CASES EXPERT STATEMENT

BEYOND THE PHASE: THE CASES EXPERT STATEMENT ON A SMARTER MANAGEMENT APPROACH TO HORMONE-RELATED SYMPTOMS IN ACTIVE FEMALES

Produced on behalf of the Chartered Association of Sport and Exercise Sciences by
Esther Goldsmith, Dr Natalie Brown, Dr Sophie E Harrison and Dr Eleri S Jones MCASES.

Female hormone-related symptoms arising from the menstrual cycle and contraceptives can impose a burden, affecting health, wellbeing, and performance. Despite individual variability in the symptoms experienced, the most reported symptoms are mood changes, irritability, fatigue, stomach cramps, and breast pain (Bruinvels *et al*., 2020). Both recreational and elite female athletes report that hormone-related symptoms negatively impact their training and performance (Brown *et al.* 2021). Female athletes believe that having more information and research about these symptoms may support their performance, health and wellbeing (McCleery *et al*., 2024), yet support remains limited.

Those working with active females should be aware of the impact of hormone-related symptoms and be equipped with appropriate management strategies. Adopting a bio-psycho-social approach offers a framework to integrate support for active females. Enhancing awareness and cross-disciplinary collaboration is key to ensuring that females receive support that enhances wellbeing and performance.

This expert statement provides applied recommendations to support the health, wellbeing and performance of active females. The term female here, refers to those assigned female sex at birth, and considers exercise participation through to high performance.

PHASE-BASED VS SYMPTOM-INFORMED APPROACHES

Menstrual cycle monitoring has become more common, with research and applied practice within the last 15 years largely focusing on phase-based training (i.e. adjusting training

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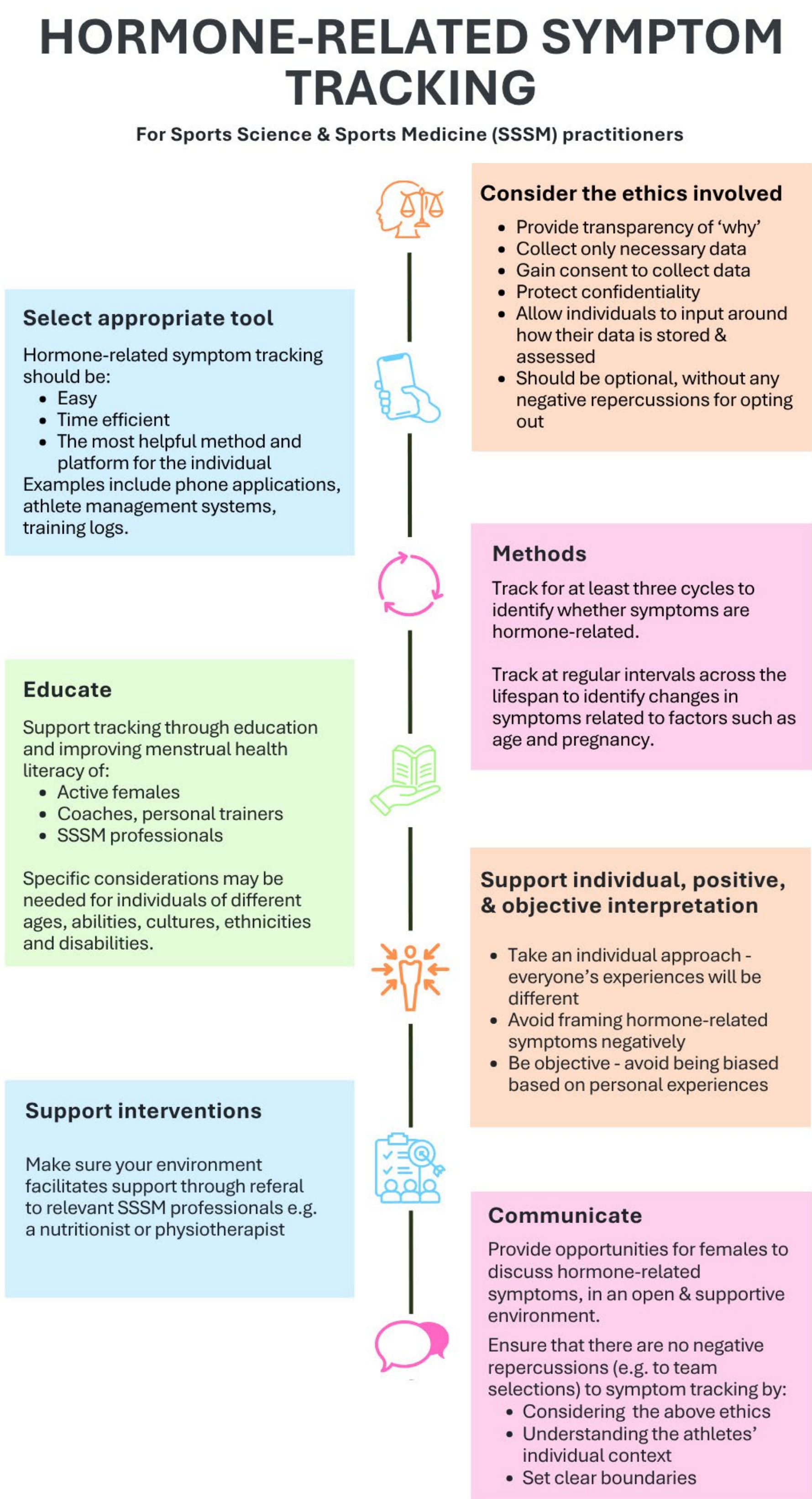


▲ **Figure 1:** Sport Science and Sports Medicine (SSSM) practitioner guide to hormone-related symptom tracking (Information from Carmichael et al., 2024)

modality, intensity and duration across different phases of the menstrual cycle). This approach was deemed beneficial due to the hypothesised roles of oestrogen and progesterone in the cellular pathways for adaptation to exercise (Oosthuye & Bosch, 2010). However, there is a lack of high-quality evidence, making it difficult to draw strong conclusions (Colenso-Semple *et al.*, 2023). Furthermore, there are several factors that may negate the use of phase-based training. From a psychological perspective, phase-based training models may be inappropriate as they can undermine a female's readiness to perform when competition coincides with a menstrual cycle phase typically associated with amended training, potentially leading to increased anxiety, reduced confidence, and a mismatch between preparation and performance demands (Dupuit *et al.*, 2023). From a social perspective, it may not be feasible for individuals to perform phase-based training without access to appropriate support staff and may be impractical within a team sport-based setting, when females are within different phases during the same training session. Finally, the phase-based approach does not consider individual experiences of hormone-related symptoms. Therefore, there is no strong rationale to support this approach.

The terms "phase-based", or "cycle syncing", are often used incorrectly within the media to describe symptom-informed approaches. The symptom-informed approach (SIA) differs from the phase-based approach by taking an individualised perspective, which involves tracking symptoms across menstrual cycles or throughout contraceptive use. Tracking symptoms facilitates identification of trends to allow:

- Symptom-informed management and minimisation (SIA-M), which involves managing symptoms to allow participation in all modalities, intensities and durations of exercise.
- Symptom-informed training adjustment (SIA-T), which involves modifying training modality, intensity or duration at times when symptoms are present.

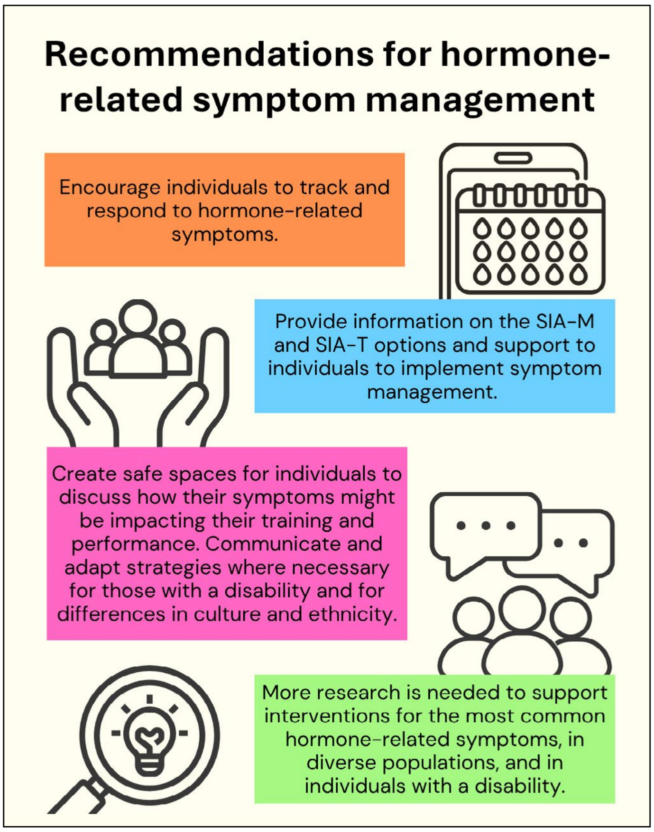
These approaches have important considerations that make them more appropriate within different scenarios. For example, a female competing within sport may want to maximise training and be prepared to compete at

any time of the cycle, so SIA-M seems appropriate. In lieu of reducing training load due to symptoms such as heavy legs, fatigue or low mood, symptoms could instead be managed through recovery, sleep and psychological interventions to support consistent performance. Conversely, recreationally active females may choose to avoid exercise due to their symptoms. However, completing activity of any modality, intensity or duration is beneficial and therefore, it may be appropriate to use SIA-T.

SYMPTOM TRACKING AND MANAGEMENT

Hormone-related symptom tracking can support symptom management; however, it is important to consider the related purpose, practicalities, and behaviours (Carmichael *et al.*, 2024). When considering symptom tracking, key principles should be applied, including ethical considerations, education for athletes and support staff, effective communication, identification of appropriate tools and methods, and support with tracking, interpretation and management (Figure 1). Where feasible, the involvement of a multidisciplinary team of practitioners with expertise in female-specific considerations could be facilitative. However, when this is not feasible, it is important that coaches and support staff understand the scope of practice and when external support is required. For example, health/medical expertise may be required to diagnose and provide support for menstrual dysfunctions.

Coaches and support staff are key in developing supportive environments. Education can address communication barriers, such as stigma, and help with adopting appropriate and inclusive language. By creating an environment that facilitates open communication, whilst respecting individual privacy, it is feasible to identify and implement symptom



▲ **Figure 2:** Summary of recommendations for hormonal-related symptom management. SIA-M: Symptom-informed management and minimisation approach. SIA-T: Symptom-informed training adjustment approach.

TEST	PURPOSE	DESCRIPTION
Pharmacological interventions		
NSAIDs/Analgesics (National Institute for Health and Care Excellence, 2025)	Menstrual pain, breast pain, heavy menstrual bleeding, muscle/joint pain, headaches, back pain	• First recommendation on the NICE guidelines for management of premenstrual syndrome • May be more effective if taken pre-emptively • Contraindications to usage within certain populations and medical conditions (e.g. those with a history of stomach ulcers) • Common side effects including gastrointestinal symptoms • Chronic use may result in blunted training adaptations
Hormonal contraceptives (National Institute for Health and Care Excellence, 2025)	Heavy menstrual bleeding, breast pain, menstrual cramps, headaches, menstrual migraines, back pain, mood changes, sleep disturbances, anxiety	• May have adverse side-effects e.g. mood alterations or anxiety • Can mask symptoms of REDs • Contraindications with some medical conditions (e.g., combined pill should not be used with those who have a history of cancer) • Some forms may negatively affect bone health in adolescents
Nutritional interventions		
Micronutrient supplementation/increasing micronutrient intake (e.g. omega 3, calcium, curcumin, vitamin D, zinc, magnesium, vitamin C) (Brown et al., 2024)	Depression, nervousness, anxiety, lack of concentration, bloating, headaches, breast tenderness/ pain, fatigue, menstrual pain, irritability, mood changes	• May be more effective in those micronutrient deficiencies • Improvement in symptom experience may only occur after multiple cycles – chronic intake or supplement use may be necessary • There is differing strength of evidence to support the use of each micronutrient • Most research has focused on supplementation and not a food-first approach • Any supplements should be batch-tested and comply with WADA guidelines
Natural food strategies (e.g. peppermint tea, ginger, chamomile tea) (Khayat et al., 2014)	Nausea/sickness, gastrointestinal disturbance, menstrual pain	• There is variation in strength of evidence to support application for hormone-related symptoms • Potential differences in effectiveness depending on chronic vs acute use
Energy intake manipulation (e.g. increasing carbohydrate intake, increasing fuelling regularity, increasing protein intake) (Wohlgemuth et al., 2021)	Fatigue, food cravings, bloating, mood changes, delayed recovery from exercise	• Support from a registered nutritionist may be warranted • Gut motility and energy requirements may be altered in individuals with certain disabilities (e.g. spinal cord injuries) • Individuals with disordered eating or eating disorders may struggle to implement
Psychological interventions		
Cognitive Behavioural Therapy (CBT)/Goal setting (Lustyk et al., 2009)	Low motivation, poor concentration	• Improvement in symptom experience may only occur after multiple cycles • Support from a registered psychologist may be required • Access to CBT may incur financial, psychological and time cost
Stress management (e.g. meditation, breathing, going for a walk in green space, talking with friends) (Lustyk et al., 2011)	Anxiety, depression, low motivation, disrupted sleep, mood changes, irritability, menstrual pain, headache	• Large variation in effectiveness of different strategies • Account for complex mental ill-health and ensure interventions are delivered by qualified professionals.
Exercise interventions		
Stretching/Yoga/Pilates (Vaghela et al., 2019)	Menstrual pain, lower back pain, poor coordination/ balance, joint pain, mood changes, sleep disturbances	• Improvement in symptom experience may only occur after multiple cycles • May be more effective for those who don't participate in stretching/Yoga/ Pilates normally • Accessing Yoga/Pilates classes may incur time and financial costs
Aerobic exercise (e.g. cycling, running, rowing, swimming, walking) (Vaghela et al., 2019)	Menstrual pain	• May be more effective in those who are sedentary • Increasing training load in active females to manage symptoms could increase risk of injury, illness and REDs
Warm-up and cool down modifications (e.g. including reaction time activities, adding more neuromuscular activation exercises) (Afonso et al., 2024)	Poor coordination/ balance, low motivation, menstrual pain, lower back pain	• Support from strength & conditioning coach or physiotherapist may be needed • Avoid extending too much in those at risk of REDs
Other interventions		
Period products (Liberty et al., 2023)	Menstrual bleeding	• Many different options depending on age, culture, ethnicity and ability/ disability of individual • Tracking can support individuals to be prepared with products
Sleep management strategies (e.g. sleep banking, sleep extension, improving sleep hygiene, napping) (Mighani et al., 2025)	Fatigue and tiredness, low motivation, mood changes, irritability	• Appropriate consultation with a professional should be sought for chronic sleep disorders • Whilst sleep can reduce severity of symptoms, disturbed sleep is a common symptom so individuals may struggle to implement • Training schedules may contradict sleep advice e.g. early morning swimming sessions
Application of heat e.g. hot water bottle, heat pack (National Institute for Health and Care Excellence, 2025)	Menstrual pain, back pain	• Effective when used acutely but not a proactive/preventative strategy • May not be practical during exercise
TENS machine (National Institute for Health and Care Excellence, 2025)	Menstrual pain, back pain	• Contraindications of usage within certain medical conditions (e.g. epilepsy, pacemaker)
NSAIDs: Non-steroidal anti-inflammatory drugs. REDs: Relative energy deficiency in Sport. WADA: World Anti-doping agency. CBT: Cognitive behavioural therapy. TENS: Transcutaneous electric nerve stimulation. These strategies may not be adequate for individuals with a diagnosed medical condition. References are intended as illustrative examples only.		

▲ **Table 1:** Summary of possible management strategies for hormone-related symptoms.

management strategies. Females should be empowered to seek support to trial different strategies if needed, but it is important they are not responsible for the sole burden. Finally, consideration should be given to the inter-individual variation in experiences of symptoms, as they can affect the degree to which the symptoms have a negative or positive impact upon training and performance.

While symptom tracking is more common, guidance to support the use of this information is limited (Carmichael *et al.*, 2024), and advice about management strategies for hormone-related symptoms is varied and has limited research-informed support. Table 1 provides a non-exhaustive overview of proposed symptom management strategies. It should be noted that there is varying quality and quantity of evidence supporting the suggested management strategies and that evidence is even more limited to support females with disabilities and does not consider different cultures and ethnic backgrounds, in which instances communicating with the individual and adapting strategies on a case-by-case basis is recommended, whilst research should be advanced in these areas.

CONCLUSIONS AND RECOMMENDATIONS.

Evidence does not support a one-size-fits-all approach to training modifications based on menstrual cycle phases. Instead, hormone-related symptom tracking and SIA-M or SIA-T may provide a feasible and effective practice. Whilst further research is necessary to confirm the effectiveness of symptom management strategies, some proposed approaches exist that, when considered in an individualised manner, may improve female health, wellbeing and performance (Figure 2). ■

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ESTHER GOLDSMITH

Esther is a Physiologist at Sport Wales and a Professional member of CASES.

DR NATALIE BROWN

Natalie is a Research Officer for the Welsh Institute of Performance Science in Sport and Exercise Science at Swansea University.

DR SOPHIE HARRISON

Sophie is a Lecturer in Sport and Exercise Science in the School of Sport Science at Bangor University.

DR ELERI SIAN JONES MCASES

Eleri is a Lecturer in Performance Psychology in the School of Sport Science at Bangor University and is CASES accredited.

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