



# WOMEN & GIRLS HEALTH & WELFARE

MENSTRUAL CYCLE

**'Menstrual cycle 101' will help you understand the menstrual cycle and associated symptoms, explore how these symptoms may impact experiences playing and performing in rugby along with differences between a natural menstrual cycle and hormonal contraceptives. It will also cover menstrual health and medical conditions.**

## Player experiences

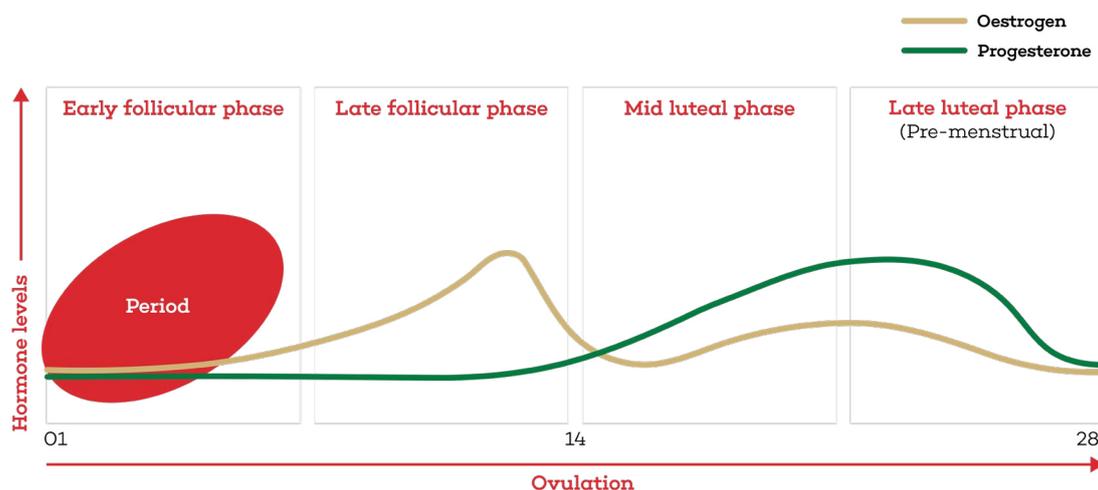
*"Oh no, I wouldn't say anything...I just don't want to because its awkward"*

Many players feel uncomfortable talking to their coaches and support team about the menstrual cycle and periods due to AWKWARDNESS. This is despite the fact we know symptoms related to the menstrual cycle can affect training and/or sport performance.

*"You kind of want to feel really confident and really energetic and when you are on your period you feel a bit rubbish"*

*"Time before my period impacts training and performance"*

- Periods are perfectly normal! Just like hormones control if we are tired or hungry, hormones control the menstrual cycle.
- The menstrual cycle is a biological process, it's not just a period - the cycle is a repeating pattern of fluctuating hormones which are very individual. Individuals who menstruate will have their own experience of their cycle and everyone will be unique.
- A typical cycle ranges from 21-35 days, up to 40 days for the first couple of years of starting periods. Day 1 of the cycle is characterised by the bleed known as menses, menstruation or a period. Typically bleeding will last 3-5 days.
- On average individuals will start their period around age 12 with a range from age 9-15yrs, if an individual has not started their period by age 16 it is always best to seek medical advice.
- The image below shows what happens to hormones throughout one menstrual cycle. It is important to understand the changes in hormone levels and phases as this helps understand when and what symptoms may be experienced.



Day 1 is the first day of bleeding and at this stage the 2 primary hormones involved, oestrogen and progesterone, are both at their lowest. This is known as the early follicular phase.

The next phase is the late follicular phase, this occurs before ovulation which is approximately midway in your cycle. During this phase there is a peak in oestrogen.

After ovulation, progesterone increases along with a second peak in oestrogen in the mid luteal phase.

The late luteal phase is associated with a decline in both hormone levels if pregnancy does not occur and returns to day 1 of the cycle where a period is experienced.

These changes in hormone levels across the menstrual cycle can cause a variety of different symptoms, both positive and negative.

## **SYMPTOMS AND MANAGEMENT FOR TRAINING AND PERFORMANCE**

**Here is a list of negative symptoms that may be experienced due to the menstrual cycle and changes in hormone levels:**

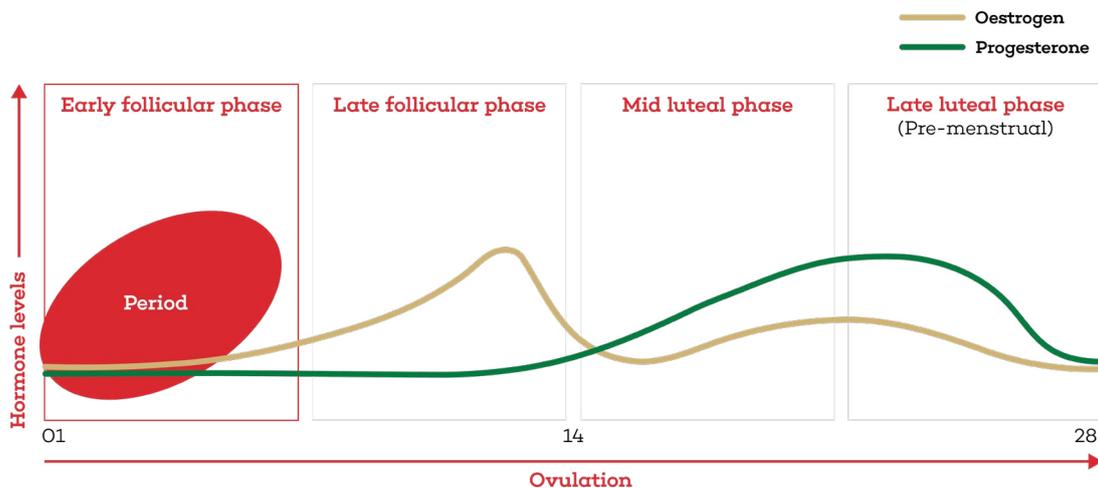
- Abdomen/stomach cramp
- Back pain
- Headaches
- Agitated/irritable
- Decreased energy levels/lethargy
- Weight gain/changes
- Ill/cold symptoms
- Reduced motivation
- Heavy bleeding
- Sleep disturbance
- Worry/anxiety
- Dizziness
- Discomfort
- Fatigue/tiredness
- Poor core control
- Bad skin
- Bloating
- Gastrointestinal disturbance, i.e. constipation or diarrhoea
- Distraction
- Reduced recovery
- Nausea (feeling sick)
- Breast pain/change size
- Being emotional
- Poor temperature regulation
- Reduced coordination/clumsiness
- Change appetite/food cravings
- Mood swings

**We usually think of the symptoms as negative and associated with the time before or at the start of the period. But remember it isn't just the period. There are also many positive symptoms that can be seen throughout the menstrual cycle, most commonly experienced during the follicular phase:**

- Improved feelings of strength
- Increase in motivation
- Increased confidence
- Being energetic
- Improved focus
- Being ready to take a risk/challenge

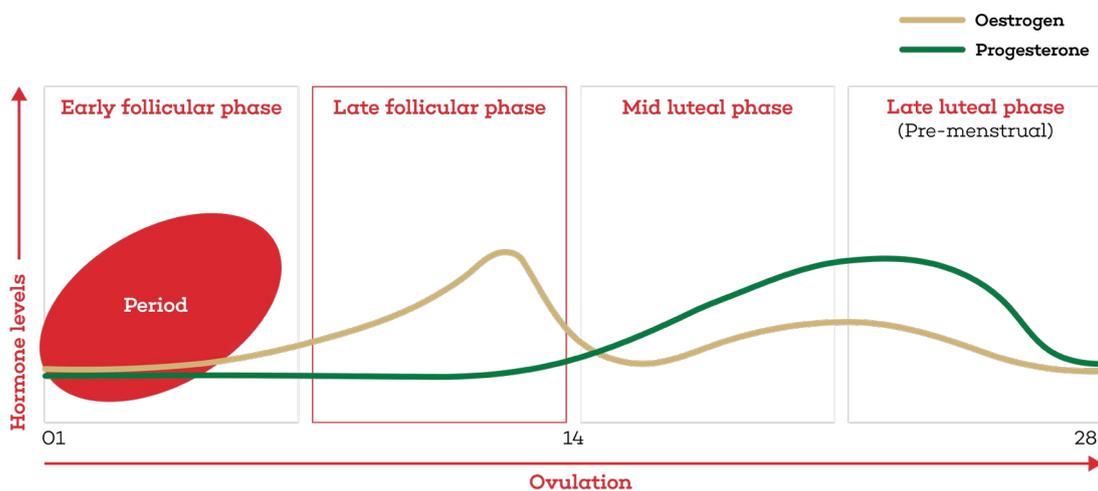
It should also be noted that the menstrual cycle is an extra sign of health. A regular menstrual cycle indicates a good energy balance, and that the body's hormones and reproductive system are functioning well.

### So when are symptoms likely to occur?

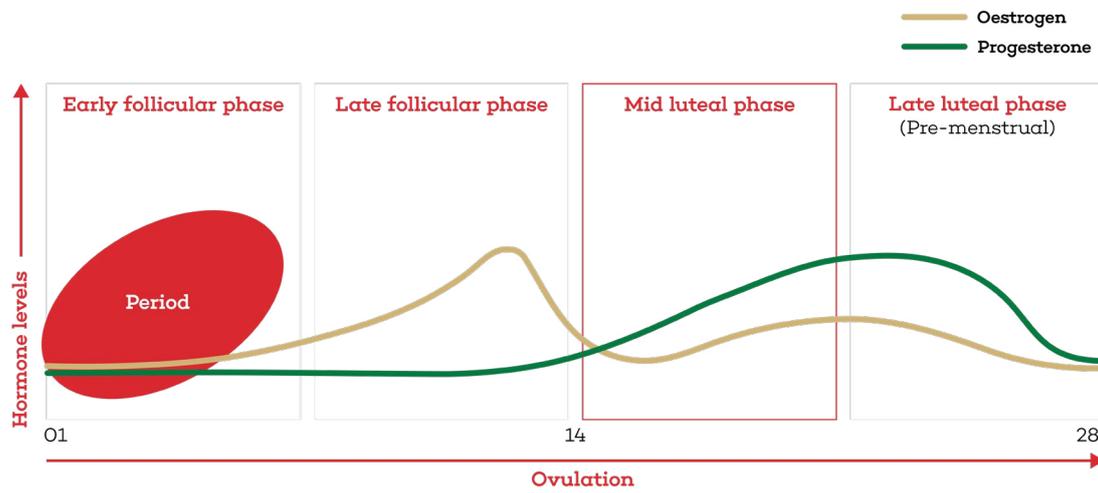


In the early follicular phase, when bleeding occurs, stomach cramps are also very common. If bleeding is heavy, for example needing to use 2 types of period products or changing products every hour, seek medical advice to help with management as this is classed as heavy menstrual bleeding. Also if stomach cramps are severely affecting day to day activities speak to your medical practitioner to check there are no underlying medical conditions such as endometriosis [for more info see menstrual health section].

After the first couple of days of bleeding it can be common to start experiencing positive symptoms, no more brain fog, improved mood and motivation.

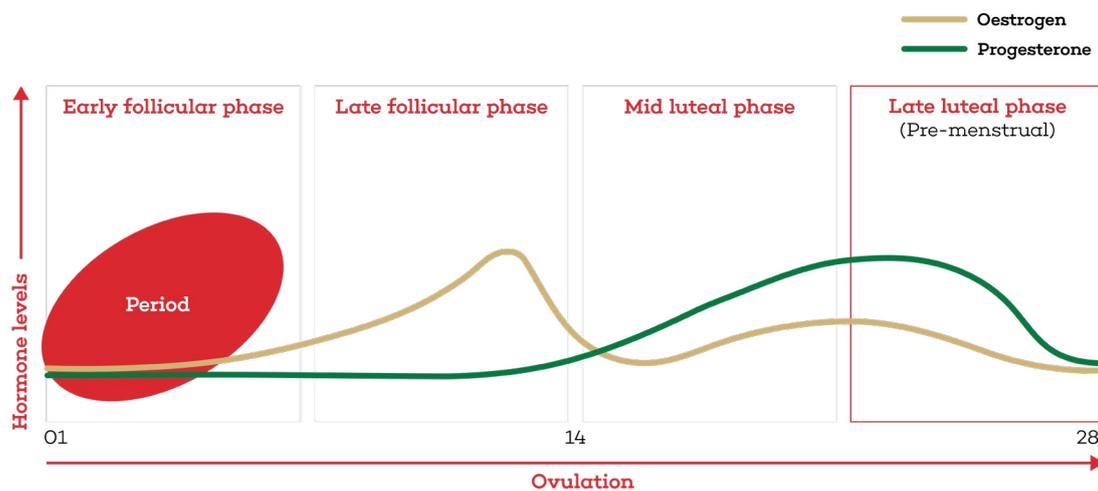


The late follicular is usually associated with positive symptoms, feeling strong, increased energy and motivation caused by the increase in oestrogen. Feelings of tiredness may occur around ovulation.



**When moving into the luteal phase, approximately half way through the menstrual cycle, this phase is associated with a lot more of the negative symptoms that may be experienced:**

- Bloating
- Constipation
- Weight changes
- Poor temperature regulation
- Food cravings
- Clumsy/reduced coordination



**These symptoms in the mid luteal phase may continue into the late luteal phase, whilst also experiencing:**

- Headaches
- Bloating
- Dizzy
- Back ache
- Abdominal pain
- Weight changes
- Irritable/agitated
- Breast pain and swelling
- Mood swings
- Poor temp regulation
- Decreased energy levels/lethargic
- Fatigue
- Reduced motivation
- Increased worry/anxiety
- Illness (cold like symptoms)
- Poor core control
- Reduced recovery

These symptoms are caused by the decline in hormone levels, how the withdrawal of hormones affects the brain and also increases inflammation within the body.

How to reduce or manage symptoms? The aim is to be proactive to prevent negative symptoms affecting rugby training or performance.

## 1. TRACK YOUR MENSTRUAL CYCLE

- Keeping a track of cycle length and symptoms can be helpful to understand what is regular for you.
- Apps or diaries can be helpful to complete this - but whatever works best for you, noting it down in a training diary is another option.
- Track for 3 cycles to understand what symptoms are related to the menstrual cycle, these will be the symptoms that occur across every cycle and in a pattern. For example, increased fatigue and tiredness is common the week before a period...if you are feeling tired at other times in your cycle it might be that you are not getting enough sleep rather than your hormones causing this.
- Note any stress, poor sleep, travel, matches etc as well as these may affect symptoms you experience.

## 2. TAKE ACTION!

Be proactive and put plans and strategies in place that can help reduce or manage symptoms. Food, stress, lifestyle and medical conditions can all cause symptoms to be worse. Consider:

- **Stress** – What is the cause of your stress and can you reduce this. What makes you feel less stressed e.g. reading a book, chatting to friends and socialising, hot bath, yoga, meditation. Everyone is different, find what works for you.
- **Sleep** – Quality & quantity of sleep is important. There are some simple sleep hygiene strategies you can try to improve sleep: create a regular time to go to bed and wake up every day, make sure your bedroom is cool, dark and quiet (eye masks and ear plugs are create if its not, or travelling away for camps/matches), make sure your bed and pillows are comfortable, try avoid working or studying in your bedroom.
- **Recovery** – What recovery are you doing before, after or even between training and after matches? The week before your period we know it may feel harder to recover so make sure you think about food, sleep, stretching etc to help.
- **Diet considerations** – Some symptoms are caused by inflammation in the body, food can be helpful in providing anti-inflammatories by this we mean foods such as fruit and vegetables. Reducing intake of processed foods such as crisps, cake, ready meals, takeaways can also help as these are the opposite - they are pro-inflammatory which means increasing inflammation and can make symptoms worse. Don't forget to have adequate fuel, carbohydrates are important before and after training and matches as they provide fuel to perform and help recovery, along with protein which can support recovery but also reduce food cravings.
- **Medical advice** – If symptoms are severe and impacting daily activities, seek medical advice.

### 3. TALK TO YOUR COACH AND SUPPORT TEAM

(Including your team mates) Especially whilst you are working out your symptoms and how to reduce them affecting training and match performance.

#### **Example: stomach cramps**

- Check no underlying medical condition e.g. endometriosis if pain is severe (check digestion as this will affect immune system and increase inflammation)
- Take Ibuprofen (if no medical conditions preventing use) the day before period pain starts
- Apply heat packs on your stomach or back
- Diet – ensure eating anti-inflammatory foods (alongside a balanced diet), 5-7 portions a day especially the week before your period of fruit and vegetables to help reduce inflammation
- Light exercise & stretching can help if you are experiencing stomach pains
- Talk to your coach – what can you achieve in training?

## Hormonal contraceptives

Using hormonal contraceptives prevents the fluctuations and changes in hormone levels that occur with a natural menstrual cycle. There are no changes in natural hormone levels and therefore no phases are experienced.

If you experience bleeding, whilst using hormonal contraceptives, this is due to the effect of the synthetic hormones on your body. For this reason, a withdrawal bleed is NOT classed as or the same as a natural period. A regular withdrawal bleed is NOT indicative of a regular menstrual cycle, so players who use hormonal contraception cannot use their withdrawal bleed to indicate irregular or loss of menstrual cycle.

Some athletes may experience symptoms whilst using hormonal contraception, such as irregular bleeding, headaches, changes to mood and reduced motivation. None of these symptoms should affect daily activities and most of the time can be avoided by trying a different hormonal contraceptive - this might be the same type such as the pill just a different brand, it might be a change of type of hormonal contraceptive such as an intrauterine device or mini pill.

If hormonal contraceptives are being used just to manage symptoms, weigh up the reasons for use and explore alternative strategies as well, in consultation with a doctor.

# Menstrual health

Regular menstrual cycles are important for health & provide an additional 'sign' of good health.

Irregular or absent periods are not normal and a disrupted hormone system impacts a variety of body functions such as the heart, brain and metabolism.

Irregular menstrual cycles refer to cycles that are either shorter than 21 days or longer than 35 after the first 2 years of having a period, the first couple of years it can be more usual to have irregular cycles. Menstrual cycle length should also not vary by more than 3-5 days each cycle.

Absent periods are the experience of having no periods, in the absence of pregnancy. Now and again this might occur due to stress or energy deficiency as some examples, however if periods are absent, shorter than 21 days or longer than 35 days for 3 cycles or more we advise speaking to your doctor.

## What else is irregular?

- Stomach cramps are an extremely common symptom related to the menstrual cycle, however, debilitating stomach cramps not eased by over the counter pain relief is not normal and should not be suffered.
- Heavy bleeding requiring changing every hour or having to use 2 menstrual products is not regular.
- Severe changes in mood, experiencing increased anxiety and/or depression.

## Many factors can affect a regular menstrual cycle:

- Restricted food/energy intake
- Stress
- Exercise
- Contraceptives
- Lack of sleep or recovery
- Psychological fatigue (exams, work interviews etc)
- Age
- Pregnancy
- International travel

**But it is also important to have an awareness of potential underlying cause of severe symptoms, for example:**

- **Endometriosis** - <https://www.endometriosis-uk.org/what-endometriosis>
- **Uterine fibroids** - <https://www.mayoclinic.org/diseases-conditions/uterine-fibroids/symptoms-causes/syc-20354288>
- **Polycystic ovary syndrome (PCOS)** - <https://www.nhs.uk/conditions/polycystic-ovary-syndrome-pcos>
- **Premenstrual dysphoric disorder (PMDD)** - [https://www.mind.org.uk/information-support/types-of-mental-health-problems/premenstrual-dysphoric-disorder-pmdd/about-pmdd/#:~:text=Premenstrual%20dysphoric%20disorder%20\(PMDD\)%20is,phase%20of%20your%20menstrual%20cycle.](https://www.mind.org.uk/information-support/types-of-mental-health-problems/premenstrual-dysphoric-disorder-pmdd/about-pmdd/#:~:text=Premenstrual%20dysphoric%20disorder%20(PMDD)%20is,phase%20of%20your%20menstrual%20cycle.)

Specifically in individuals taking part in sport and exercise, energy deficiency can be a cause of irregular or absent periods. This is not normal, a regular menstrual cycle is important for many bodily functions that affect both health and performance.

Hormones in the menstrual cycle act a like relay race. If one hormone doesn't "pass the baton," things can slow down or stop altogether. It's a delicate and important balance.

Over exercising or under fueling can cause **Relative Energy Deficiency in Sport (RED-S)** – energy imbalance.

Low energy availability - nutritional intake is insufficient to cover the energy demands of both exercise training and bodily processes or excessive training load reducing energy available to support life.

It affects both male and female athletes who do not fuel adequately, either intentionally or unintentionally.

The cause of this syndrome is energy deficiency relative to the balance between dietary energy intake and energy expenditure required for health and activities of daily living, growth and sporting activities.

Adverse effects on many biological systems such as menstrual function, endocrine system (hormones), musculoskeletal (bone and muscle), gastrointestinal (digestive), cardiovascular system (heart & circulation), immune function and growth and development.

There is also a negative impact on performance, with decreased response to training, impaired co-ordination and increased injury risk as just some examples.

Even where body weight is steady, low energy availability may be present due to high training loads and/or endocrine and metabolic adaptations have occurred to prevent weight loss. So, a steady body weight does not rule out low energy availability.

## Key facts of RED-S

- Negative impact on health and wellbeing
- Adverse effects on sport performance
- For individuals who menstruate a regular menstrual cycle is a good sign of health and loss of a regular period can be a good indicator of energy deficiency
- Hormonal contraceptives can 'mask' energy deficiency as a regular period is not experienced

## A loss of period can have many short and long term impacts:

- Fertility
- Mental fatigue
- Time lost training
- Urinary incontinence
- Decreased performance
- Longer post training/race recovery
- Bone health – increased risk bone injuries (fractures)

## Player example:

*'I put the lack of strength gains down to genetics, the tiredness down to training hard, the bad memory and concentration down to my head injury and just thought it was funny that I got so cold at night that I needed a sleeping bag in spring (in the house, also under a duvet...).'*

Having healthy hormones is fundamental to optimal athletic performance, menstrual cycles could be viewed as another training metric. If you have irregular or absent periods seek medical advice and also speak to your support network and coach in rugby.



DIOLCH

