactive health education sessions from Cooper Institute experts, a one-mile walk and donated lunches from Central Market. Other collaborating partners included CENTEX, The Northwood Woman's Club, U.S. Food and Drug Administration and the North Texas Food Bank.

New Ways to Get Research "Off the Shelf"

A new area called "translational research" is gaining momentum at The Cooper Institute (CI) and in centers across the country.

"For us, it was largely a board-driven challenge," said Barbara McGowan, CI's director of Development. "After one of our ground-breaking studies was published several years ago, a board member posed the question, 'What are we doing with our research and evidence-based content?'"

Ruth Ann Carpenter, M.S., R.D., L.D., former director of Dissemination, and her team began developing the framework in 2003 that enabled The Institute to take its renowned research to the curbside—helping people where they live. Their mission: "to translate process and materials from behavioral research interventions into evidence-based programs and products that, through various dissemination strategies, promote the adoption of healthy lifestyle behaviors in different populations."

Not surprisingly, the National Institutes of Health (NIH) has seen a growing need to translate scientific discoveries into practical applications. In October 2006, the NIH launched the Clinical and Translational Science Awards (CTSA) Consortium. Within a year, the consortium grew from 12 academic health centers to 24. By 2012, the NIH expects to have about 60 institutions on-board "to energize the discipline of clinical and translational science" and anticipates investing \$500 million in the program.

The purpose of translational research, according to the NIH, is "to ensure that results of scientific research will be used to directly benefit human health."

"After funding wonderful science over the years, the NIH recognized that a lot of those studies never get past the 'writing the

scientific manuscripts' stage," Carpenter said. "They want people to benefit from the billions of dollars being spent on health-related research."

In basic terms, translational research enables CI to "repackage" its most recent scientific health findings for the general population, stated Rachel Huber, M.P.H., R.D., associate director of Dissemination. There are two key types of translational research:

- The **"bench to bedside"** model involves taking basic science and translating it into a clinical setting, such as a hospital.
- The **"bedside to the curbside"** approach focuses on taking research that works in a highly controlled research or clinical setting into the community. Currently, this is the approach that The Cooper Institute has implemented.

As an example, when The Cooper Institute published its Project Active study findings in the Journal of the American Medical Association—revealing the huge health benefits of doing moderate activity, 30 minutes a day, most days of the week—the research team knew the findings were too important to sit on the shelf.

Out of the Project Active study, a team developed the 20-session "Active Living Every Day" curriculum. The Lifestyle Nutrition Study led to a 20-session "Healthy Eating Every Day" program. "Out of both of these studies, we've developed combined healthy eating and physical activity curricula, including the Heart Smart for Women program and the Illinois WISEWOMAN program," Huber said.

Another example of translational research at The Cooper Institute is the "Active for Life" project, funded by the Robert Wood Johnson Foundation. According to Carpenter, the foundation wanted to see how two physical activity programs, both research-based, fared with the general public. Four communities used one program, while five communities focused on the other program. For five years, Carpenter was part of a multicenter team

that monitored the project and evaluated the results. Through translational research, they were able to determine how the two programs needed to be modified for the "real world."

"With translational research, you ultimately get the community's perspective on what works and what needs to be different," Carpenter said.

One of CI's newest examples of translational research involves technology. An anonymous donor wanted to help with the obesity epidemic and felt that The Institute had the research and tools to accomplish his vision. A brainstorming session led to the major development of a new web site, www.StandUpandEat.org, which officially launches this fall. The site includes a "Billion Calorie Burn" section, biweekly blog written by CI staff, healthy eating ("What's In") and active living ("What's Out") content libraries, calculators and downloadable tools.

The biggest challenge with translational research? "You have to keep the end user in mind," Huber said. "People are different, and some research shows that tailoring your educational materials to your population is important. If your population is low-income and has low literacy levels, you have to make sure the materials work for them. It can be tough to bring down the reading level when dealing with complex words and topics."

Making sure that people of all backgrounds have access to its life-changing research is a priority at The Cooper Institute. "It is not enough to do the research, find a tool that is effective and then stop," Huber said. "Our goal is to find ways to get what we learn out to the public in a format they can understand and use."



The Cooper Institute
12330 Preston Road
Dallas, Texas 75230
www.cooperinstitute.org

Main Number:972.341.3200
800.635.7050
Development Office... 972.341.3280
Education Products 972.341.3273
FITNESSGRAM972.341.3261
Oak Cliff Center 214.330.9165
Speakers Bureau and
Volunteers972.341.3200

Stand Up & Eat



Learn all about calorie balance at www.StandUpandEat.org