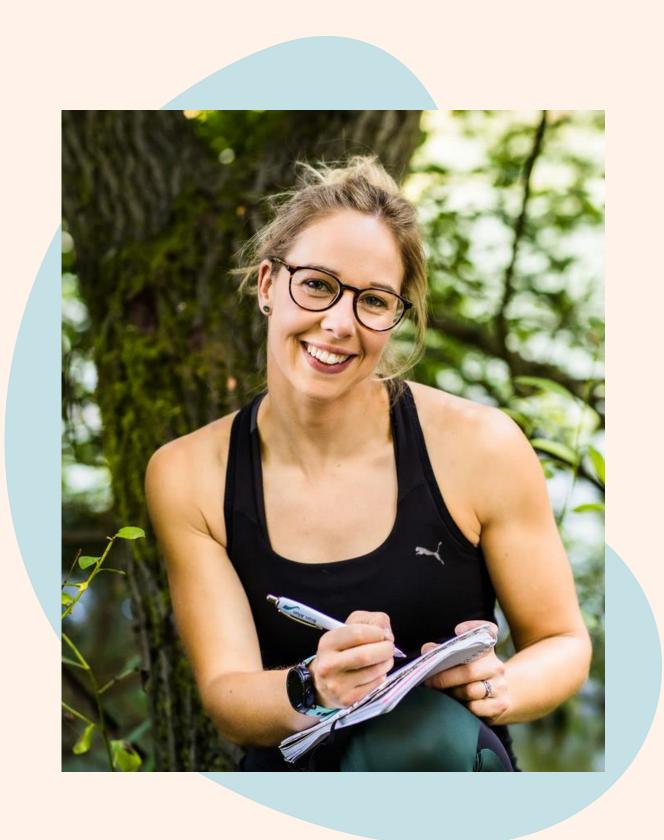


## Optimal Period.



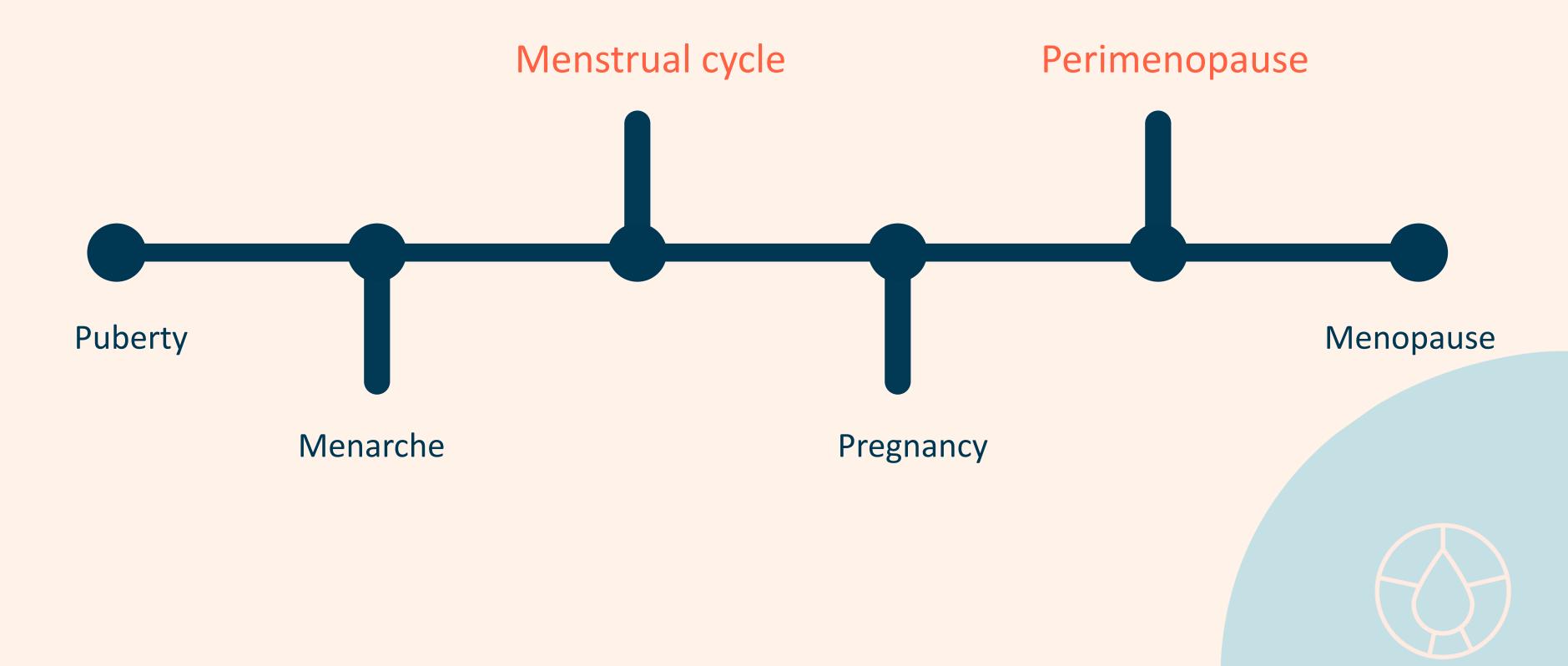
#### About me

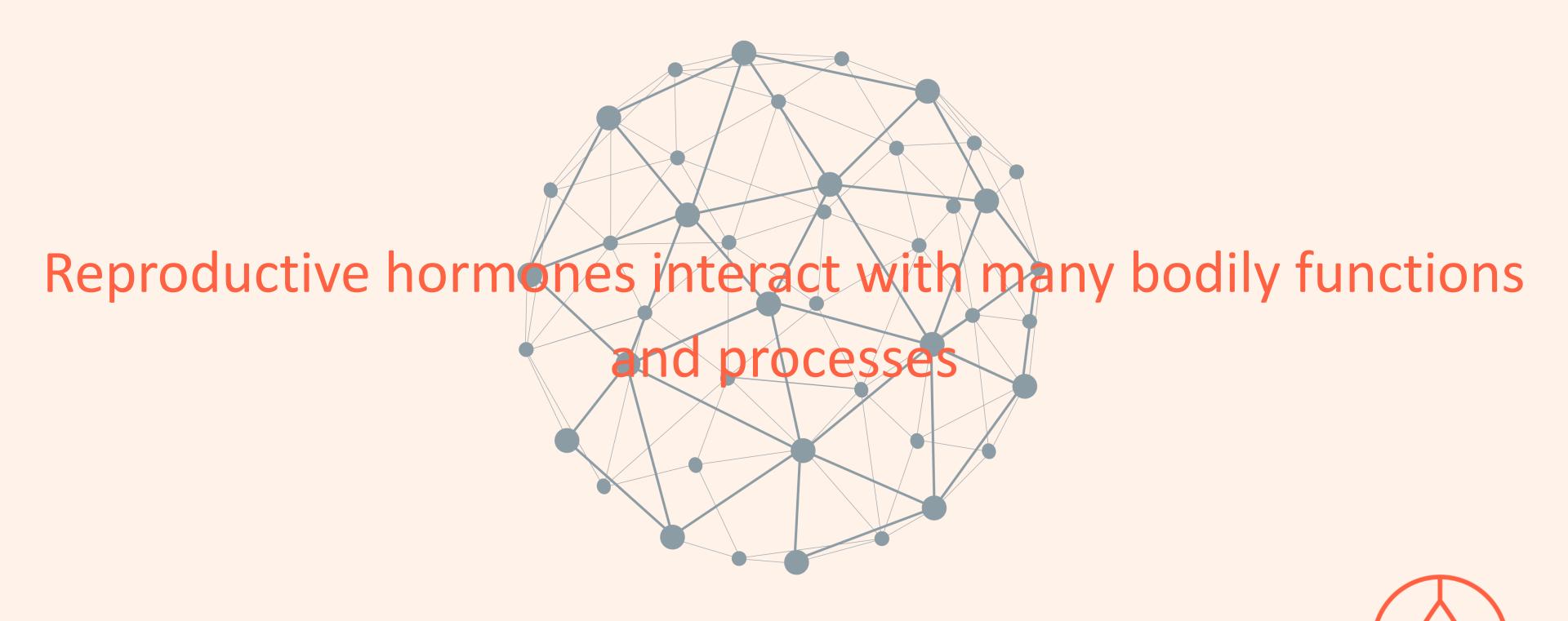
Research Associate Swansea University working with Sport Wales
Researching female hormones including the menstrual cycle and menopause, participation and performance in sport for the last 6 years
Arc'Teryx Ambassador
A keen climber!

**ARC'TERYX** 

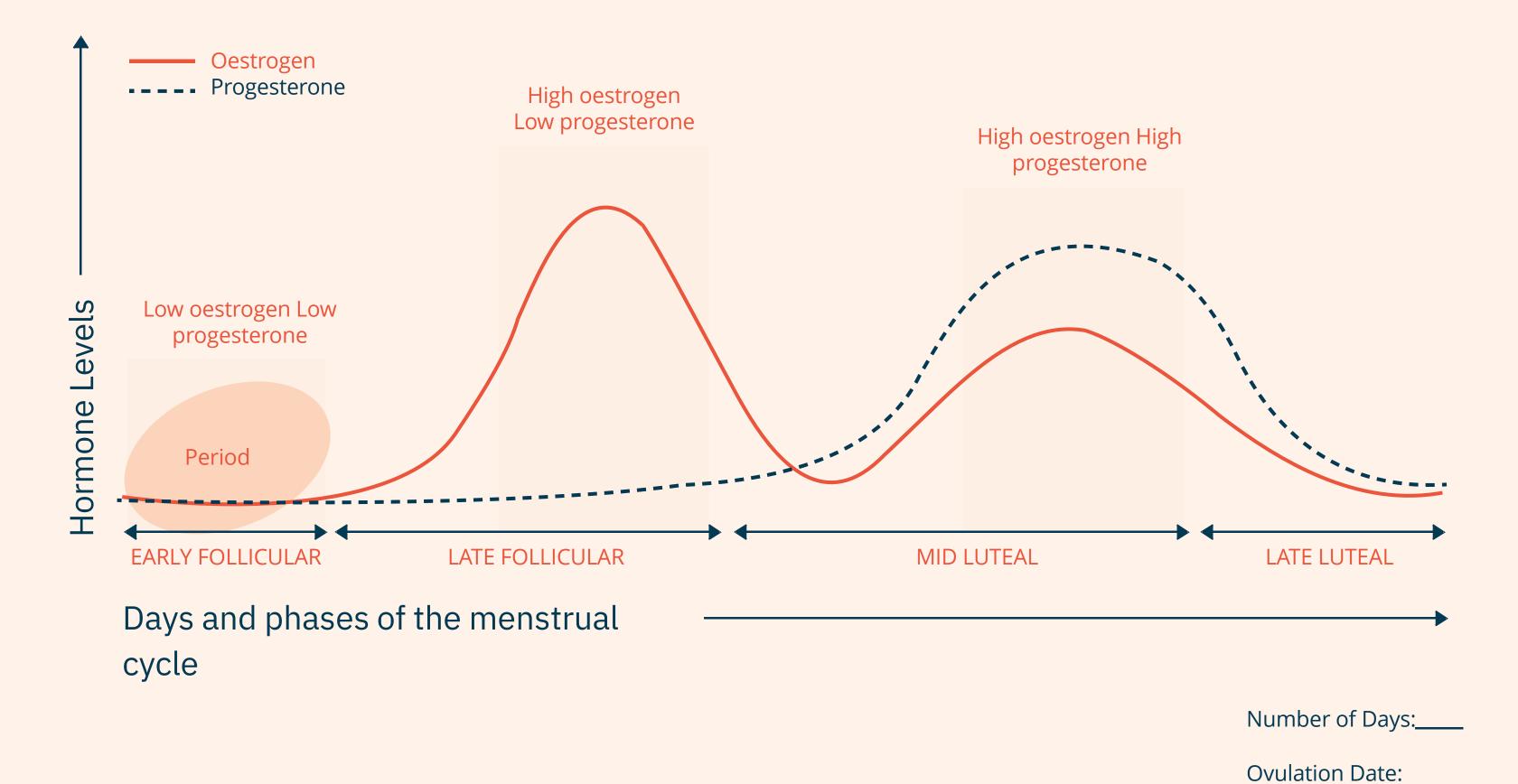


## Hormone Lifecycle

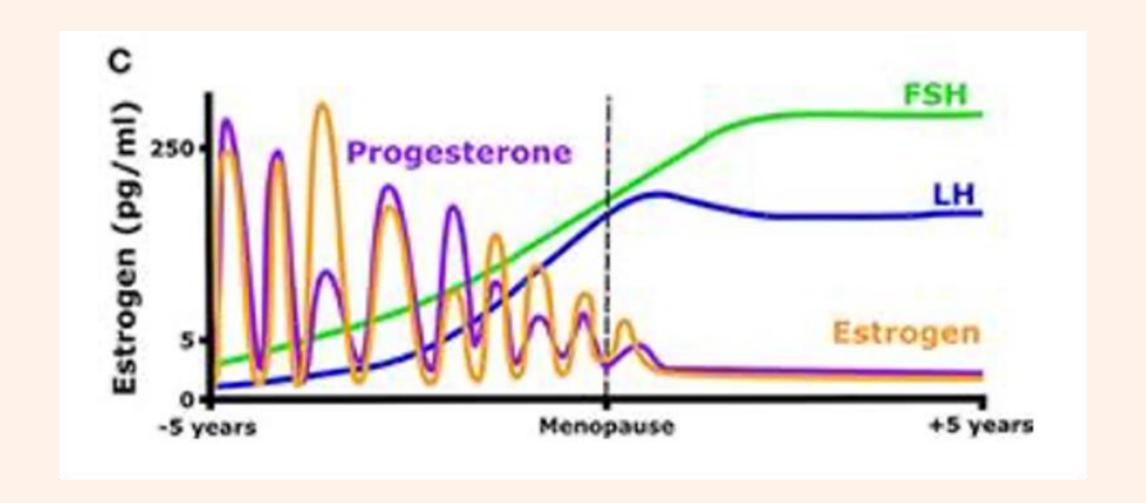




#### Changes in hormones across the menstrual cycle



#### Changes in hormones across the menopause





#### Menstrual Cycle



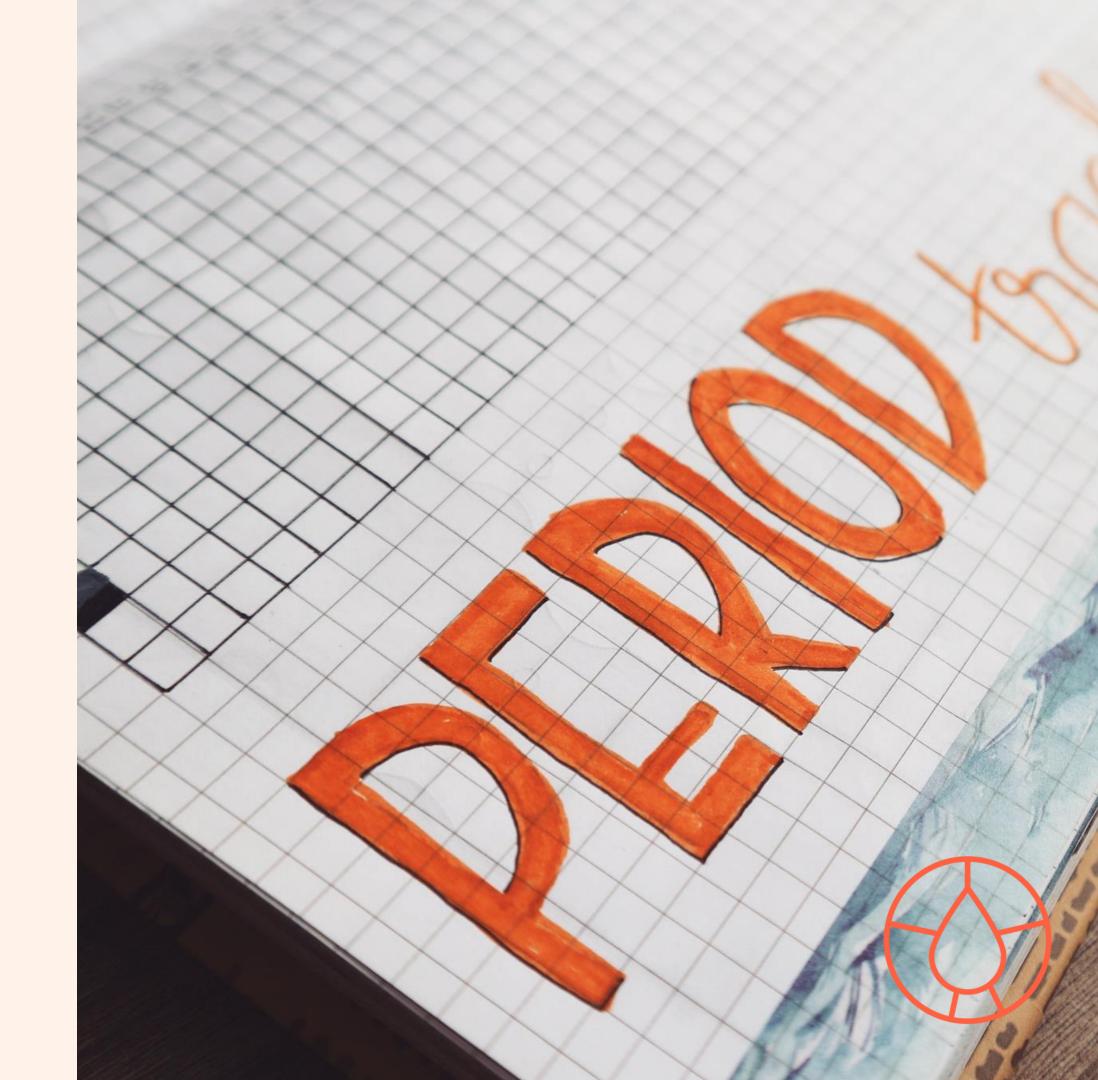
Biological process



Cycle length



Period





# Irregular or absent periods are not normal

Reproductive hormones play a role beyond reproduction





The menopause is when a female stops having periods. It marks the end of menstrual cycles



#### Menopause



Natural biological process



Perimenopause



Periods stop





Menstrual cycle and menopause symptoms...how many can you think of...?

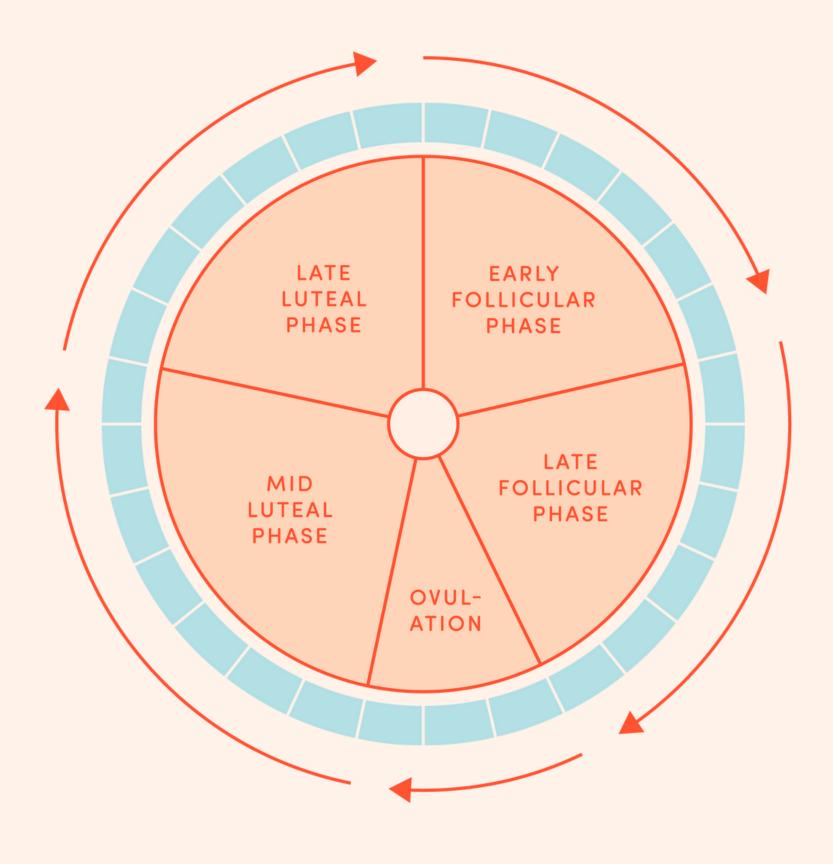


#### Menstrual cycle Symptoms

Abdominal pain	Headache	Heavy bleeding	Bloating	Dizziness
Fatigue/ tiredness	Backache	Bad skin	GI distrubance	Reduced recovery
Sick/Nausea	Weight changes	Irritable/ aggitated	Breast pain/ change size	Mood swings
Poor temp reg	Changes appetite/ Food cravings	Lethargy/ Changes energy level	Reduced motivation	Clumsiness/ reduced coordination
Trouble sleeping	III/cold symptoms	Poor core control	Worry/anxiety	Distracted/ emotional



#### Timings of symptoms



#### Menopause symptoms

Less frequent Shorter cycles Heavier Lighter periods (>25 days) periods bleeding Headaches/ Mid Sleep Sleep Weight gain migraines disturbance waking Increased Irritability Depression Mood swings cramps Sore, swollen, Hot Night sweats Brain fog flushes/flashes lumpy breasts Joint/muscle Reduced Fatigue Anxiety confidence pain

## Impact on sport and activity







time before my period impacts training and performance



I found it had a lot of effect on motivation and energy levels, or just being happy enough to go and climb, because I'd be so worn out





## STOP!

Although these symptoms are all super common, they should not be debilitating or stop anyone completing daily activities. If they do seek medical advice.?



#### Menstrual cycle management strategies



#### Menopause management strategies





#### Food is fuel...and recovery...and prevention...!

Include carbohydrate with meals and snacks

across the day

Carbohydrate within 30 minutes of finishing exercise

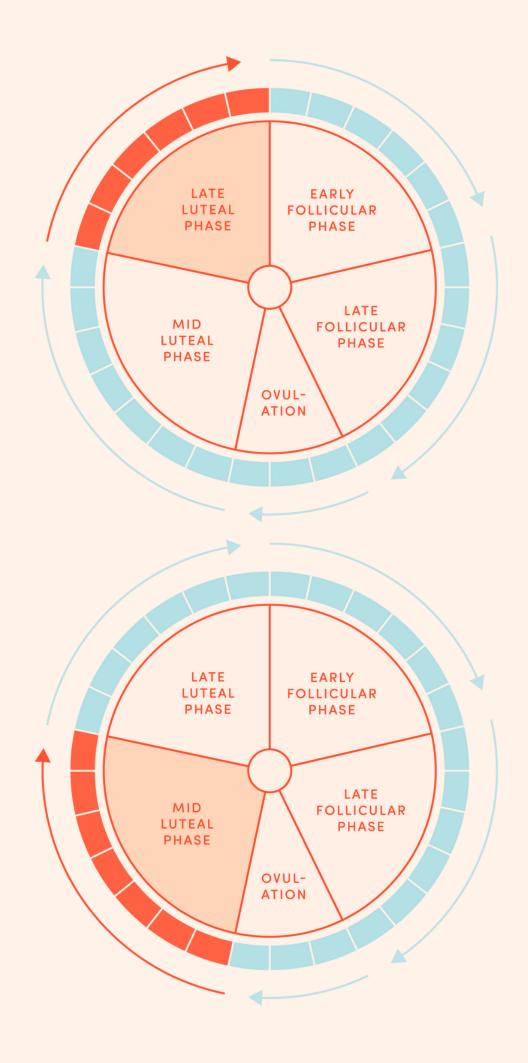
Carbohydrate containing meal 4 hours before

Carbohydrate containing snack 2 hours before



High intensity or long sessions include carbohydrate during

3-4 hours Before Training	1-2 hours Before Training	During Training	After Training
Carbohydrate within your meal	Carbohydrate snack to top up or if it's morning training then a smaller snack like this may be easier	High intensity >45mins or Low intensity >75mins you will need some quick releasing carbohydrate	Carbohydrate within 30minutes of finishing
Pasta, Rice, Bread, Potatoes, Couscous, Cereal, Oats, Crackers	Cereal bar, Banana Malt Loaf, Crumpets, Jam Sandwich, Scotch pancakes	Gels, Sweets, Malt loaf, Banana, Energy drinks	Milkshake, Cereal, Yogurt & fruit, Sandwich, Main meal



#### Recovery

Progesterone can cause protein to be broken down which may slow down recovery and reduce training adaptations.

To prevent this, you can aim for 20g of protein every 3-4 hours (simply speaking: include protein with every meal and snack).

You can also try having a milky drink before bed on days of intense exercise. This will support overnight muscle recovery

#### 10g Protein

½ pint of milkHandful of nuts2 babybel1 small yogurtNut barHummus x<br/>1tbspCottage<br/>cheese x 1bspPeanut butter x<br/>2tbspsCheddar<br/>cheese x 30gQuorn mince x<br/>2 tbsps

#### 20g Protein



#### Actions

What 1 action are you going to take after today?



