



Menstrual cycle symptoms: monitoring and management

Professor Kirsty Elliott-Sale, Professor of Female Endocrinology and Exercise Physiology

Centre of Excellence for
Women in Sport

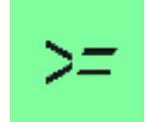


Thank you for my invitation

Although I work with lots of amazing organisations, I have no conflicts of interest to declare
I will present the current state of the art without prejudice



FIFPRO FOOTBALL PLAYERS WORLDWIDE



International Olympic Committee





📍 Institute of Sport, Manchester, UK

Centre of Excellence for
Women in Sport

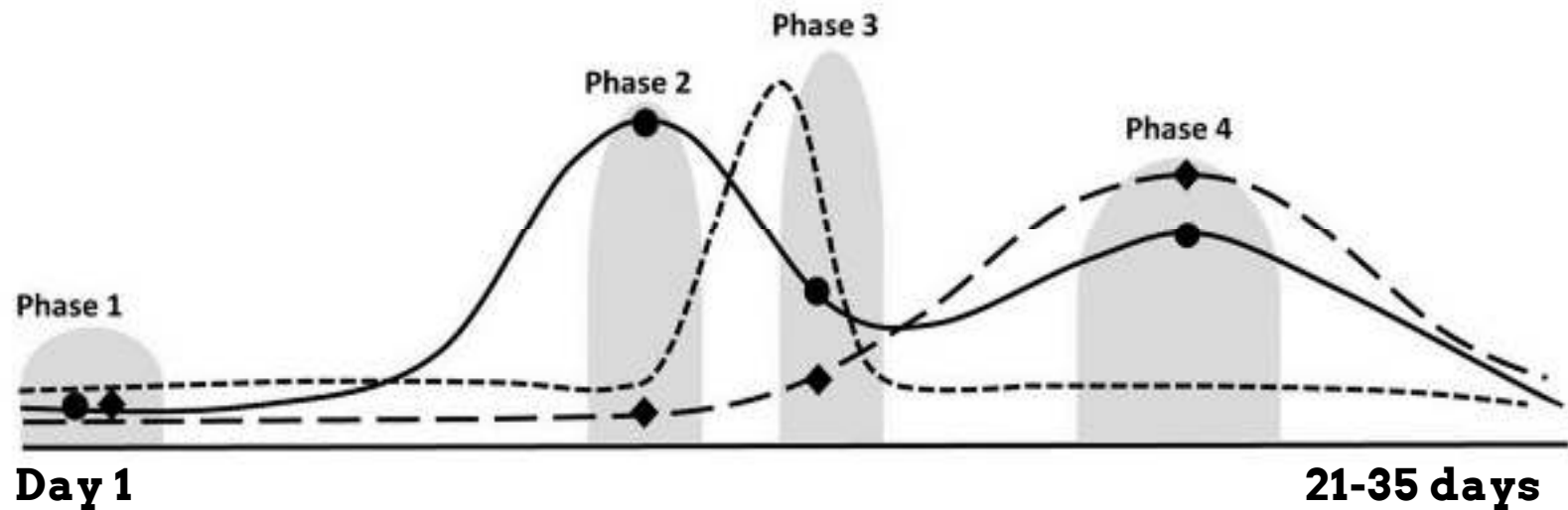


On a mission

to accelerate and amplify the development of women's sport

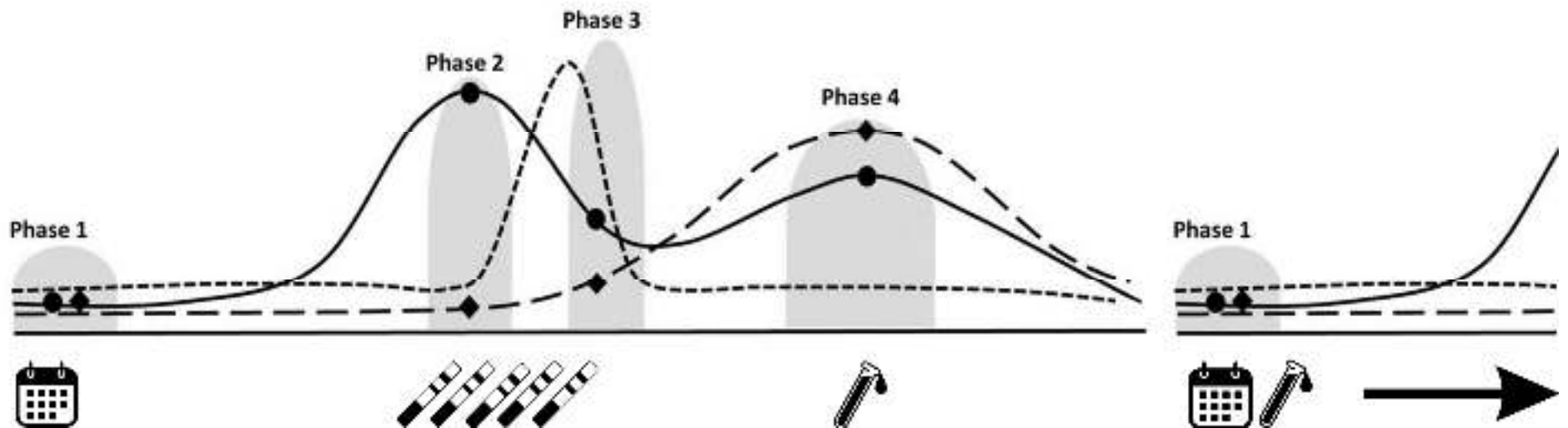
Menstrual cycle phases

based on hormones



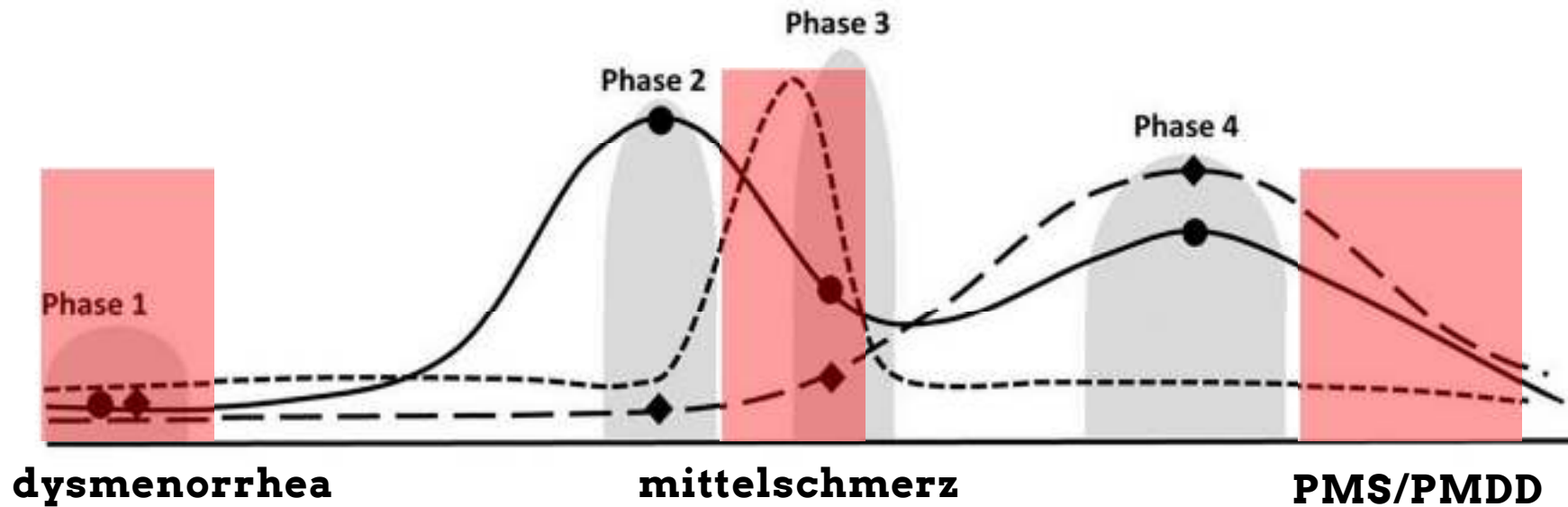
Menstrual cycle phases

gold-standard: all phases



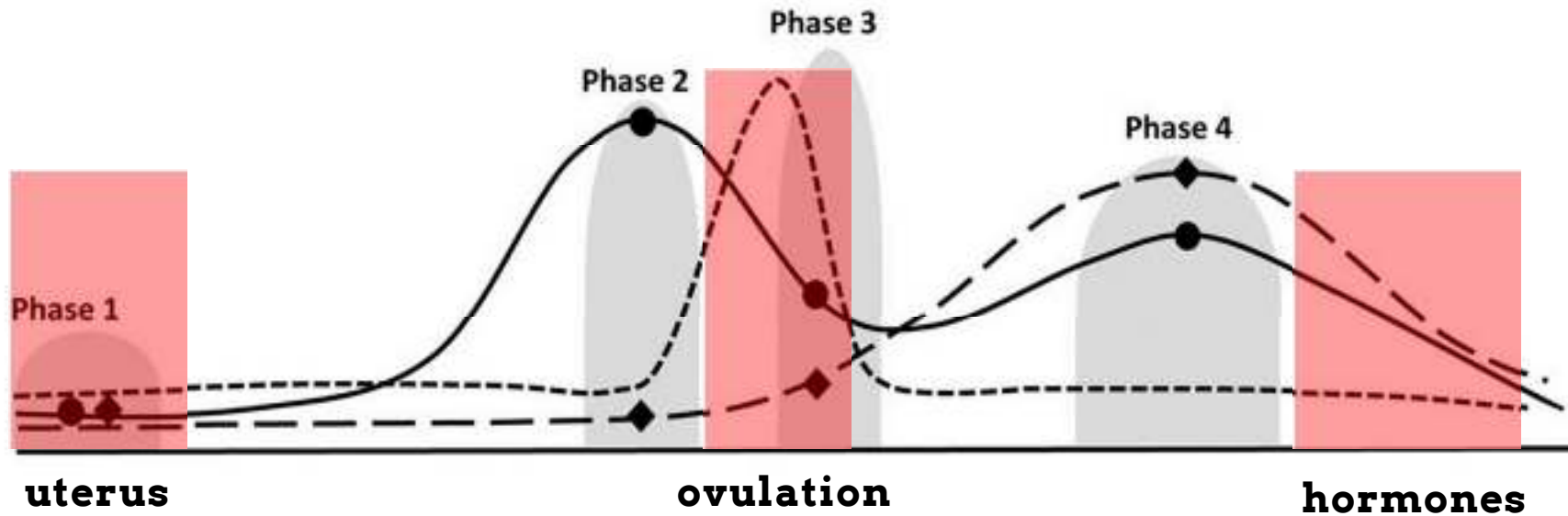
Menstrual cycle phases

timing of symptoms



Menstrual cycle phases

timing of symptoms





Menstrual cycle symptoms

monitoring



Menstrual cycle symptoms

self-reported

Menstrual cycle symptoms

Martin et al. (2018)

Symptom	Frequency	Prevalence, %
Physical		
Stomach cramps/abdominal pain	103	47.5
Unspecified cramps	48	22.1
Back pain	37	17.1
Headaches/migraine	21	9.7
Bloating	12	5.5
Nausea/sickness/vomiting	10	4.6
Tiredness/fatigue/lethargy	9	4.1
Dizzy/light-headed/blush of complexion	5	2.3
Leg discomfort	4	1.8
Unspecified pain	3	1.4
Hot flashes/sweating	2	0.9
Hunger/increased appetite	2	0.9
Sore breasts	2	0.9
Rash/skin	1	0.5
Constipation	1	0.5
Heavy bleeding	1	0.5
Muscle aches	1	0.5
Problems with exercise	1	0.5
Sore throat	1	0.5
Tight neck	1	0.5
Weakness	1	0.5
Emotional		
Mood changes/swings	9	4.1
Irritability	1	0.5
Frustrated	1	0.5

“Non-HC users had a menstrual cycle length of 29 (5) d and 77.4% reported negative side effects during their menstrual cycle, primarily during days 1–2 of menstruation (81.6%).”



Menstrual cycle symptoms

management

How the menstrual cycle and menstruation affect sporting performance: experiences and perceptions of elite female rugby players

Rebekka Findlay,¹ Elidh B Macrae,¹ Ian Whyte²,³ Chris Easton²,⁴
Laura Honeist (née Whyte)¹

ABSTRACT

Objectives: To explore athletes' past and current experiences and perceptions of the menstrual cycle in relation to its impact on sporting performance.

Methods: 10 international female rugby players participated in individual semi-structured interviews (age 24.5–36.2 years). All interviews were recorded and transcribed verbatim, resulting in 37 576 words of verbatim data for analysis and thematic analysis. Inter-rater reliability checks resulted in a concordance of agreement of 83%.

Results: A total of athletes (93%) reported menstrual cycle-related symptoms. In the three percent perceived heavy menstrual bleeding and took one of these symptoms impacted their performance. Two-thirds of athletes self-medicated to a lesser degree. A thematic analysis generated 282 meaning units, 16 themes, 10 sub-themes and 4 general dimensions. The four general dimensions were (1) symptoms; (2) psychological and psychological menstrual cycle-related symptoms such as exhaustion, mood, reduced energy levels, worry, distraction, fluctuating emotions and reduced motivation; (3) impacts perceived impact of menstruation on different aspects of daily lives and performance; (4) coping, negative and neutral responses; (5) seeking the methods approaches included with menarche-related symptoms including accepting, not accepting and managing symptoms with self-medication or other treatment; (6) support available support and comfortability in discussing menstrual cycle-related issues.

Conclusions: This study provides the first in-depth insight into athletes' experiences of the menstrual cycle and perceived impact on training and competition. It highlights individual responses to menstrual cycle-related issues, the need for education and support, and to undertake menstrual cycle and life, monitoring and continue to develop awareness, openness, knowledge and understanding of the menstrual cycle.

with abdominal/back, cramps, abdominal/muscle aches and headaches/migraine.⁸ In addition, Findlay et al. identified that half of elite British female runners and rowers (n=20) felt that their menstrual cycle had in some way impacted on their training and sporting performances.⁹

Historically, research in this area has often focused on amenorrhoea and the female athlete triad. More recently, this work has evolved to include 'relative energy deficiency in sport'.¹⁰ The prevalence of secondary amenorrhoea, the most commonly diagnosed menstrual abnormality in female athletes, has been repeatedly shown to occur at higher rates compared with the general population, especially in sports striving for leanness.¹¹ Additionally, menstrual cycle dysfunction such as heavy menstrual bleeding have also been found to impact on health and thus athletic performance with 37% of female elite rowers and rowers reporting heavy menstrual bleeding.⁹

Despite the importance of these studies in highlighting menstrual cycle symptomatology and prevalence of menstrual cycle dysfunction in female athletes, much of the published research has been physiologically based and quantitative in nature. This research has also tended to be dominated by individual sports or sports which encourage leanness.^{12–14} However, none have considered the in-depth lived experiences and perceptions of elite athletes and athletes in team sports. This highlights the importance of the call made by Bestwick et al. for further research in the area of sport and the menstrual cycle.¹⁵ Therefore, the aim of this study was to understand the current and historical menstrual cycle issues, lived experiences and perceptions of the menstrual cycle in relation to elite athletes' performance. This should help to highlight awareness and understanding of female athletes' and

Menstrual cycle symptoms

Findlay et al. (2020)

93% self-reported menstrual cycle related symptoms

67% perceived their symptoms impaired their performance

66% self-medicated



Menstrual cycle synonymous with symptoms

bleeding, perception, ill health, physiological pathway



Symptoms are self-reported and subjective
rather than objectively measured



Impact of symptoms on performance are perceived
and rarely tested



Symptom monitoring in elite environments

systems and processes



Real time capture

check for cyclicity



Symptom management in elite environments

systems and processes



YOU COULD: Adapt training based on phase

“train women as women”



Autoregulation is a process that is used to manipulate training based primarily on the measurement of an individual's performance or their perceived capability to perform. Despite being established as a training framework since the 1940s...



Not all players in a team have a menstrual cycle [hormonal contraception]

Not all players will experience menstrual cycle symptoms

Not all players will be in the same phase at the same time experiencing the same symptoms



BETTER YET: Optimise training in all phases

train players as players



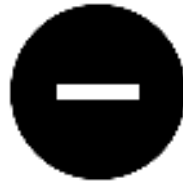
In medicine, an intervention is a specific action taken to improve health by preventing, treating, or managing a condition, or by restoring function



In sport, one size never fits all

Player's treatment should be individualised

Treatment[s] should be designed and implemented by a MDT



DON'T FORGET: Perception shapes reality

the menstrual cycle is not just about adversity [symptoms]

we can reduce or remove symptoms

competitions have been won on every day of the cycle [even with symptoms]



Integration into the elite environment

opt-in, resources, pipeline



Menstrual health should be monitored using robust processes that include measurements rather than assumptions and should only be undertaken under the right conditions. Proactivity rather than reactivity is recommended when it comes to matters related to menstrual health.



Menstrual cycle symptoms should be monitored using real-time systems. Symptoms should be checked for cyclicity. Proactivity rather than reactivity is recommended when it comes to menstrual cycle symptom management. Treatment should be offered by a MDT.

