

COOPER QUARTERLY

SUMMER NEWSLETTER 2022

HONORING DR. WILLIAM L. HASKELL



MESSAGE FROM THE CEO

NTX GIVING DAY: FIND
YOUR PASSION AND GIVE
WITH PURPOSE

SAVE THE DATE: OUR
ANNUAL LEGACY
CELEBRATION IS JUST
AROUND THE CORNER



OUT OF THIS WORLD:
WHAT IS THE LONG-TERM
HEART HEALTH OF
NASA ASTRONAUTS?

50 YEARS OF TITLE IX:
SPANNING BEYOND SPORTS
TO IMPROVE BONE HEALTH
OF GIRLS



The
Cooper Institute[®]
WELL. INTO THE FUTURE.



MESSAGE FROM THE CEO

Laura F. DeFina, MD, FACP, FAHA
President, CEO and Chief Science Officer

This summer marked the 52nd anniversary of The Cooper Institute. On a mission to prove exercise is medicine, Dr. Kenneth Cooper founded The Cooper Institute on June 22, 1970. In the past five decades, we have collected so much data through the Cooper Center Longitudinal Study (CCLS) it is hard to deny that exercise is medicine.

Here at The Cooper Institute, we celebrate and share the research findings that have helped people of all ages, backgrounds and genders live long, healthy lives.

In June 1972, not too long after The Cooper Institute was founded, the landmark gender equality legislation, Title IX, was signed into law. **The passage of Title IX helped shape women's sports in the United States by not allowing any person to be excluded from involvement "under any education program or activity receiving federal financial assistance."** This translated to increased participation of girls and women in sports of all kinds and provided benefits for girls' physical, mental and social well-being.

While on the subject of the importance of women staying active and fit, one of our recently published papers explores how small increments in cardiorespiratory fitness (fitness) impact mortality risk in women, particularly at the lower end of the fitness continuum. **The big takeaway of the study is that among adult women, there was**

a decreased risk of all-cause mortality across the fitness continuum up to a level of approximately 11 METs. This means that those women who are inactive do not have to start immediately running 10Ks but they can gradually increase their exercise level which impacts their fitness level. Approaching a new exercise program gradually increases the likelihood of success and long-term health benefits.

It may go without saying, but **The Cooper Institute would not be what it is today without the vision and hard work of Dr. Cooper and the leadership and commitment of many people. One of our greatest supporters is Dr. William L. (Bill) Haskell.**

Earlier this summer, I had the great honor of speaking at a tribute celebrating Dr. Haskell's many accomplishments in his 50 years at Stanford University. The tribute was held at Stanford and was attended by his children, colleagues, and many others who have benefited from his research and mentorship over the years. Dr. David Maron, Dr. Barbara Ainsworth, Dr. Abby King, Dr. Jim Sallis and many other titans in the field spoke in his honor.

On a personal note, I am honored to have had the opportunity to work beside Dr. Haskell for the last 12 years. I could never have imagined having my research training supported by an investigator of his caliber.

For context, a CRF value of 11 METs is equivalent to covering 1.4 miles during the Cooper 12-minute run test.



**SCAN THE BOX TO
READ THE FULL BLOG.**

As a token of appreciation of Dr. Haskell's unwavering dedication to The Cooper Institute, the CCLS and our research, we established the William L. Haskell Well. Hero. Award in his honor celebrating leaders in prevention science.



50 YEARS OF TITLE IX: SPANNING BEYOND SPORTS TO IMPROVE BONE HEALTH OF GIRLS

"No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving federal financial assistance."

**TITLE IX OF THE EDUCATION
AMENDMENTS ACT OF 1972**

June 22, 2022 marked the 50th anniversary of Title IX—the 37 words that changed sports for women.

As a nation full of soccer moms and dads can attest, the explosion of girls' and women's sports that resulted from the passage of Title IX has provided tremendous benefits for girls' physical, mental and social well-being. Greater confidence, higher self-esteem, a more positive body image and an increased likelihood to

succeed as a leader in future careers are all associated with participation in sports. Researchers have studied many health benefits associated with increased physical activity in the last half-century, and one under-appreciated benefit is the building of strong bones.

MOVEMENTS THAT MATTER

Many of the most popular interscholastic girls' sports provide jumping, pivoting and sprinting opportunities—movements critical to bone-



CONTINUE LEVELING THE PLAYING FIELD
 Although significantly more girls participate in sports today due to Title IX, girls still do not have the same number of participation opportunities provided to boys. Participation is also lowered by less access to playing space, playing times, quality coaching and safe equipment. These factors disproportionately disadvantage girls, racial and ethnic minorities, youth from lower-income households and youth with a disability compared to their peers.

strengthening. During the initiation of quick, dynamic movements, muscles load the bone by pulling on it. At the conclusion of these movements, there is impact with the ground and the bone is once again loaded. Higher-than-normal muscle-loading and impact-loading, especially those in non-repetitive load directions, cause bones to adapt by increasing its mass and shape; thus, making the skeleton stronger.

On a hopeful note, evidence from post-Title IX research shows kids' participation in sports builds strong bones that can keep them competing well into their Senior Games years. **Now we just need to find the backbone as a society to continue expanding opportunities until all kids have equal access to participate and benefit from sports. Fortunately, thanks to Title IX, there are now many more women with very strong backbones.**

This article has been shortened for this publication.



SCAN THE BOX TO READ THE FULL BLOG.



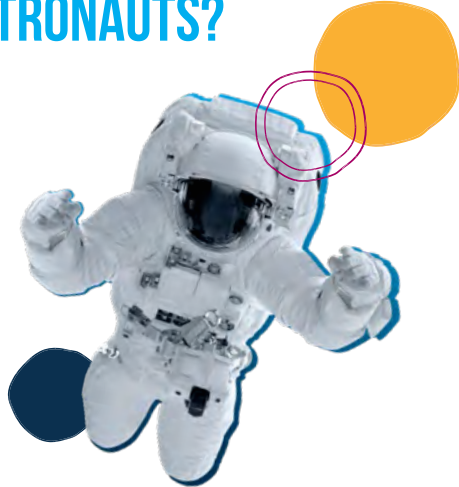
OUT OF THIS WORLD: WHAT IS THE LONG-TERM HEART HEALTH OF NASA ASTRONAUTS?

Interested in space travel? Thinking about the red planet as your destination? At a minimum, a round trip to Mars is approximately 34 million miles with a flight time measured in years!

Such a distant destination will require a lot of planning and preparation. Not the least of which, it is important to ensure your underlying health is good enough to make any space trip as there are no emergency rooms or hospitals in space.

Known health concerns of space travel include changes in exercise routines, a change in diet, impaired sleep, psychological stress and exposure to some radiation. During and after spaceflight, astronauts sometimes experience changes in their blood lipid profiles, insulin resistance and increased levels of inflammation. Physical changes include loss of bone density and muscle bulk depending on their time in space. **However, it is unclear whether some of these concerns are long-lasting.**

With this in mind, NASA collaborated with



The Cooper Institute investigators to examine possible long-term effects of space travel. A group of 303 astronauts with space mission experience since 1970 was compared to a group of 1,514 Cooper Center Longitudinal Study (CCLS) participants of similar age, sex and health status. Importantly, because astronauts must be physically fit to carry out their missions, CCLS participants were chosen for this study

based on their fitness level. Fitness is a powerful predictor of health, chronic disease and mortality.

Results published in the Mayo Clinic Proceedings on July 1, 2022, showed both groups experienced below-average rates of heart disease and death during an average 30 years of follow-up. No difference was found in future risk of heart disease-related death in astronauts compared to CCLS participants. However, evidence of a slight increased risk of non-fatal heart attacks and strokes was seen in the astronauts studied. For those considering a trip to space, the study supports the need for heart-healthy living and preventive health care.

As Neil Armstrong said during the first moonwalk, "That's one small step for man, one giant leap for mankind." **This study's findings make a small, but significant contribution to the protection of space explorers.**



— 9.22.22 —
 COMMUNITIES
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GIVING DAY
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 amazon

MARK YOUR CALENDARS! NORTH TEXAS GIVING DAY IS THURSDAY, SEPTEMBER 22

Everyone in the community is invited to find their passion and give with purpose. At The Cooper Institute, we are passionate about creating a world where everyone lives long, healthy lives. Please consider donating to The Cooper Institute to support life-changing research.



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Legacy Celebration

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NOV 03 2022

7 P.M. | ARTS DISTRICT MANSION



Honoring Millie Cooper, who helped revolutionize the fitness industry for all women. Celebrating women everywhere who have made a global impact on health and fitness.

Sponsorship packages and tickets are available at cooperinstitute.org/Gala



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