

MENSTRUAL CYCLE & HORMONAL CONTRACEPTION:



University of
Southern
Queensland

Knowledge questionnaire

This questionnaire is designed to understand your knowledge surrounding the menstrual cycle and hormonal contraception, not your personal experience. Please answer all questions honestly and without assistance. We do acknowledge that the content contained in this questionnaire may be sensitive in nature. If you experience any feelings of distress, there are support options available (please see final page).

Demographic questions:

What is your date of birth? _____

What is your gender? _____

What is your nationality? (e.g., Australian) _____

What is your ethnicity? (e.g., Asian, Caucasian) _____

What is the highest level of education you have completed?

- Primary School
- High School
- Diploma
- Bachelor
- Honours / Masters
- Doctorate

Please list any diplomas or university degrees that you have completed, or are currently undertaking:

Have you completed any courses or training regarding the female athlete, the female reproductive system, the menstrual cycle, or hormonal contraception? Yes No

If yes, please list: _____

Have you ever used hormonal contraception (e.g., oral contraceptive pills)? Yes No N/A

If yes, please specify the type(s) and the brand(s) you have used. If you are unsure, write "I don't know":

Sport-specific demographic questions – Athletes to complete

What sport(s) do you compete in? _____

If you play multiple sports, what is your primary sport? _____

Please select the highest level that you are currently competing at:

- regional/state
- national
- international
- other (please specify): _____

What is the total number of hours per week that you typically participate in exercise, including sport-specific training, strength and conditioning, and cross-training?

- 2 - 4 hours 5 - 7 hours 8 - 10 hours 11 - 13 hours More than 13 hours

Sport-specific demographic questions – Coaches/performance support staff to complete

What sport(s) do you work with? _____

If you work with athletes from multiple sports, what is your primary sport? _____

What is your primary position/role? _____

Please select the highest level athlete that you currently work with:

- regional/state
- national
- international
- other (please specify): _____

Please select the answer that best describes the athletes you work with:

- All female Predominantly female Mixed Predominantly male

How many years have you worked in high performance sport? _____

All knowledge questions have one answer, unless otherwise specified

Menstrual cycle knowledge:

1. At what age do most people begin to menstruate (i.e., get their first period)?

- 7-10 years old
- 15-18 years old
- 11-14 years old
- I don't know

2. At what age do most people stop regularly menstruating (i.e., go through menopause)?
- 45-55 years old
 - 35-45 years old
 - 55-65 years old
 - I don't know
3. For someone with a regular menstrual cycle, the length of one complete menstrual cycle (i.e., the number of days from the first day of one period to the first day of the next period) is:
- 6-20 days
 - 36-44 days
 - 21-35 days
 - I don't know
4. What is the typical duration of menstruation (i.e., one period)?
- 7-10 days
 - 4-7 days
 - 1-2 days
 - I don't know
5. The normal amount of menstrual fluid (blood) to lose during menstruation (i.e., one period) is:
- 10-20 mL (2-4 teaspoons)
 - 30-60 mL (2-4 tablespoons)
 - 100-200 mL (5-10 tablespoons)
 - I don't know
6. How many days before starting menstruation (i.e., the first day of a period) does ovulation typically occur?
- 14 days
 - 7 days
 - 1 day
 - I don't know
7. Name the female sex hormones produced by the ovaries that fluctuate throughout the menstrual cycle:
-
8. Name the distinct phases that occur within one typical menstrual cycle (i.e., from the first day of one period to the first day of the next period):
-

Are the following statements true or false?

9.	Changes in hormone levels during the menstrual cycle prepare the body for a possible pregnancy	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
10.	Menstruation (a period) is the internal uterus lining being released through the vagina	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
11.	It is normal for menstrual cycles to be irregular for a few years after menstruation starts	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
12.	It is considered healthy for athletes to experience absent menstruation (i.e., 'lose their period') during periods of hard training	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
13.	Persistent absence of menstruation (i.e., 'missing periods') can increase the risk of poor bone health	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
14.	Debilitating pain that interferes with day-to-day activities prior to or during menstruation is a feature of a healthy menstrual cycle	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know

15. Some people experience a range of physical and emotional symptoms in the 1-2 weeks before menstruation (e.g., fatigue, breast tenderness, food cravings, irritability). This phenomenon is known as:

- menorrhagia
- oligomenorrhea
- pre-menstrual syndrome (PMS)
- I don't know

16. If someone has infrequent menstruation, excess male hormone (androgen) levels, and follicles on the ovaries, they may be diagnosed with:

- polycystic ovarian syndrome (PCOS)
- pre-menstrual syndrome (PMS)
- dysmenorrhea
- I don't know

17. What is amenorrhea?

- a condition of absent menstruation (i.e., absent periods)
- a condition of infrequent menstruation (i.e., infrequent periods)
- a condition of painful menstruation (i.e., painful periods)
- I don't know

18. Which of the following statements regarding irregular/absent menstruation is most correct?
- an athlete should seek medical advice if they miss 3 or more periods
 - an athlete should seek medical advice if they miss 12 or more periods
 - irregular/absent menstruation is normal and does not require medical advice
 - I don't know
19. If someone has tissue similar to the lining of the uterus growing outside of the uterus, they may be diagnosed with:
- polycystic ovarian syndrome (PCOS)
 - secondary amenorrhea
 - endometriosis
 - I don't know
20. If someone has extreme, abnormal mood shifts (e.g., sadness, anxiety) that interfere with day-to-day activities in the lead up to menstruation, they may be diagnosed with:
- menorrhagia
 - pre-menstrual dysphoric disorder (PMDD)
 - endometriosis
 - I don't know

True or false - the following factors can be associated with irregular/absent menstruation (i.e., 'missing periods'):

21.	Insufficient energy intake (e.g., 'under-fuelling')	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
22.	Low body weight/low body fat percentage	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
23.	Significant changes in body weight	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
24.	Very high training loads	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
25.	Trauma/mental distress	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
26.	Certain illnesses	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
27.	Certain menstrual disorders	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
28.	Pregnancy	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
29.	Certain medications	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know

Hormonal contraception knowledge:

30. What happens to the female sex hormones produced by the ovaries when someone uses hormonal contraception (e.g., 'the pill')?
- they increase
 - they decrease
 - they stay the same
 - I don't know
31. Which of the following is not a way in which hormonal contraceptives like 'the pill' work to prevent pregnancy?
- preventing the ovaries releasing eggs
 - boosting an individual's immunity so that their antibodies attack sperm
 - changing the lining of the uterus so a fertilised egg is less likely to implant and survive
 - I don't know
32. One type of oral contraception is called the combined pill. This form of contraception contains which hormones?
- progesterone and testosterone
 - oestrogen and progesterone
 - testosterone and oestrogen
 - I don't know
33. Another type of oral contraception is called the mini pill. This form of contraception contains which hormone?
- progesterone
 - oestrogen
 - testosterone
 - I don't know
34. What may happen when the inactive oral contraceptive pills (i.e., the placebo 'sugar pills') are skipped and the active, hormone-containing pills are continuously taken in their place?
- withdrawal bleeding stops
 - permanent infertility occurs
 - the pill as a contraceptive becomes ineffective
 - I don't know
35. Which of the following statements about hormonal contraception is not true?
- all readily available forms of hormonal contraception are more than 99% effective at preventing pregnancy if used consistently and correctly
 - hormonal contraceptives can cause various side effects in different individuals
 - hormonal contraceptives provide protection against sexually transmitted infections (STIs)
 - I don't know

36. Which of the following are hormonal contraceptive options? You may select more than one answer:

- Condom
- Contraceptive injection (e.g., Depo-Provera™)
- Copper Intra Uterine Devices (IUDs)
- Diaphragm
- Vaginal ring (e.g., NuvaRing®)
- I don't know

The following questions are True/False questions regarding Intra Uterine Devices (IUDs) (e.g., Mirena®) and contraceptive implants (e.g., Implanon NXT)

37.	An IUD can prevent pregnancy for 3–10 years	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
38.	An IUD is inserted into the uterus	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
39.	An IUD cannot be removed early, even if someone changes their mind	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
40.	An IUD can only be used in people who have previously given birth	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
41.	An implant can prevent pregnancy for at least 3 years	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
42.	An implant is inserted under the skin in the upper arm	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
43.	An IUD or implant must be inserted and removed by a medical professional	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
44.	IUDs and implants are more effective at preventing pregnancy than oral contraceptive pills as they do not require daily administration	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
45.	IUDs and implants affect fertility in the long term (i.e., after removal)	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
46.	IUDs (e.g., Mirena®) and implants (e.g., Implanon NXT) are <u>hormonal</u> forms of contraception	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know

For further information regarding the menstrual cycle/hormonal contraception, visit:

- Australian Institute of Sport (AIS) Female Performance and Health Initiative: <https://www.ais.gov.au/fphi>
- Understanding your menstrual cycle: https://www.ais.gov.au/fphi/female-athlete-resources#understanding_your_menstrual_cycle
- Hormonal contraception: What are the options? https://www.ais.gov.au/fphi/female-athlete-resources#hormonal_contraception

For mental health support:

- Beyond Blue: Anxiety, depression and suicide prevention can be accessed via phone call, online chat, emailing or access to online support groups <https://www.beyondblue.org.au/>
- Lifeline crisis support: can be accessed via calling, online chat, or text <https://www.lifeline.org.au/>

MENSTRUAL CYCLE & HORMONAL CONTRACEPTION:

Knowledge questionnaire

User guide: This questionnaire provides a total menstrual cycle and hormonal contraception knowledge score (maximum score = 49) derived from four key knowledge domains: 1) Normal menstrual cycle function, 2) Menstrual cycle dysfunction, 3) Oral contraceptive pills, and 4) Other hormonal contraceptives. Scores can be used to assess baseline knowledge, identify topic-specific knowledge gaps, and evaluate changes in knowledge pre- and post-education. Information on how to score each knowledge domain and calculate respondents' overall knowledge score are provided in the black boxes.

Menstrual cycle knowledge

Scoring information - Normal menstrual cycle function:

Questions 1-11 make up the '*Normal menstrual cycle function*' knowledge domain. The maximum score for this domain is 13. Participants receive 1 point for each correct response. Incorrect or 'I don't know' responses score a 0. Questions 7 and 8 are worth 2 points if answered correctly (or 1 point if answered partially correctly); all other questions are worth 1 point if correct. Correct responses indicated in bold.

1. At what age do most people begin to menstruate (i.e., get their first period)?
 - 7-10 years old
 - 15-18 years old
 - 11-14 years old**
 - I don't know
2. At what age do most people stop regularly menstruating (i.e., go through menopause)?
 - 45-55 years old**
 - 35-45 years old
 - 55-65 years old
 - I don't know
3. For someone with a regular menstrual cycle, the length of one complete menstrual cycle (i.e., the number of days from the first day of one period to the first day of the next period) is:
 - 6-20 days
 - 36-44 days
 - 21-35 days**
 - I don't know

4. What is the typical duration of menstruation (i.e., one period)?
- 7-10 days
 - 4-7 days**
 - 1-2 days
 - I don't know
5. The normal amount of menstrual fluid (blood) to lose during menstruation (i.e., one period) is:
- 10-20 mL (2-4 teaspoons)
 - 30-60 mL (2-4 tablespoons)**
 - 100-200 mL (5-10 tablespoons)
 - I don't know
6. How many days before starting menstruation (i.e., the first day of a period) does ovulation typically occur?
- 14 days**
 - 7 days
 - 1 day
 - I don't know
7. Name the female sex hormones produced by the ovaries that fluctuate throughout the menstrual cycle:

Oestrogen (1 point), progesterone (1 point)

8. Name the distinct phases that occur within one typical menstrual cycle (i.e., from the first day of one period to the first day of the next period):

Follicular (1 point), luteal (1 point)

Are the following statements true or false?

9.	Changes in hormone levels during the menstrual cycle prepare the body for a possible pregnancy	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
10.	Menstruation (a period) is the internal uterus lining being released through the vagina	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
11.	It is normal for menstrual cycles to be irregular for a few years after menstruation starts	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know

Scoring information - Menstrual cycle dysfunction:

Questions 12-29 make up the 'Menstrual cycle dysfunction' knowledge domain. The maximum score for this domain is 18. Participants receive 1 point for each correct response. Incorrect or 'I don't know' responses score a 0. All questions in this domain are worth 1 point if correct. Correct responses indicated in bold.

12.	It is considered healthy for athletes to experience absent menstruation (i.e., 'lose their period') during periods of hard training	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
13.	Persistent absence of menstruation (i.e., 'missing periods') can increase the risk of poor bone health	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
14.	Debilitating pain that interferes with day-to-day activities prior to or during menstruation is a feature of a healthy menstrual cycle	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know

15. Some people experience a range of physical and emotional symptoms in the 1-2 weeks before menstruation (e.g., fatigue, breast tenderness, food cravings, irritability). This phenomenon is known as:
- menorrhagia
 - oligomenorrhea
 - pre-menstrual syndrome (PMS)**
 - I don't know
16. If someone has infrequent menstruation, excess male hormone (androgen) levels, and follicles on the ovaries, they may be diagnosed with:
- polycystic ovarian syndrome (PCOS)**
 - pre-menstrual syndrome (PMS)
 - dysmenorrhea
 - I don't know
17. What is amenorrhea?
- a condition of absent menstruation (i.e., absent periods)**
 - a condition of infrequent menstruation (i.e., infrequent periods)
 - a condition of painful menstruation (i.e., painful periods)
 - I don't know
18. Which of the following statements regarding irregular/absent menstruation is most correct?
- an athlete should seek medical advice if they miss 3 or more periods**
 - an athlete should seek medical advice if they miss 12 or more periods
 - irregular/absent menstruation is normal and does not require medical advice
 - I don't know

19. If someone has tissue similar to the lining of the uterus growing outside of the uterus, they may be diagnosed with:

- polycystic ovarian syndrome (PCOS)
- secondary amenorrhea
- endometriosis**
- I don't know

20. If someone has extreme, abnormal mood shifts (e.g., sadness, anxiety) that interfere with day-to-day activities in the lead up to menstruation, they may be diagnosed with:

- menorrhagia
- pre-menstrual dysphoric disorder (PMDD)**
- endometriosis
- I don't know

True or false - the following factors can be associated with irregular/absent menstruation (i.e., 'missing periods'):

21.	Insufficient energy intake (e.g., 'under-fuelling')	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
22.	Low body weight/low body fat percentage	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
23.	Significant changes in body weight	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
24.	Very high training loads	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
25.	Trauma/mental distress	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
26.	Certain illnesses	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
27.	Certain menstrual disorders	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
28.	Pregnancy	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
29.	Certain medications	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know

Hormonal contraception knowledge:

Scoring information – Oral contraceptive pills:

Questions 30-34 make up the 'Oral contraceptive pills' knowledge domain. The maximum score for this domain is 5. Participants receive 1 point for each correct response. Incorrect or 'I don't know' responses score a 0. All questions in this domain are worth 1 point if correct. Correct responses indicated in bold.

30. What happens to the female sex hormones produced by the ovaries when someone uses hormonal contraception (e.g., 'the pill')?
- they increase
 - they decrease**
 - they stay the same
 - I don't know
31. Which of the following is not a way in which hormonal contraceptives like 'the pill' work to prevent pregnancy?
- preventing the ovaries releasing eggs
 - boosting an individual's immunity so that their antibodies attack sperm**
 - changing the lining of the uterus so a fertilised egg is less likely to implant and survive
 - I don't know
32. One type of oral contraception is called the combined pill. This form of contraception contains which hormones?
- progesterone and testosterone
 - oestrogen and progesterone**
 - testosterone and oestrogen
 - I don't know
33. Another type of oral contraception is called the mini pill. This form of contraception contains which hormone?
- progesterone**
 - oestrogen
 - testosterone
 - I don't know
34. What may happen when the inactive oral contraceptive pills (i.e., the placebo 'sugar pills') are skipped and the active, hormone-containing pills are continuously taken in their place?
- withdrawal bleeding stops**
 - permanent infertility occurs
 - the pill as a contraceptive becomes ineffective
 - I don't know

Scoring information – Other hormonal contraceptives:

Questions 35-46 make up the 'Other hormonal contraceptives' knowledge domain. The maximum score for this domain is 13. Participants receive 1 point for each correct response. Question 36 is worth 2 points if answered correctly, all other questions are worth 1 point only. If incorrect options are selected for question 36 in addition to the correct options, score this question as a 0. All other incorrect or 'I don't know responses' score a 0. Correct responses indicated in bold.

35. Which of the following statements about hormonal contraception is not true?

- all readily available forms of hormonal contraception are more than 99% effective at preventing pregnancy if used consistently and correctly
- hormonal contraceptives can cause various side effects in different individuals
- hormonal contraceptives provide protection against sexually transmitted infections (STIs)**
- I don't know

36. Which of the following are hormonal contraceptive options? You may select more than one answer:

- Condom
- Contraceptive injection (e.g., Depo-Provera™)**
- Copper Intra Uterine Devices (IUDs)
- Diaphragm
- Vaginal ring (e.g., NuvaRing®)**
- I don't know

The following questions are True/False questions regarding Intra Uterine Devices (IUDs) (e.g., Mirena®) and contraceptive implants (e.g., Implanon NXT)

37.	An IUD can prevent pregnancy for 3–10 years	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
38.	An IUD is inserted into the uterus	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
39.	An IUD cannot be removed early, even if someone changes their mind	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
40.	An IUD can only be used in people who have previously given birth	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
41.	An implant can prevent pregnancy for at least 3 years	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
42.	An implant is inserted under the skin in the upper arm	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
43.	An IUD or implant must be inserted and removed by a medical professional	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
44.	IUDs and implants are more effective at preventing pregnancy than oral contraceptive pills as they do not require daily administration	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
45.	IUDs and implants affect fertility in the long term (i.e., after removal)	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know
46.	IUDs (e.g., Mirena®) and implants (e.g., Implanon NXT) are <u>hormonal</u> forms of contraception	<input type="checkbox"/> True <input type="checkbox"/> False <input type="checkbox"/> I don't know

Scoring information – Total knowledge score:

Add up the '*Total knowledge score*' by combining the scores for the four individual knowledge domains. The maximum score that can be achieved on the questionnaire is 49 marks.

The total knowledge score can be used as a descriptive indicator of the overall level of menstrual cycle and hormonal contraceptive knowledge. Individual knowledge domain scores can be used to provide descriptive information about where specific knowledge gaps are and which topic areas may require targeted education.

Therefore, the questionnaire can be used to: 1) assess baseline knowledge level (pre-education), 2) identify knowledge gaps to inform targeted education opportunities, and 3) assess the efficacy of education delivery through the comparison of pre-education and post-education knowledge scores.