

As Title IX's first generation ages, research needed to identify effects of playing sports

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Many of the impacts Title IX has had on women are well-known, visible throughout society.

What about the impacts of [women](#) playing sports that aren't known, though? And what might that mean for our society in the coming decades?

Brain health and memory, bone density, joint stability, [hormone levels](#) during and after menopause—there is the possibility that playing sports in their younger years has a role in how women age, but we don't know because most [scientific findings](#) are based on studies of men. As the first generation of women to benefit from Title IX reaches its 50s and 60s, that research gap will have real implications.

"How is this going to affect me? Will it affect me? No one knows!" said Michelle Akers, a star of the U.S. women's teams that won the 1991 and 1999 World Cups as well as the first Olympic gold medal in 1996.

As it became increasingly apparent that repetitive head trauma was the cause of chronic traumatic encephalopathy in male athletes, particularly football and [hockey players](#), Akers began wondering about the ramifications for her own career. Few players were better in the air than Akers, and many of her 105 goals came off headers.

A friend, Tara Galovski, was researching the link between traumatic brain injuries and [domestic violence](#) as director of the women's health sciences division of the National Center for PTSD at the VA Boston Healthcare System. When Robert Stern, an expert in sports-related brain trauma at Boston University, told Akers he was trying to secure grant money for a new study that would specifically include female athletes and asked if she would help spread the word, Akers said yes.

Stern's Head Impact and Trauma Surveillance Study will examine the brain health of 4,800 people who played football or soccer and are now 40 or older, with female soccer players making up a quarter of the study subjects. HITSS began accepting participants in March, and all 4,800

study subjects must be enrolled within two years.

"It's just a little frustrating to think, first of all, that the same things aren't going to happen to women. But also, why weren't women athletes included (in research) right from the beginning?" Akers asked.

And why, Akers wants to know, isn't there more research into the many other issues that could affect former [female athletes](#) as they age?

"I want equality in all things. To have medical experts researching what things can affect me negatively is hugely important," said Akers, who now runs the Michelle Akers Horse Rescue & Outreach in Orlando, Florida.

"With (Stern and Galovski) doing research on female brain trauma, it's encouraging, but I hope it also pushes more research to be done on different injuries and trauma and illnesses in women," Akers said. "To me, it's all connected."

Women have long been underrepresented—you could even say ignored—in [scientific research](#).

The assumption was that women were simply smaller versions of men, so studies done largely on men could apply across the entire population. By not taking the differences in anatomy and physiology into account, however, it's resulted in women getting the wrong medication doses, treatment plans and warning signs for a heart attack, among other things.

Even the crash-test dummies that have informed car safety features are largely based on the male anatomy. Which researchers have known is a problem since they realized some 40 years ago that male and female bodies react differently in car crashes.

"This idea that something might be safe or effective just because it was tried out in one portion of the population ... we know that to be false," said Kathryn Schubert, president and CEO of the Society for Women's Health Research.

The gender gap in sports science is even wider. A study published last October in the *Women in Sport and Physical Activity Journal* examined more than 5,200 publications between 2014 and 2020 and found that only 6 percent of the studies were solely focused on women compared with 31 percent that included only men.

In total, the studies covered more than 12 million participants.

"So we're way behind," said Kathryn Ackerman, a sports medicine physician at Boston Children's Hospital and the director of the Female Athlete Program.

"We just have so many questions. Are the changes we're seeing related to sports participation? Or is it related to menopause? Or is it related to aging?" Ackerman said. "Those are big, open questions we have, and the only way to get answers is to study big cohorts of women."

That, however, requires a recognition of the research gap, which Schubert said still comes as a surprise to many. Then awareness of the studies as they're being done, so women can enroll and participate.

And, finally, entities that are willing to fund such research.

"The scientific community has to catch up and make up for the fact we're behind in studying females," said Christina Master, a pediatric and adolescent sports medicine specialist at the Children's Hospital of Philadelphia and co-director of the Minds Matter Concussion Program.

"And we can't just say, 'OK, we're just going to study them equally,' " Master continued. "We do not have equity because we're not starting at the same point. We're starting from so far behind."

Daunting as that might sound, Galovski said, when it comes to head trauma in women, at least, existing studies can be used as a foundation if additional research is done that identifies where patterns are similar and where they're different.

"We don't need to reinvent the wheel," Galovski said.

There also is a global effort to close the gap in all areas of research, Ackerman said. The Female Athlete Conference, held every other year, brings together athletes, coaches, trainers, physicians and researchers with the goal of sharing information and putting the findings that do exist into practice.

As Akers shows, athletes themselves can play a role, too.

"(Older) athletes are really, really eager to participate and help and be part of the studies," Ackerman said. "At the same time, some are starting to invest. And we just need more of that."

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