

Reproduction Basics

A Lesson Plan from Rights, Respect, Responsibility: A K-12 Curriculum

Fostering respect and responsibility through age-appropriate sexuality education.

2012 NSES ALIGNMENT:

By the end of 8th grade, students will be able to:

PR.8.CC.1 – Define sexual intercourse and its relationship to human reproduction.

TARGET GRADE: Grade 7
Lesson 3

TIME: 50 Minutes

MATERIALS NEEDED:

- LCD projector and screen
- Desktop or Laptop computer with PowerPoint on it
- **PowerPoint: “Fertility and the Menstrual Cycle”**
- One set of the 28 day cards
- Two medium-sized bouncy balls (red, rubber balls typically used in PE class are perfect if you can borrow them or most dollar stores sell them)
- 5 copies of the sperm page
- One copy of the birth control page
- Human Reproduction Answer Key – one copy for teacher
- Human Reproduction Sample Definitions – one copy for teacher
- Three pieces of newsprint prepared as described
- Homework: “Reproduction Facts” – one per student
- Masking tape
- Flipchart markers – one per student
- Pencils in case students do not have their own

ADVANCE PREPARATION FOR LESSON:

- Make five copies of the sperm page.
- Prepare newsprint with the following headers, one per sheet:
 1. Sexual intercourse is when. . .
 2. A pregnancy can start when . . .
 3. A pregnancy can’t start when . . .
- Post the three pieces of newsprint in different places around the wall with enough room by each so that a small group of students can gather and write on them. Tape the bottom edge of each newsprint sheet up over its top, folding it in half, so that students cannot see what’s written on them until you are ready to do the activity.
- Print one set of the 28 day cards, of which there are 14 pages, so you need to cut them in half to have a full set of 28.
- You should be familiar with the functioning of the reproductive systems and human reproduction in order to lead the class activities and respond to students’ questions. A review can be found at <http://www.sexandu.ca/your-body/sexual-reproduction/>.

It is also important for you to be aware of your district and/or state policies governing the instruction of human reproduction.

LEARNING OBJECTIVES:

By the end of this lesson, students will be able to:

1. Describe the process of human reproduction by identifying the correct order of the steps involved with conception. [Knowledge]
2. Define sexual intercourse. [Knowledge]

A NOTE ABOUT LANGUAGE:

The terms “boy” and “girl” are used intentionally in this lesson to make it accessible for 7th grade students, who are more concrete learners than older students. While we use terms “male” and “female” when referring to particular anatomy (the “male” or “female” reproductive systems, for example), it is important to remember that someone can have a penis even if they don’t identify as a boy or a vulva even if they don’t identify as a girl. The use of more inclusive terms related to gender identity and biological sex are introduced at subsequent grade levels.

Reproduction Basics

A Lesson Plan from Rights, Respect, Responsibility: A K-12 Curriculum

PROCEDURE:

STEP 1: Say, “Today we are going to discuss human reproduction. This is a topic that some of you might know a lot about and some of you might be learning about for the first time. Let’s start by seeing what the class already knows about the topic of reproduction.”

Point out the three pieces of newsprint you have hung around the room. Walk to the closest piece of newsprint and remove the tape revealing what is written on it. Explain to students that each piece of newsprint has a different sentence starter. They are to walk around and write down the first thing that comes to mind for each page. Explain that you are just looking to see what students have heard about these topics and that you expect all of their responses to be appropriate for school. Distribute the flipchart markers and tell them to be sure to write small enough to allow room for others to contribute as well. Invite students to stand up and move around to each newsprint, writing their responses. Tell students about five minutes to get to each newsprint. Once they are done, tell them to return to their seats. Ask three students to help by each bringing one piece of newsprint to post at the front of the room so the whole class can see it. (8 minutes)

STEP 2: Starting with the first newsprint, read the answers students have given, clarifying any misconceptions and confirming accurate information. If students have not written it, make sure to say, “Vaginal sex, sometimes called sexual intercourse, is when an erect penis is inserted into a lubricated vagina. If this results in ejaculation, semen is released from the penis into the vagina. Semen contains hundreds of millions of sperm, so if an egg is present, a sperm and that egg can unite. That’s called ‘fertilization.’ The fertilized egg then keeps going and, if it implants into the wall of the uterus, it becomes a pregnancy. If it doesn’t, it results in a menstrual period. We’ll talk more about this in a minute.” Continue in this manner with the other two pieces of newsprint making sure to provide the appropriate information and/or definitions as needed. (10 minutes)

Note to the Teacher: *If you need some help providing age-appropriate definitions, please use the Human Reproduction Sample Definitions at the end of this lesson.*

STEP 3: Next say, “Now that you have some general definitions for key terms related to human reproduction, I want to make sure you understand the steps involved from start to finish. Start the PowerPoint “Fertility and the Menstrual Cycle” and review each phase of the menstrual cycle by saying the following:

Slide 1 – “This is a female’s uterus. You can see that it’s in the abdomen next to the stomach. The uterus is where menstruation occurs.”

Slide 2 – “The average menstrual cycle is generally about 28 days but really varies from person to person, sometimes being much shorter or longer than 28 days. Someone can get their first period anywhere between nine and fifteen years old and generally it will take the body a couple of years to figure out what will be a typical cycle.”

Slide 3 – “Each month an ovary releases an egg, also called an ovum, into the fallopian tube. The trip down the fallopian tube usually takes a couple days.”

Slide 4 – “While the ovum is on this journey, if it unites with sperm, the egg becomes fertilized and may implant in the lining of the uterus. Once a fertilized egg implants inside the uterus, a pregnancy has begun. If the pregnancy continues, nine months

Reproduction Basics

A Lesson Plan from Rights, Respect, Responsibility: A K-12 Curriculum

later a baby will be born.”

Slide 5 – “If there are no sperm in the fallopian tube while the ovum is there, then the ovum dissolves and is reabsorbed by the body. The ovum is only able to unite with a sperm for a couple of days before it dissolves.”

Slide 6 – “In order to prepare for a potential pregnancy, the lining of the uterus grows each month to create a good environment for a potential fetus.”

Slide 7 – “If the egg does not unite with a sperm, hormones tell the body to prepare for menstruation, also called having a period.”

Slide 8 – “Menstruation is when the body rids itself of the extra lining inside of the uterus because there was no fertilized ovum. About two tablespoons of blood and some tissue slowly leave the vagina during a menstrual period.”
(10 minutes)

STEP 4: Say, “Since the average menstrual cycle is 28 days, I have 28 cards and each one represents one day of the cycle. I am going to hand out a card to each of you. Once you have your card, please tape them to the board in the correct order. Then we will look at the menstrual cycle again, this time starting with menstruation as Day 1.” Distribute one card to each student and have them use the masking tape to post them on the chalk or white board.

Note to the Teacher: *If you have more than 28 students in your class, have students pair up to work on one card together. If you have less than 28 students, give a few students two cards to work on.* (5 minutes)

STEP 5: Say, “Now we can see an average 28 day menstrual cycle with Day 1 being the first day of her period. Next I’d like to show you when a person is most likely to become pregnant if sperm and an egg unite. Each of these two bouncy balls will represent one day when the egg is in the fallopian tube and able to unite with a sperm.” Ask for two volunteers and give each one a bouncy ball. Have one student stand under Day 14 and the other student stand under Day 15. Say, “Now whenever the egg is traveling through the fallopian tube pregnancy can happen if there are sperm present. Remember from the PowerPoint that the egg or ovum is only alive for about two days. So these two bouncy balls will represent when the egg is traveling and able to unite with a sperm.” (5 minutes)

STEP 6: Next, ask for five volunteers and give each one copy of the sperm page and say, “Sperm can live inside another person’s body for up to five days. So let’s see what happens if there is sperm in the uterus during different points of the menstrual cycle.” Have each student with a sperm page stand under Days 24- 28. Say, “You can see that sperm in the body during this time is not as likely to start a pregnancy because it’s less likely there is an egg around.”

Next, have the people holding the five sperm pages move to stand under Days 11 – 15. Say, “You can see how if there is sperm present either BEFORE or DURING the same time when the egg – the bouncy balls in our case – are present, that is the time when a pregnancy is most likely to happen.” Lastly, ask for one other volunteer and give them the birth control page. Ask them to stand between the students holding the bouncy balls and the students with the sperm card to physically block the two from meeting. Ask students, “What is the birth control doing?” Take some responses and make sure to tell students the following,

Reproduction Basics

*A Lesson Plan from Rights, Respect,
Responsibility: A K-12 Curriculum*

“Birth control, if used correctly and consistently, prevents the sperm and egg from uniting by either blocking the sperm or preventing an egg from leaving the ovary in addition to other ways.” (7 minutes)

STEP 7: Have the volunteers return the bouncy balls, birth control and sperm pages to you and return to their seats. End by asking, “What does this tell you about when pregnancy is most likely to happen?” Take a few responses and clarify any lingering misconceptions. End the lesson by saying, “Since this is just a typical menstrual cycle and we know that everyone is unique, if someone chooses to have vaginal sex but does not want to become pregnant/get their partner pregnant, it is most effective to either postpone vaginal sex or to use an effective form of birth control consistently and correctly.” Distribute and explain the homework. (5 minutes)

RECOMMENDED ASSESSMENT OF LEARNING OBJECTIVES AT CONCLUSION OF LESSON:

The card line up activity will meet the first learning objective while the stem sentence activity and discussion will meet the second learning objective.

HOMEWORK:

The homework is a short quiz intended for students to complete with a parent/caregiver in order to facilitate a conversation about reproduction.

HOMEWORK: Reproduction Facts

Name: _____ Date: _____

Directions: With a parent/caregiver, watch the three minute Pregnancy and Reproduction Explained video from Amaze. Then together write three facts you learned about how pregnancy occurs.

Amaze Pregnancy and Reproduction Explained Video –

<https://www.youtube.com/watch?v=OejdOS4lqeE>

1. _____

2. _____

3. _____

Teacher Resource: Human Reproduction Sample Definitions

The following are key terms for the explanation of human reproduction and a sample definition appropriate for use with seventh graders. It is important to review these definitions prior to teaching the lesson and with your supervisor to make sure they align with your school district and/or state policy governing instruction.

Please note this is for your reference only and should not be distributed to your students.

Vaginal Sex (sometimes called sexual intercourse)

Vaginal sex, sometimes called sexual intercourse, is when an erect penis is inserted into a lubricated vagina. If this results in ejaculation, semen is released from the penis. Semen contains hundreds of millions of sperm, one of which is needed to cause a pregnancy. If the couple is not using a contraceptive method, like condoms or the pill, the sperm in the semen can join with an egg, if one is present. If it implants in a uterus, it creates a pregnancy.

Conception

The beginning of a pregnancy. A sperm and egg must first join and implant into the lining of the uterus to result in a pregnancy. A fertilized egg cannot survive without implantation.

Human Reproduction

Human reproduction is a cycle in which a sperm and egg join and then implant into the lining of the uterus. After approximately nine months of growth, a baby is born.

Implantation

The process by which a fertilized egg attaches itself to the lining of the uterus. Once an egg is fertilized it doesn't always implant, but may leave the body with menstrual blood and tissue.

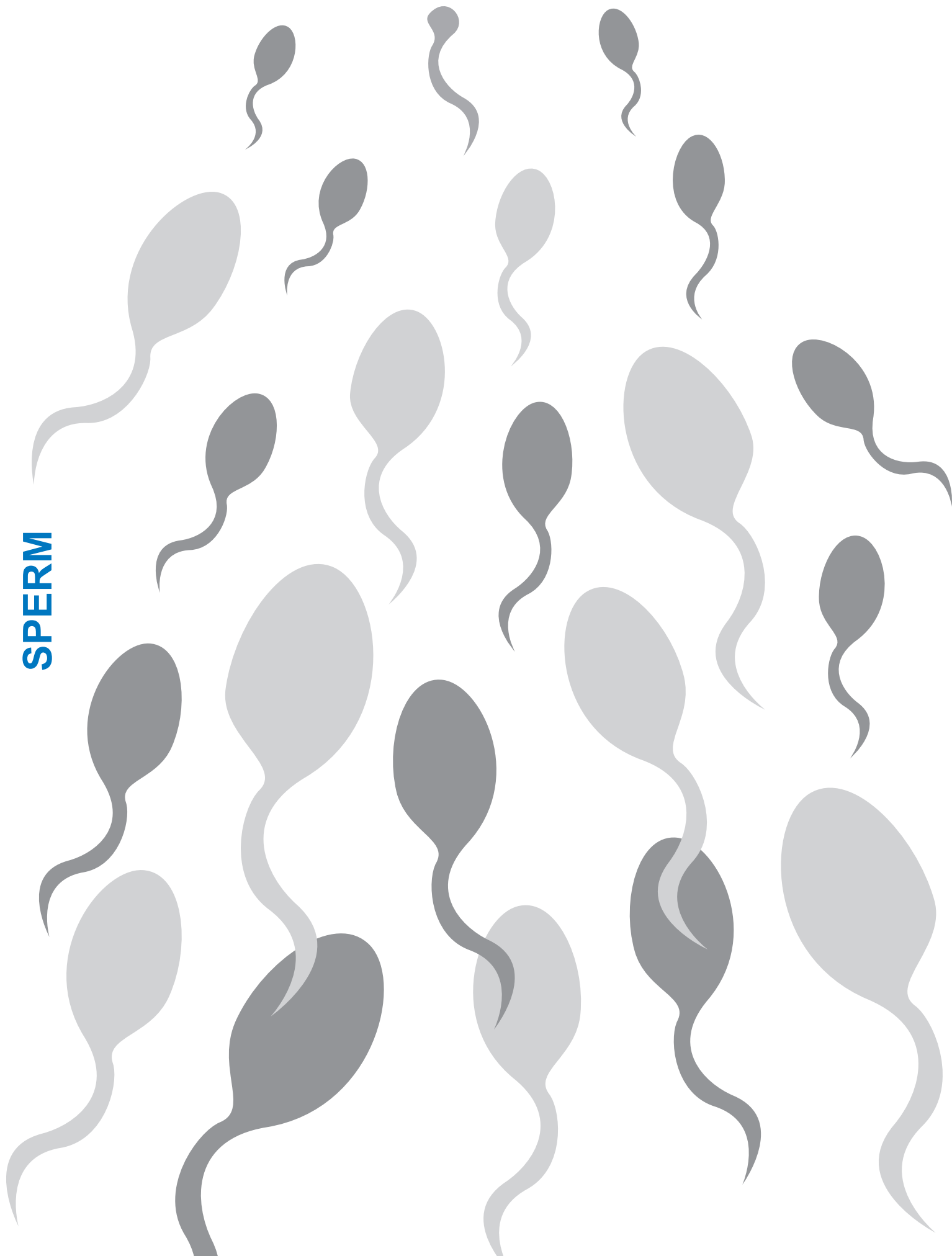
Fetus

The medically accurate name for the developing pregnancy prior to birth.

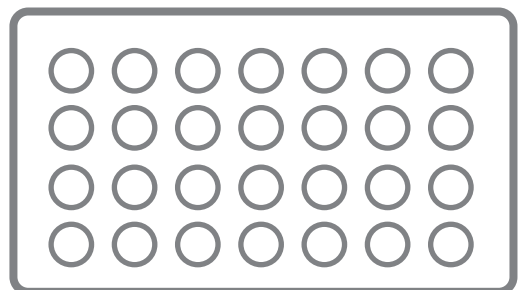
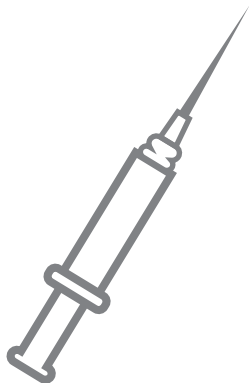
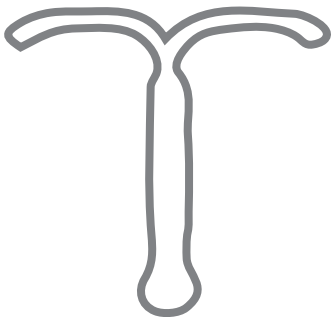
Pregnancy

Once a fertilized egg successfully implants in the lining of the uterus, a pregnancy has begun. Typically, a pregnancy lasts for 40 weeks but can terminate for many reasons including spontaneously (called a miscarriage) or by choice or medical necessity (called an abortion).

SPERM

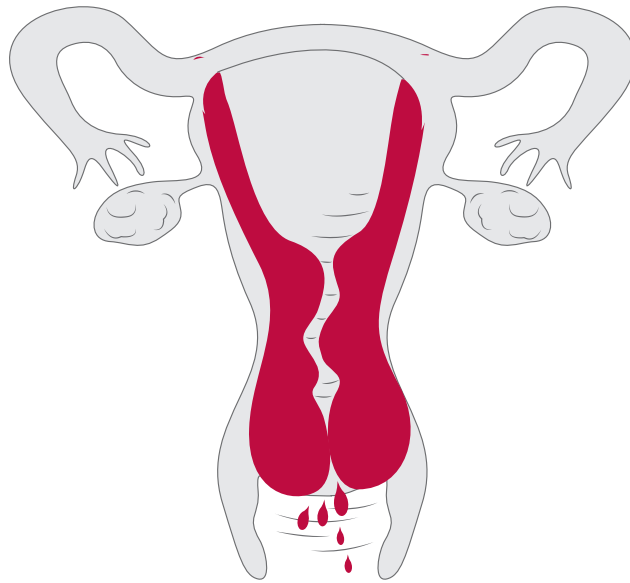


BIRTH CONTROL



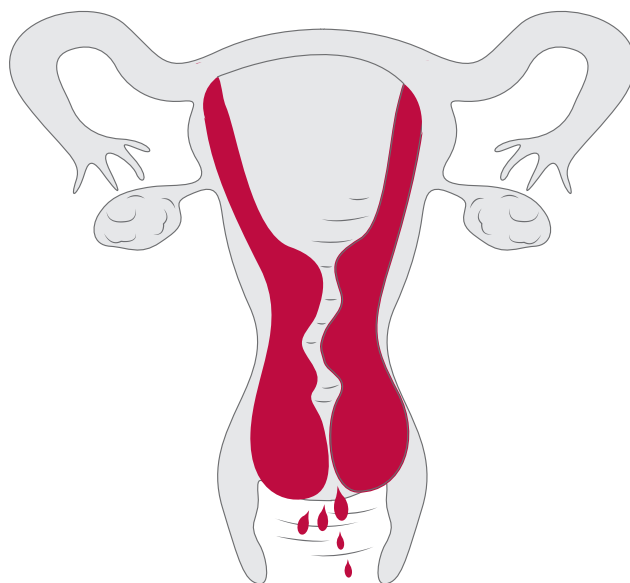
1

Menstrual period begins



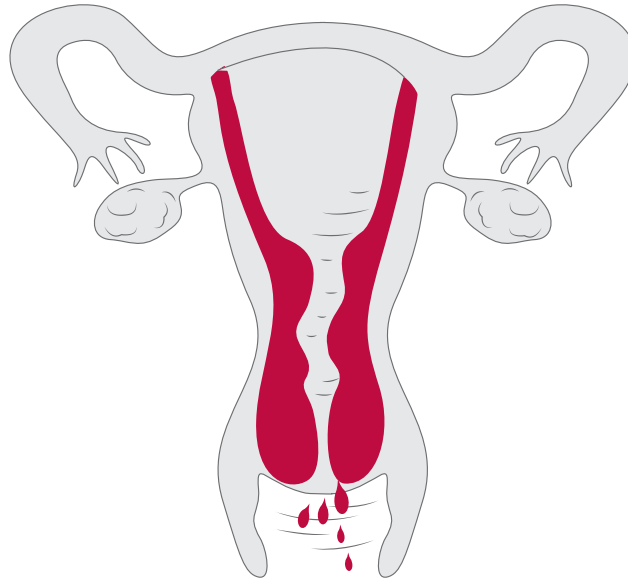
2

Menstrual period continues



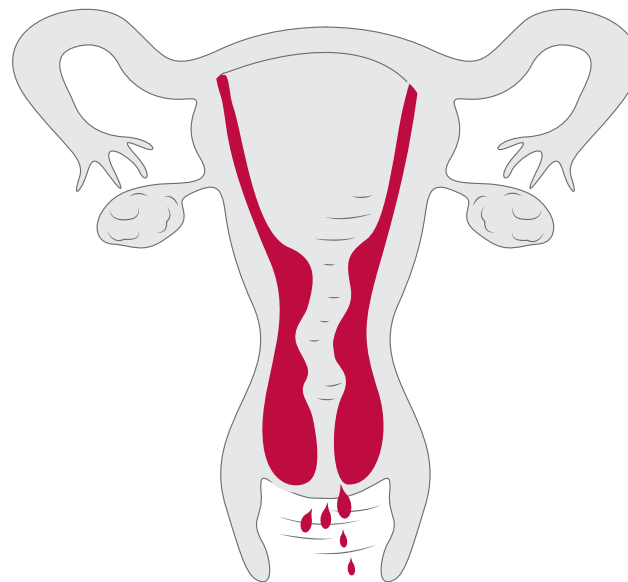
3

Menstrual period continues



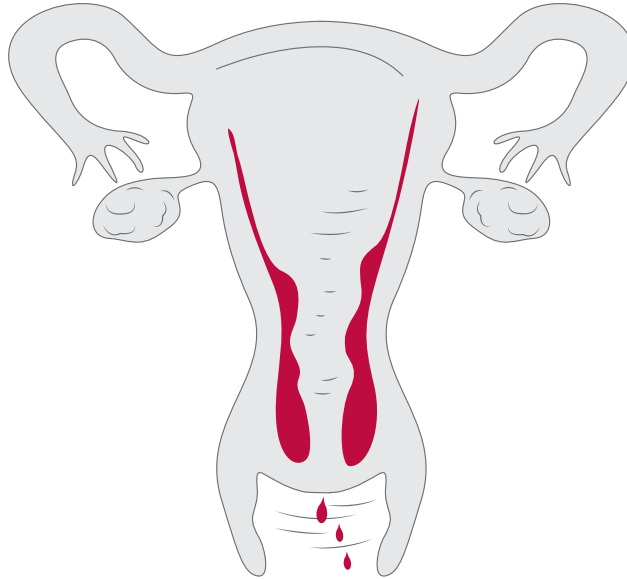
4

Menstrual period likely continues



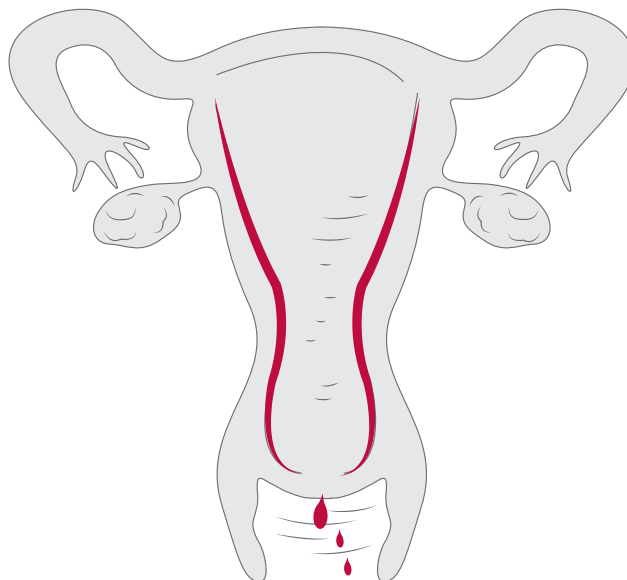
5

Menstrual period may continue/may be finishing



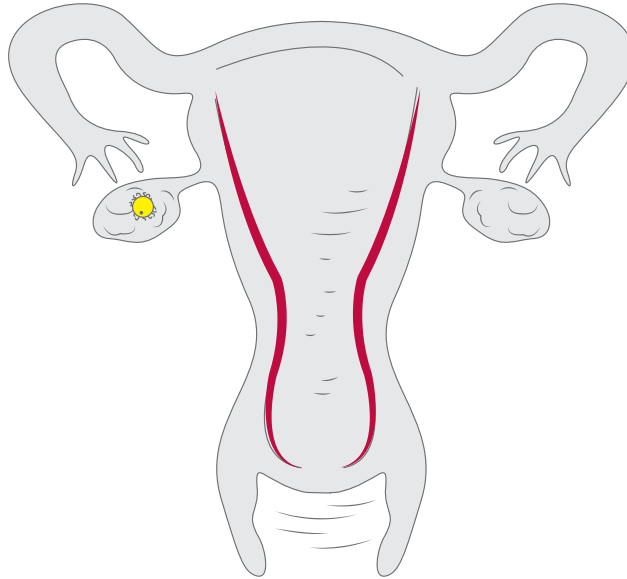
6

Menstrual period ending/ended and lining of uterus starting to grow again

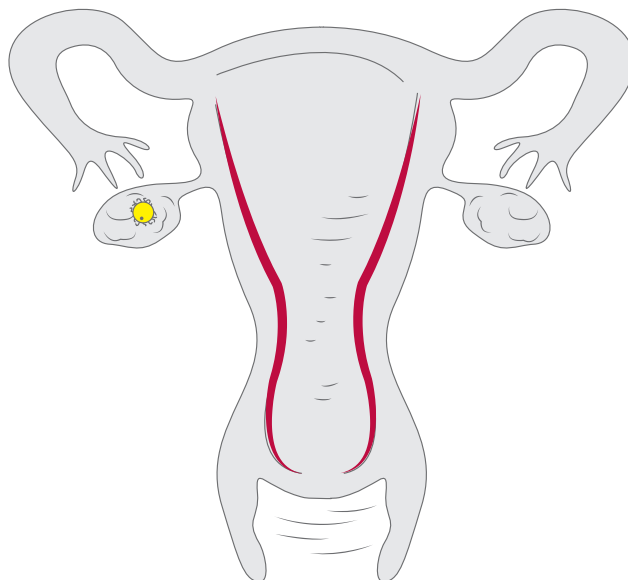




Menstrual period ending/ended and lining of uterus starting to grow again

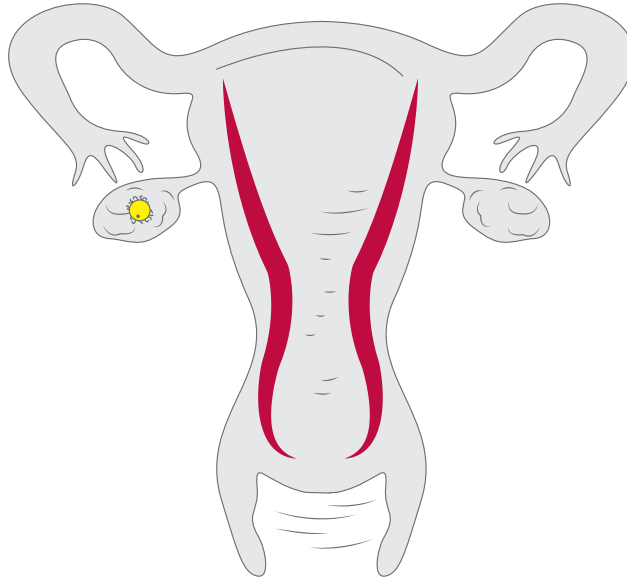


Lining of uterus continues to grow and one egg is preparing to be released



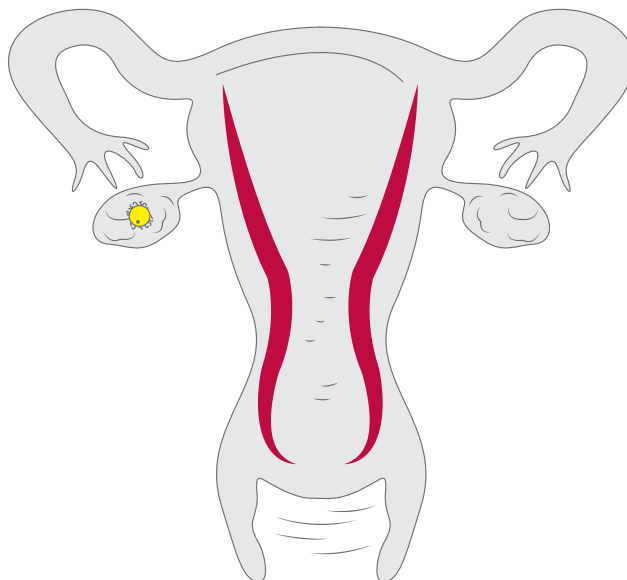
9

Lining of uterus continues to grow and one egg is preparing to be released



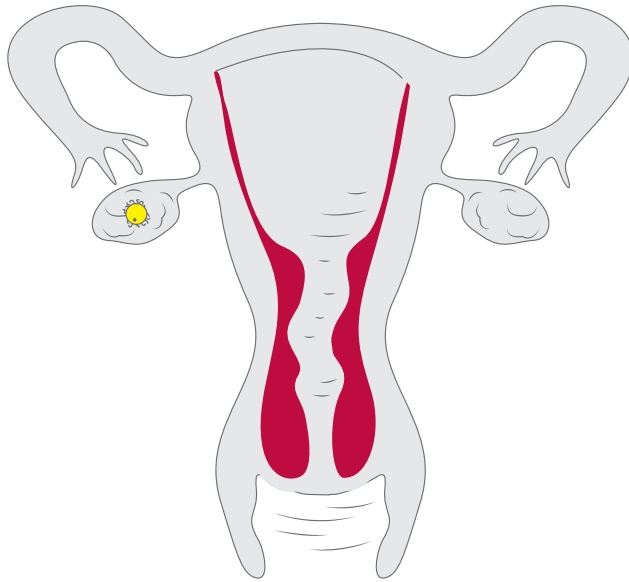
10

Lining of uterus continues to grow and one egg is preparing to be released



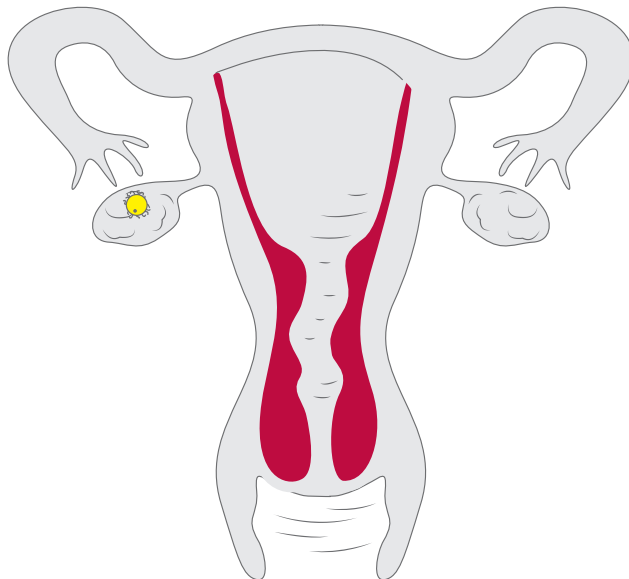
11

Lining of uterus continues to grow and one egg is preparing to be released



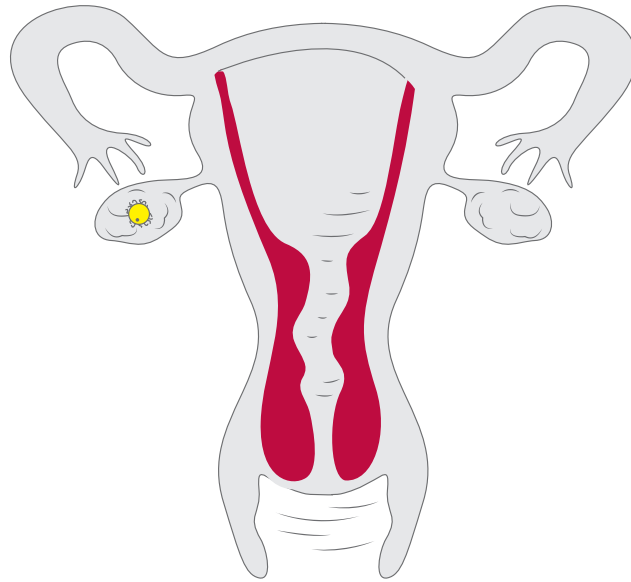
12

Lining of uterus continues to grow and one egg is preparing to be released



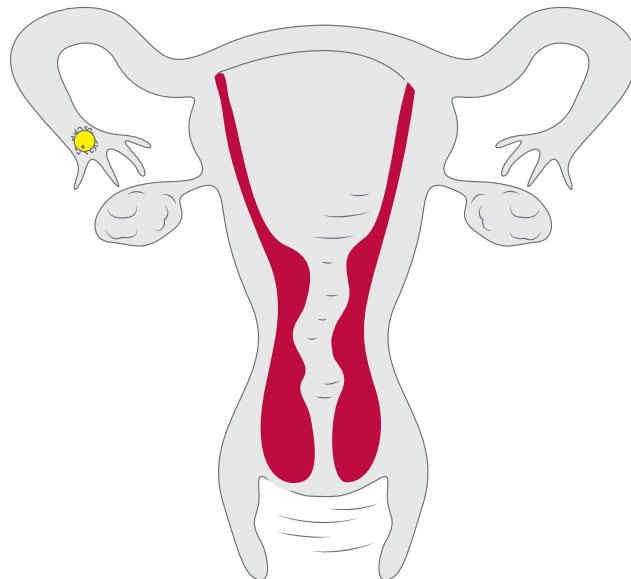
13

Lining of uterus continues to grow and one egg is preparing to be released



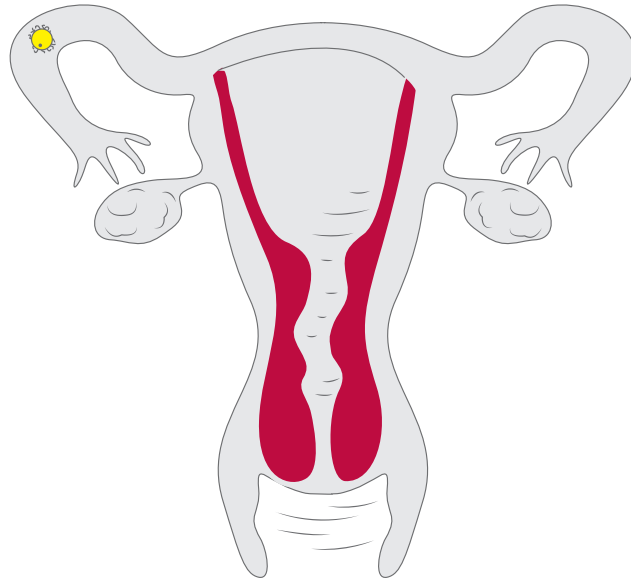
14

Ovulation is most likely to occur, meaning an egg is released from an ovary and starts to travel down a fallopian tube.



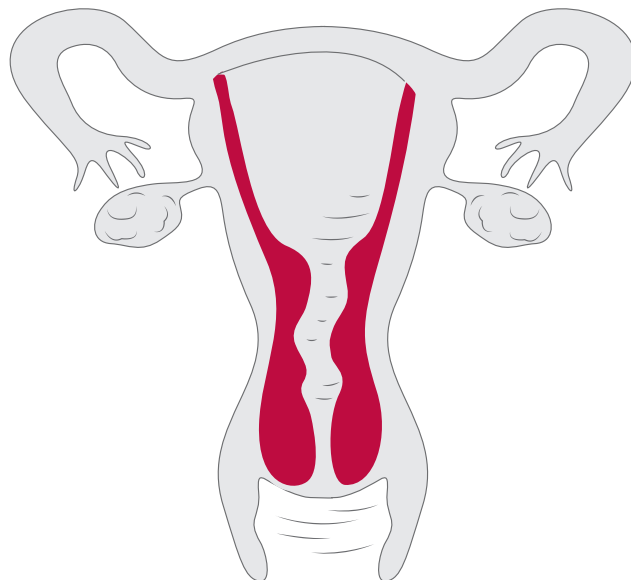
15

The egg, if it does not unite with a sperm by the end of Day 15, will dissolve and no longer viable.



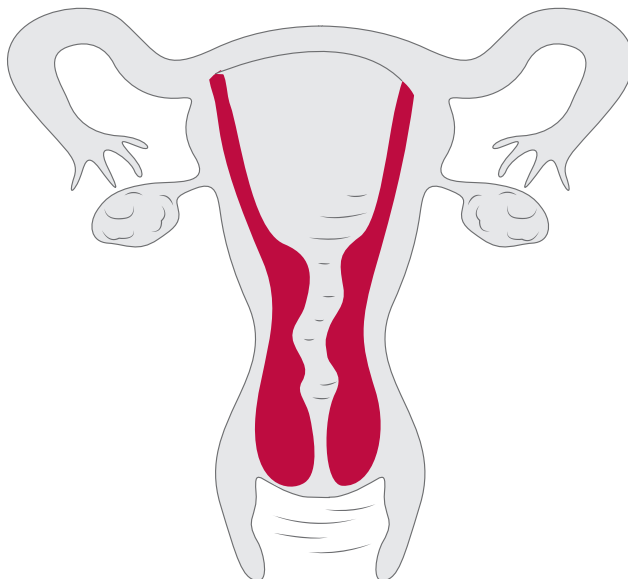
16

The egg has dissolved and will leave the body during the menstrual period.



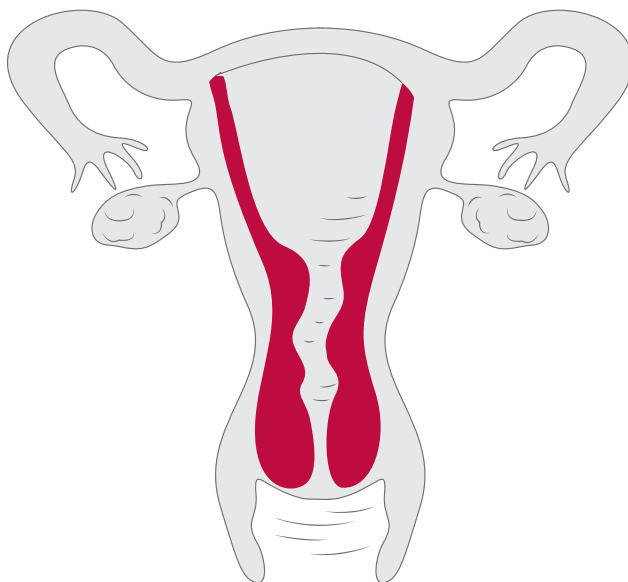
17

Lining of uterus continues to grow,
just in case it's needed



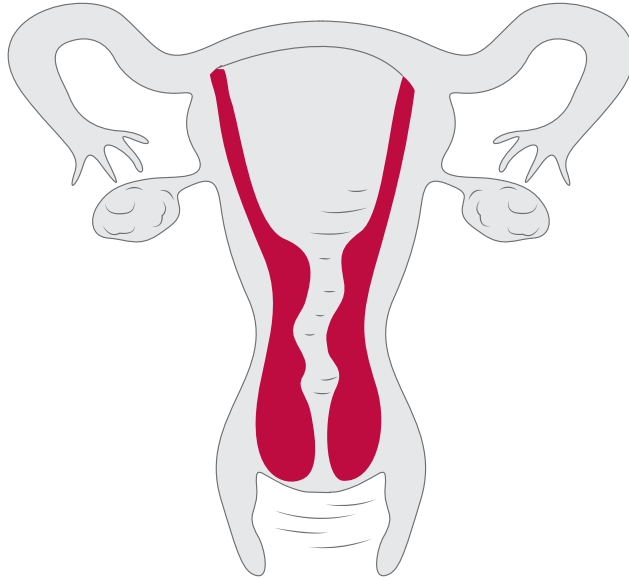
18

Lining of uterus continues to grow,
just in case it's needed



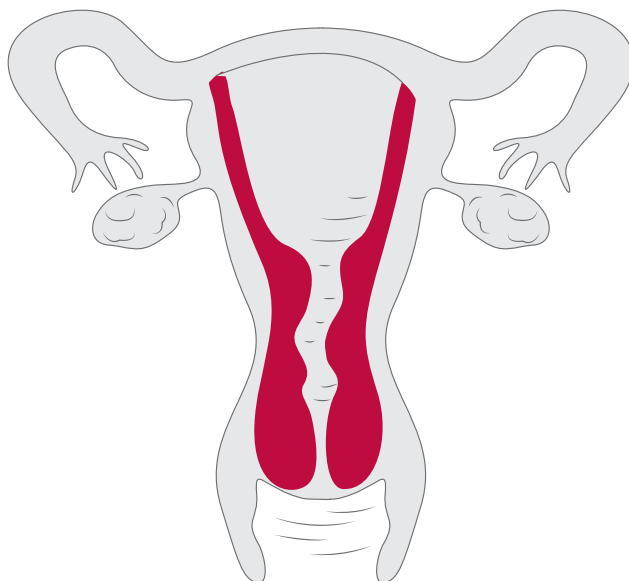
19

Lining of uterus continues to grow,
just in case it's needed



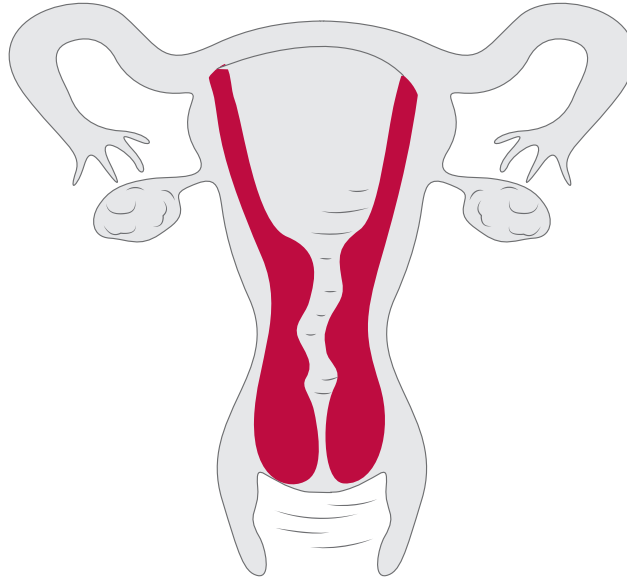
20

Lining of uterus continues to grow,
just in case it's needed



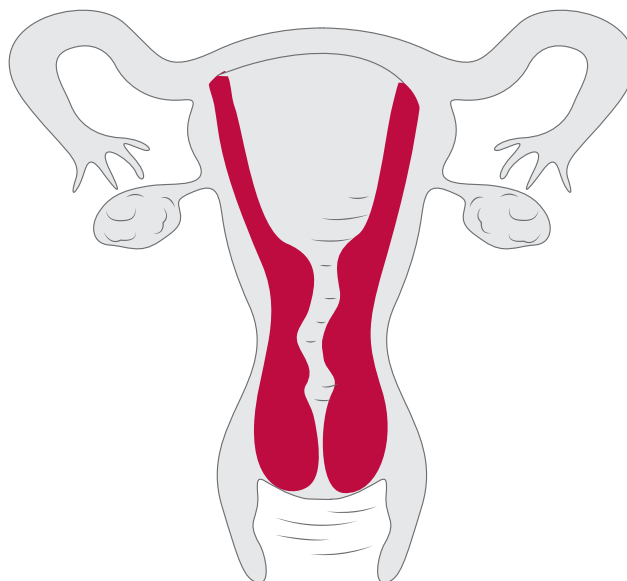
21

Lining of uterus continues to grow,
just in case it's needed



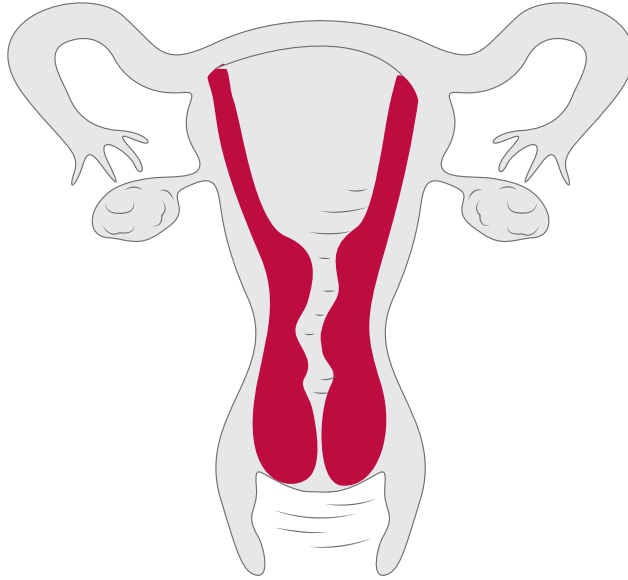
22

Lining of uterus continues to grow,
just in case it's needed



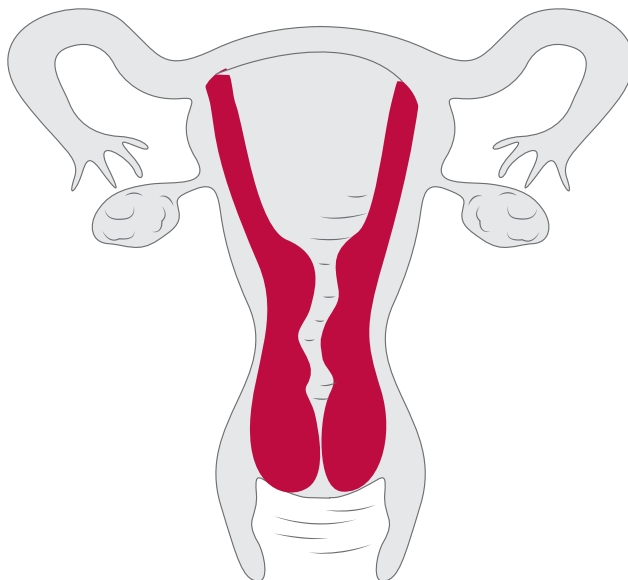
23

Lining of uterus continues to grow,
just in case it's needed



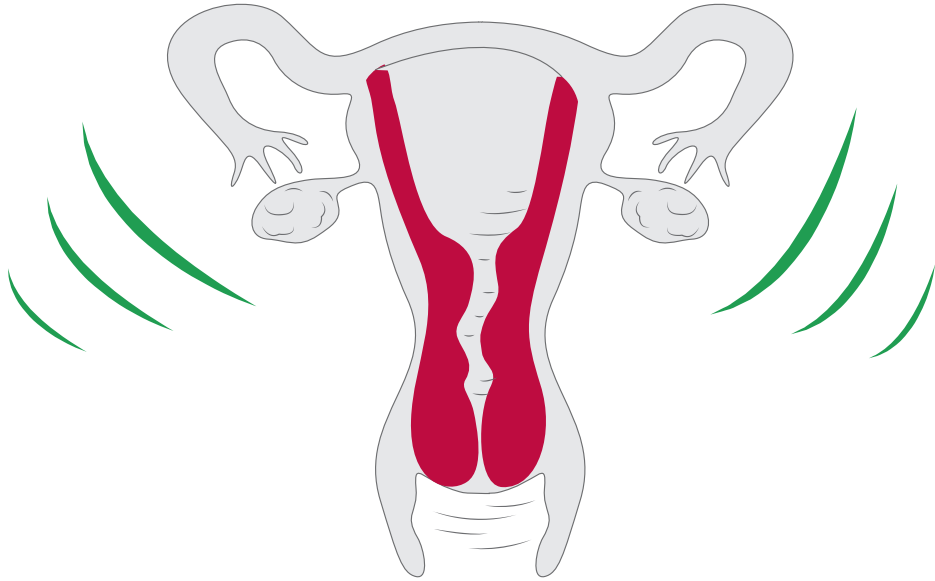
24

Lining of uterus continues to grow,
just in case it's needed



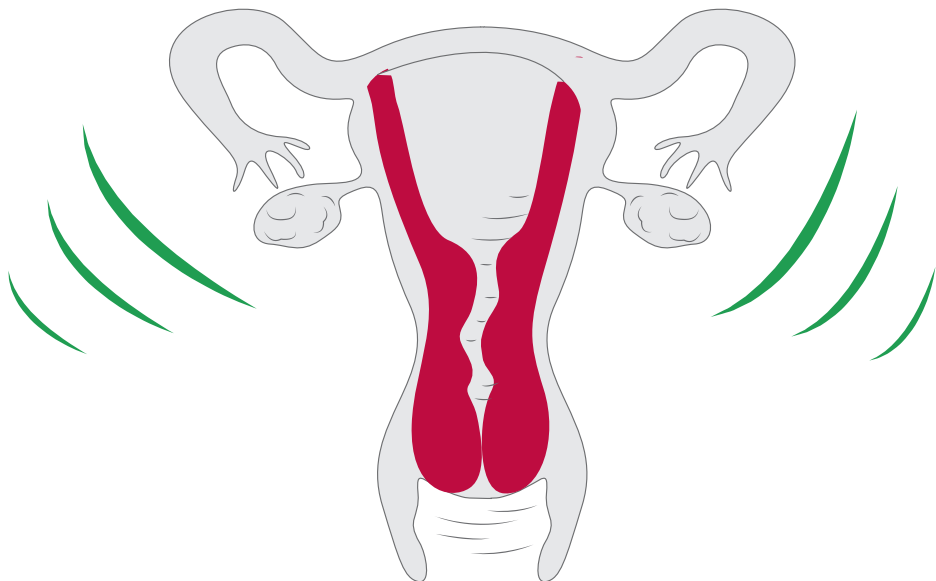
25

Lining of uterus continues to grow and hormones signal the body to prepare for next menstrual period



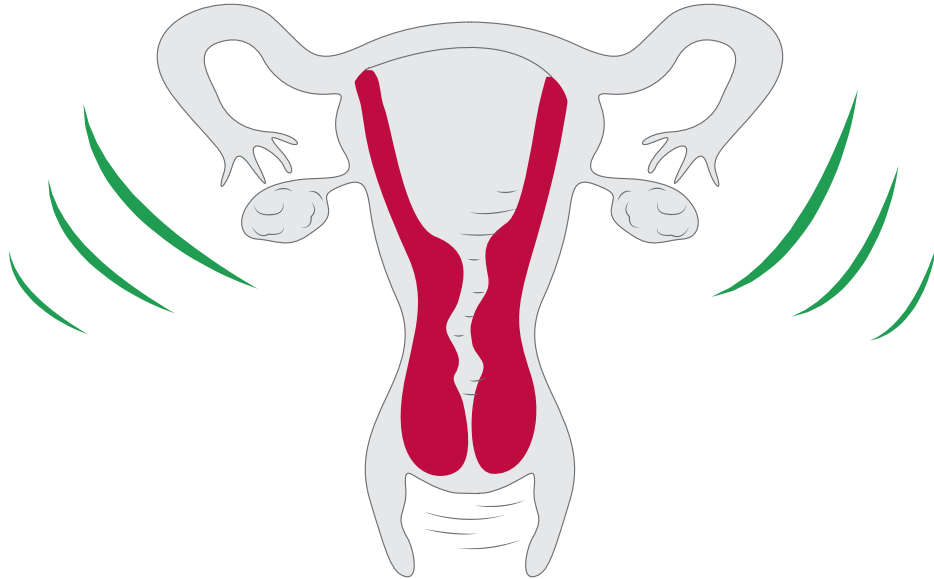
26

Lining of uterus continues to grow and hormones signal the body to prepare for next menstrual period



27

Lining of uterus continues to grow and hormones signal the body to prepare for next menstrual period



28

Lining of uterus continues to grow and hormones signal the body to prepare for next menstrual period

