

Inspiring participation and maximising performance of coaches and players

# COACHING INSIGHT



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# UNDERSTANDING FEMALE ATHLETES

**For the second part of our series of regional conference sessions, we feature boxing champion, psychologist and Director of Workathlete Rachael Mackenzie's discussion on what coaches can do to better support female athletes.**

There is no robust evidence, no thorough studies, that we can use to highlight the impact of hormones, the menstrual cycle or other female-specific areas that would be of use to coaches leading a group of women.

That's partly because the desire hasn't been there historically in the research community but also because women are very complicated and there is a lot to dig into!

What we can do though is try to see things from the point of view of a female athlete. Although I've been performing at an elite level for twenty years, I'm probably not a typical person to analyse because I am comfortable in a room full of blokes - I'm quite testosterone-driven - but that isn't the experience for most girls.

## Every female that you coach will see and experience the world in a slightly different way.

This was highlighted to me by an exchange I had with another boxer who I was doing some sparring with. Out of nowhere she burst into tears. The coach, a male coach, is shouting “why are you crying” at her, thinking it’s because I’ve been punching her in the face. But it’s not that – she gets punched in the face most days – it’s because she was at a point in her menstrual cycle where every moment that day was heightened. Her emotional response to the situation was on a different level. But her coach had no idea because he wasn’t aware of where she was in her cycle or the impact it would have.

**There are some key barriers to girls taking part in sport and physical activity that it’s important for coaches to have an understanding of:**

**Inadequate clothes options.** And that can be really easily fixed: let them wear what they want, empower them to choose the team outfit.

**Less opportunities.** That includes sports, like cricket, where there are areas with junior leagues for girls but nothing for adults so the sport loses them.

**Social barriers.** This partly goes back to the issues raised above about male players and coaches not understanding and listening to women about female-specific issues. It can also include other girls and women assuming that their own experience with things like periods and the menopause means they can predict what others are going to go through. As I’ve mentioned, women’s health and bodies are very complicated and unique.

**Confidence about being judged.** Specifically with boys and the influence they have on girls’ confidence. As coaches, how do you handle mixed gender sessions? Think about the messaging your actions can have on girls, especially those who come into the session with anxiety around being judged. If you’re pairing your least able boys with the girls, your goal might be to balance ability while still mixing girls and boys. But what message is that sending?

Kids know what status look like. You are setting the tone for everyone in that group, suggesting that girls aren’t as good as boys. Similarly, if you’re at a club that has girls or women’s teams, how do you share the space and training time with the male teams? Are the female groups always rushing straight from work or being put on the worst part of the facility to train? How can you plan for training and matches in a way that doesn’t subtly raise one set of teams above another?

Every athlete comes to a training session with their own story, which impacts on how they engage with that session. If that story already features knocks on their confidence and experiences of discrimination, something that seems very minor to you could be all it takes to push them away.

### **The dream deficit**

Around 75% of boys who are still playing competitive sport by fourteen years of age believe they could be a professional athlete. When asking the same of girls, that drops to 30%. That dream deficit is led by a social narrative which can be reinforced by families but also coaches.

That family impact can work both ways as well. If children have female family members who are athletes, they are likely to laugh at the idea that confidence or something physical like periods could stop a woman playing sports. That’s great for their own involvement, but there’s a danger that they assume all girls will follow that line of thought and so might be unsympathetic to girls around them who do see those issues as barriers.

If female athletes are bringing into training and matches an unconscious feeling of elite sport and high performance not being open to them, that has a direct impact on their performance.

## The oestrogen effect

There's an added factor in play for women when it comes to confidence, being judged and a fear of failure: oestrogen. For all female adolescents (broadly: teenagers and young adults) the extra hit of oestrogen they get drives a need for social connection. Compare that to male adolescents, who are getting extra testosterone during that period, driving them towards more outlandish behaviour.

That evolutionary bias towards making connections enhances the feeling of being judged, which can make girls more likely to look at how others in the group are responding to success in training and competition, as opposed to them analysing what happened on its own merit.

To boil that down to a very simple statement: Boys need to succeed in order to feel connected. Girls need to feel connected before they're able to succeed.

Of course there is a full spectrum of the strength of this effect, but as coaches you need to be aware of the impact it can have so that you can adjust your methods depending on the age and gender of any given group.

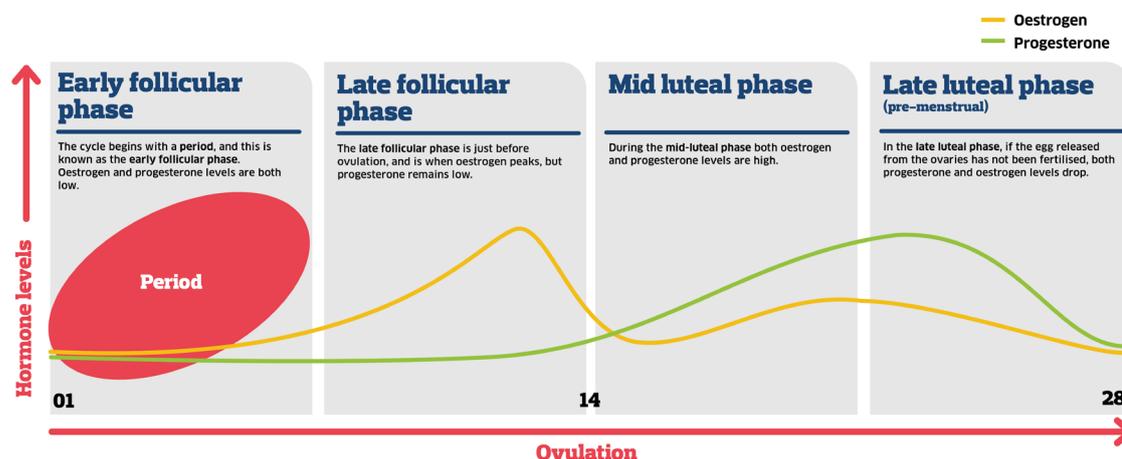
## Menstrual cycle

It's extremely hard to have large studies on the impact of the menstrual cycle (periods) on women in sport, because you'd have to measure the progress of hormones to be sure of exactly which part of the cycle a woman is on. That's OK for one woman but to get the best understanding you'd want to follow a group of women who are progressing through the cycle at the same time, at the same rate, and monitor them through the same types of activities. Because women's experiences of the cycle are so different, it's incredibly hard to find a group of women who can be matched and monitored in that way.

That means the pressure lies with the individual athlete to become experts in their own menstrual cycle, where it has an impact on their performance. That doesn't mean coaches are free of any responsibility, but it does mean that the best way to help is to listen and be sensitive to what each individual athlete explains about their period, the impacts it has and when it's happening.

The menstrual cycle is generally twenty-eight days long, and starts (day one) with the beginning of bleeding. For around three to six days that can continue and involve enough blood loss to cause faintness and dizziness. From day six until ovulation at around day twelve to fourteen, there is a surge of oestrogen, which increases the ability of the person to take on protein and recover quicker, with less inflammation and muscle soreness. That makes these few days the most productive time to work on strength and conditioning with an athlete.

In fact, the most concrete and direct conclusion from the limited research into the menstrual cycle and athletes is that it's best to focus this type of strength training during this period, rather than spread it out over the four weeks.



Graphic courtesy of UK Coaching's series on menstrual health, available for free at [UKCoaching.org](http://UKCoaching.org)

Periods are also a really important indicator of overall health in females, so another advantage of having open communication with your athletes about their menstrual cycle is that they can be open about when something out of the ordinary is happening. Healthy reasons for changes could include natural fluctuation as the body develops or the impact of contraception. But it could also be a sign that something is wrong.

You're not there as a medical professional, but you do have a responsibility to signpost your athletes to a doctor if they discuss a change with their periods.

### **Anterior cruciate ligament injury prevention**

There is another interesting bit of research into the pre-ovulation section of the cycle: the rate of non-contact anterior cruciate ligament (ACL) injuries in girls and women is four times that of any other part of the population at any other part of an average month. That is such a jump that coaches really need to take that into consideration otherwise our female athletes will be lost to injury. It's a repetitive injury, as it's linked to non-contact actions, so it is avoidable if we help our female athletes to think about focussed strength and conditioning. Just at a recreational level, the number of ACL injuries for adolescent females is sky-rocketing, because they are performing more advanced movements without conditioning their bodies to support the knee.

Yes, the female body is different, and we can't control their hormones or their anatomy, but what coaches can help change is the neuro-muscular components that help support their joints.

### **The oestrogen drop**

For the second half of the cycle, from ovulation onwards, there is incredibly little evidence of how coaches can use it to help athletes get the best out of themselves. What we do know though, is that before progesterone and oestrogen drop away at the end of the cycle, there are about one-hundred and fifty different symptoms that can impact physical performance. Whatever variation of these symptoms your athlete goes through, there will often be an impact on performance, perhaps due to the mental drain of the symptoms as much as physical impacts.

We looked earlier at the impact that oestrogen has in driving a need for social connection during adolescence, so it's no surprise that this drop in oestrogen during the last week or so of the cycle can push women towards a desire for isolation. In a team sport like cricket, we need to understand that if you have a group session planned and you know an athlete is feeling the impact of that drop in oestrogen, you may want to offer them something different.

### **Pelvic floor**

40% of female athletes have a pelvic floor dysfunction - well above average for females population-wide. This becomes a particular problem in cricket with bowlers who need a strong and stable core to bowl effectively and consistently without getting injured.

If you don't have a stable pelvic floor this will clearly have a knock-on effect when it comes to stabilising the bottom of your core. This is why you must build pelvic floor strengthening into your training with female athletes.

