

Women Are Not Small Men

Many recent studies have shown evidence that at a certain point in the cycle, female athletes experience symptoms that might affect their performances.

“Number one, two and three is that people understand what the menstrual cycle is, including what the personal differences can be, what can I ask about and how should I approach this?” Varðaróttir said.

By Gunnhildur Baldursdottir



Photo courtesy of Pixaby and Pexels.

The Paris 2024 Olympics will be the first games in history to reach full gender parity in the field of play, with an equal number of females and males competing on the largest sports stage in the world.

Gender equality is on the rise in sports, and so are studies on female athletes and the impact the menstrual cycle has on their training, competition and even injury.

According to research published in the National Library of Medicine in 2021, a regular 28-day menstrual cycle is divided into four phases, menstruation, follicular, ovulation and luteal, that are regulated by four hormones.

WOMEN'S MENSTRUAL CYCLES

FOUR PHASES

- Menstrual phase
- Follicular phase
- Ovulation phase
- Luteal phase



Source: National Library of Medicine

It is important to understand that the research depends on how the menstrual phases are defined.

Recent research has shown that female athletes have greater strength when estrogen peaks during the late follicular phase and lower strength during the luteal phase when progesterone increases.

WOMEN'S MENSTRUAL CYCLES

FOUR HORMONES THAT CONTROL THE MENSTRUAL PHASES

- Estrogen
- Progesterone
- Luteinizing hormone
- Follicular stimulating hormone



Source: National Library of Medicine

Aron Gauti Laxdal, an Icelandic associate professor in sports science at the University of Agder in Norway, said women in sports should not be seen as small men. He added that it is still too common that information considered professional comes solely from research on men.

"It would be a lot easier to take 12 healthy men and then assume the research results can be used for women as well," Laxdal said. "But you see instantly that there is a problem. We don't know if they can be generalized, we don't know if they respond to volume in the same way, and we don't know if the menstrual cycle indeed says a lot."

Ådne Ausland, a Ph.D. student at the University of Agder in Norway and a head coach of a cross-country skiing club, specializes in coaching female athletes and coaching education. Along with several colleagues, he is currently working on opening a research center dedicated to female

athletes called FIDES, or Female Inclusion and Development in Exercise and Sports Coach Education Program.

Ausland decided to specialize in women's sports training because he believes female athletes are not getting the same opportunities as males due to insufficient knowledge about women's bodies.

"About three years ago, I had one male coach, about 35 years of age. He had a talk with one of our female athletes, a 14-year-old, about the menstrual cycle. The parents of this athlete contacted me directly after the practice, telling me what the coach had told this young girl, and I was a bit shocked because it was terribly wrong," Ausland said. "All the things that he mentioned were horrible. It was then that I realized that I have to try to increase the knowledge of my staff and that educational material was lacking."

Ausland said it is necessary for athletes, coaches and parents to talk about the menstrual cycle to avoid communication conflicts. To understand the importance, Ausland is starting a survey for coaches and athletes from both Norway and Sweden to establish the number of how many talk about different period topics and if they find it necessary to discuss.

"I recently talked to a track and field coach who has coached female athletes for the last 45 years. He said they haven't talked about the menstruation cycle at all because it hasn't been a problem," Ausland said. "But he's a male, around 65 years of age and stubborn. So that's what we have to get up against because it's mostly stubborn adults. Many males don't understand the value."

The value of this research also lies in preventing sports injuries. Birna Varðardóttir, a Ph.D. student in sports and health science at the University of Iceland, was among the researchers who established the first research project about relative deficiency in sports, or REDs, among Icelandic athletes.



Youngstown State University's volleyball team played against Wright State, who were stronger on Sept 26. Last season the team had eight Horizon League wins, which became a new school record. Photo by Gunnhildur Baldursdottir

Varðardóttir said there is some evidence that female soccer players could be more likely to get injured around the ovulation phase, although more research is warranted.

“Sometimes this [injury factors] can be a very bad cocktail. Studies have, for example, suggested that joint stiffness decreases around the ovulation phase, and this might explain why some females feel more prone to injuries around this time,” Varðardóttir said.

Jen Tymkew, associate director of Athletic Training Services at Youngstown State University, has a degree in kinesiology and years of experience working with different universities as an athletic trainer for several sports. Tymkew said she has seen more Anterior Cruciate ligament-specific injuries in female athletes during her career.

“Based on injury surveillance data, women suffer from ACL injuries at a higher frequency than men. Research continues to show potential links with biomechanics, anatomy, menstrual cycles, sport-specific movements, and contact versus non-contact events,” Tymkew said.

Tymkew adds that YSU athletics is preparing to take the first steps towards this evolution in thinking by educating coaches and athletes in the future about the menstrual cycle to reduce stress and increase confidence for female athletes.

Laxdal said one of the main focuses in the upcoming years will be to demonstrate that women also belong in sports and that their participation has its own value.

“They shouldn’t have to be trying to be like men or having to do things out of men’s presupposition, but showing that women’s sport is something independent,” Laxdal said.

1. Ådne Ausland, Ph.D. student at University of Agder, Norway, adne.ausland@uia.no
2. Aron Gauti Laxdal, Associate Professor of Sports Science of University of Agder, Norway, aron.laxdal@uia.no
3. Birna Varðardóttir, Ph.D. student at the University of Iceland, biva@hi.is
4. Jen Tymkew, associate athletics director and director of athletic training services, jtymkew@ysu.edu
5. International Journal of Environmental Research and Public Health, Meignié, A., Duclos, M., Carling, C., Orhant, E., Provost, P., Jean-François Toussaint, J-F. and Juliana Antero, J. (2021). The Effects of Menstrual Cycle Phase on Elite Athlete Performance: A Critical and Systematic Review. *Frontiers in Physiology*. doi:10.3389/fphys.2021.654585