

EMERGENCY IN OBSTETRICS

dr Ewa Zbucka



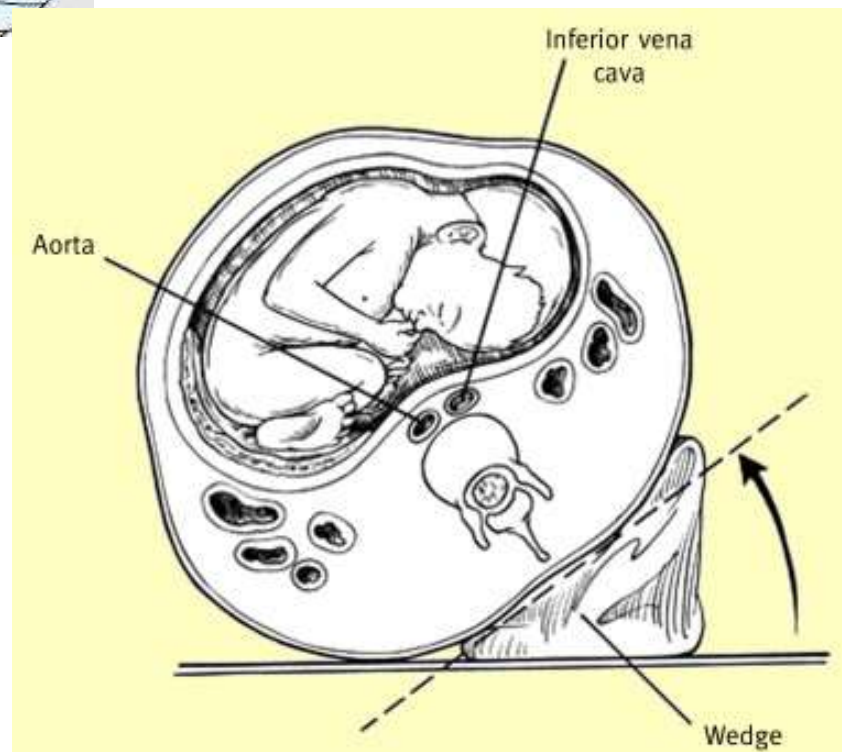
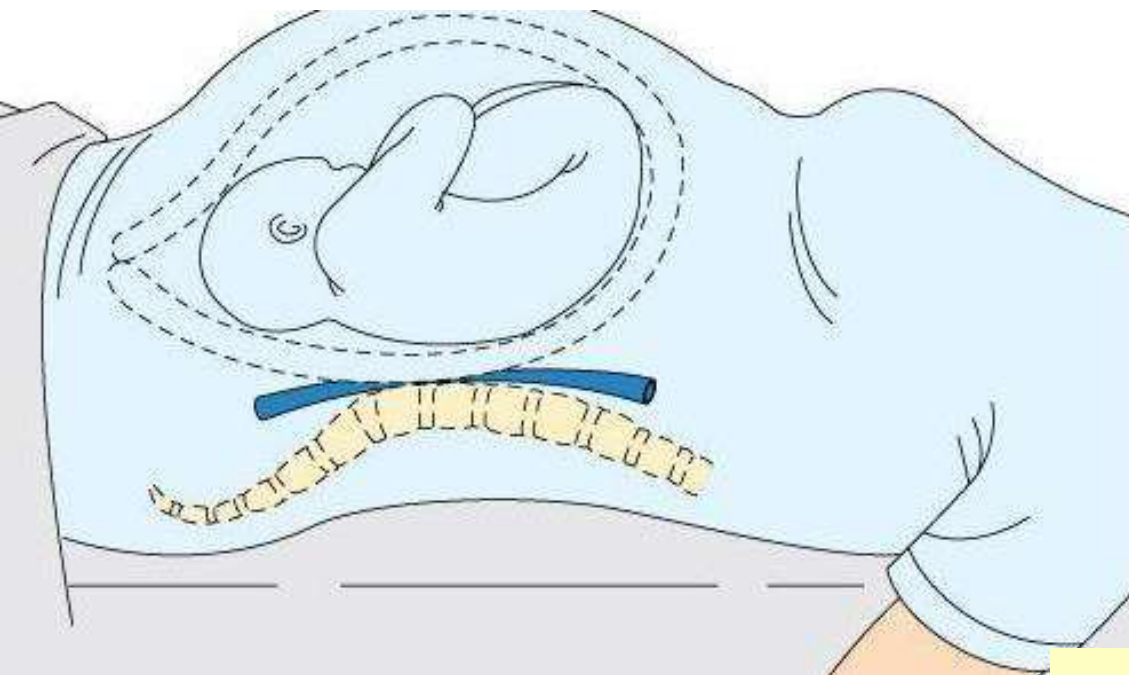
PLAN

- Some simple questions
- Bleeding
- PROM
- Monitoring fetal movement
- CTG

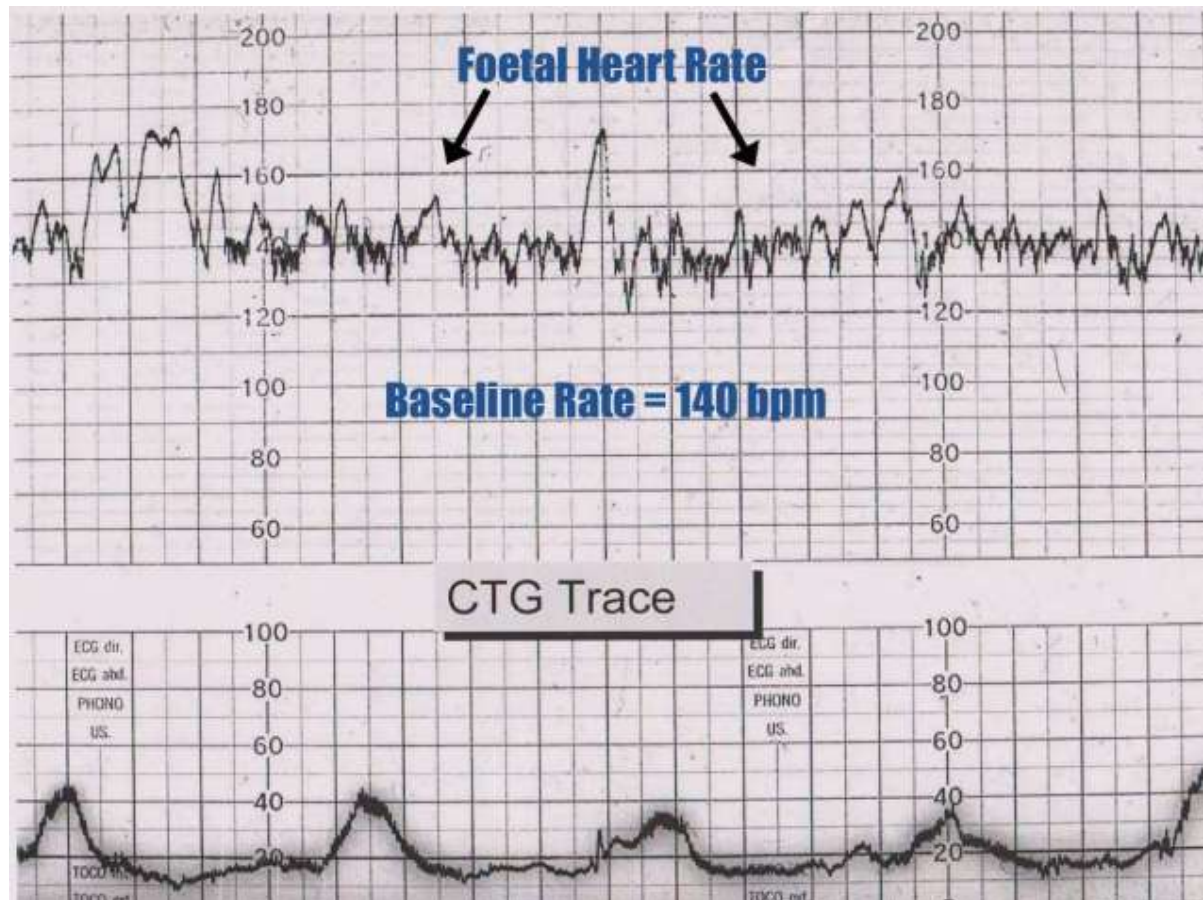
- When does pregnancy begin?
- Gestational age vs embryonic age



- What is the best position to sleep for a pregnant woman?



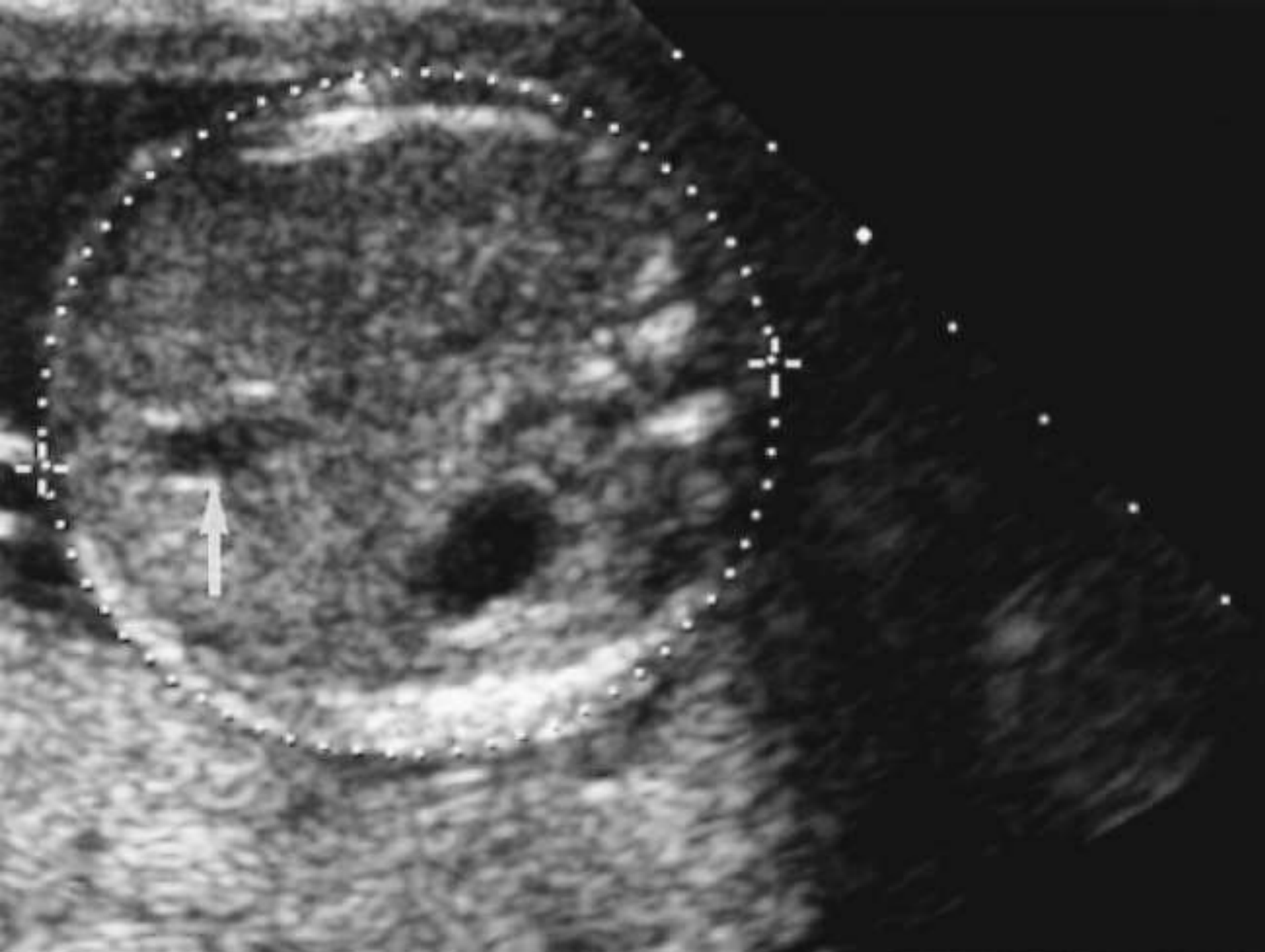
- What is the average fetal heart rate?



- How do you estimate the weight of the fetus?







FL 2.16cm
GA 16w3d <2.3%

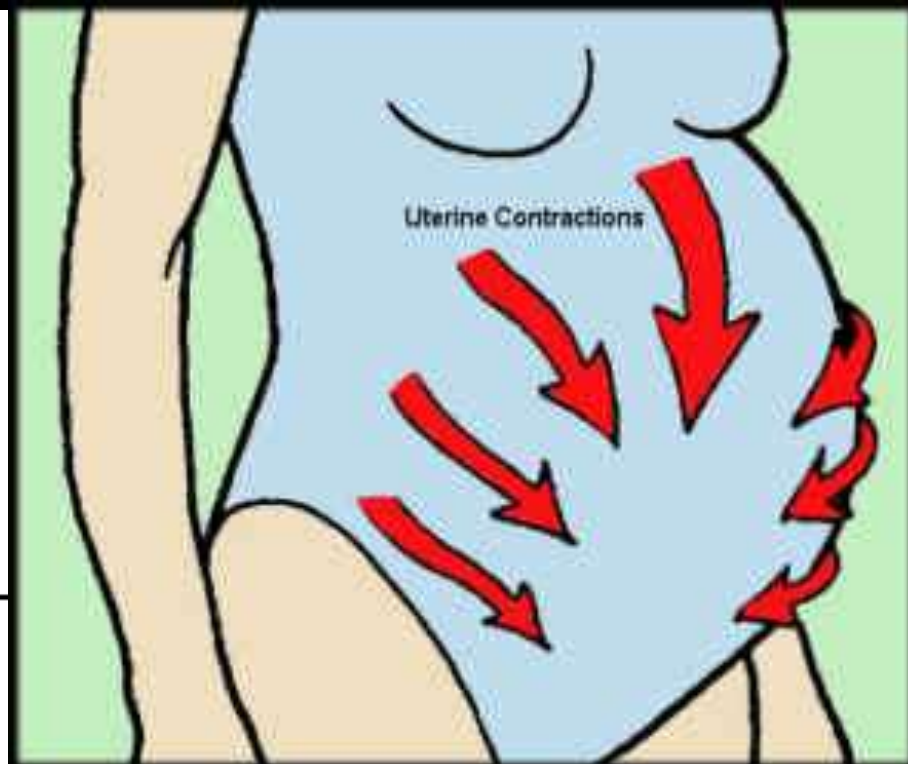
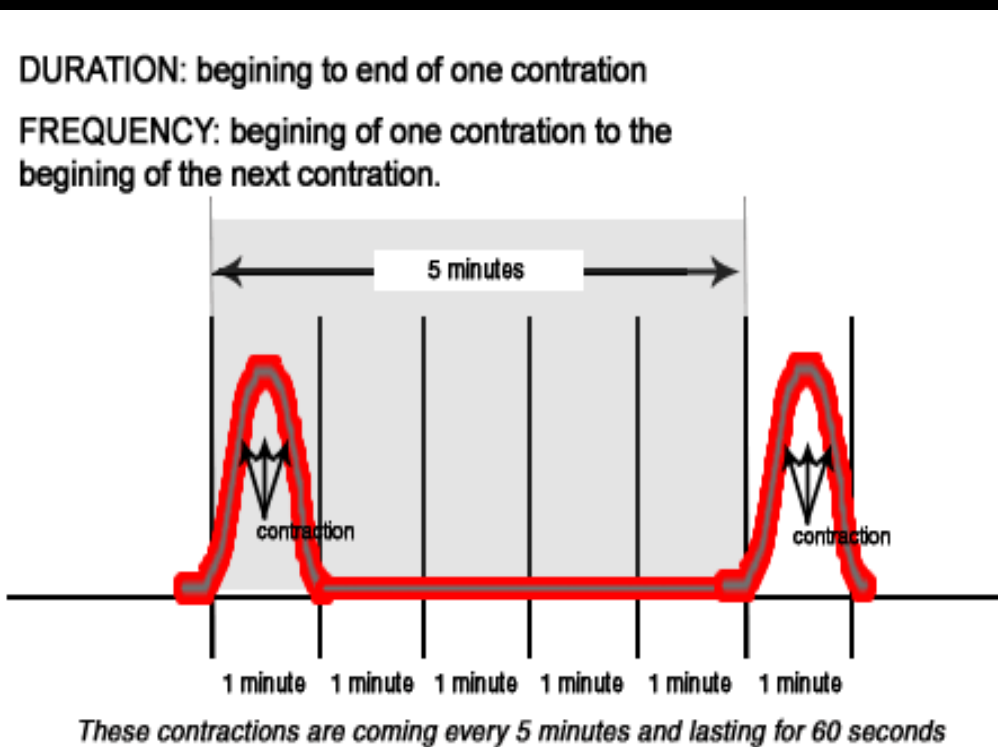


- What are the norms of blood pressure values for a pregnant patient?

VISIT HOSPITAL WHEN:

- Contractions
- Bleeding
- PROM
- Weak fetal movement

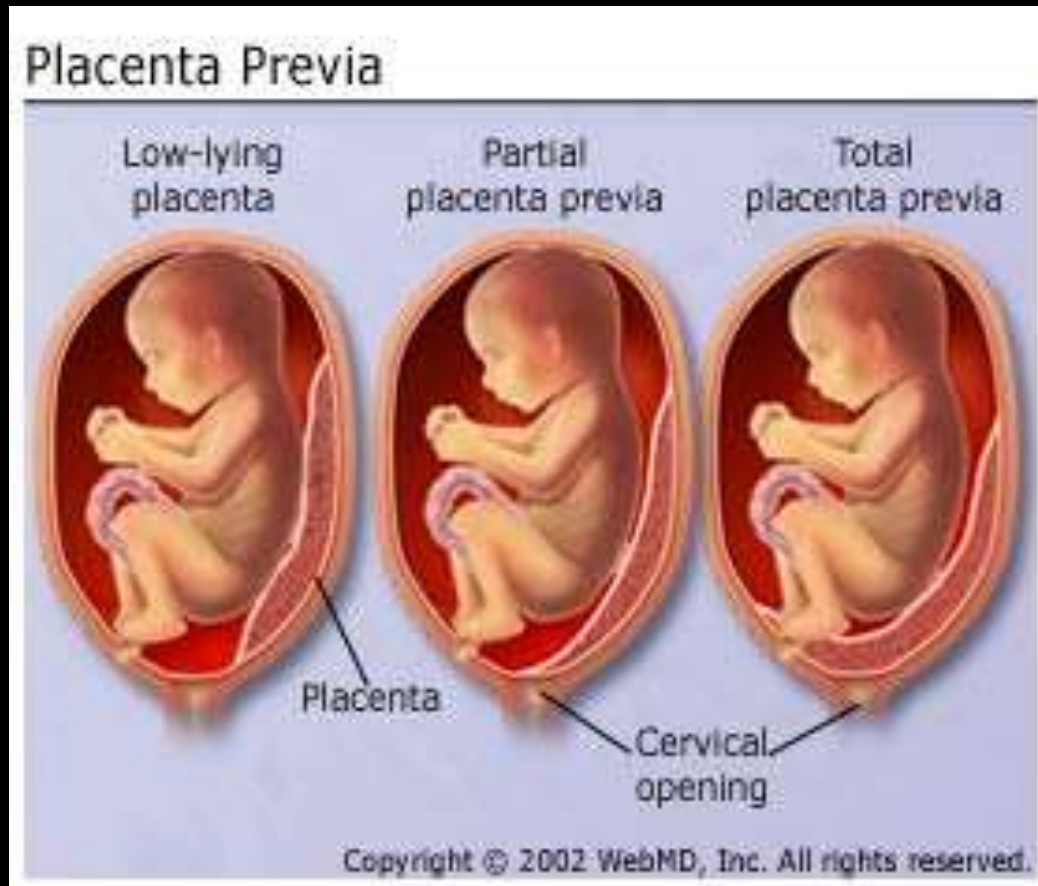
- As the strength of each contraction increases, the peaks will come sooner

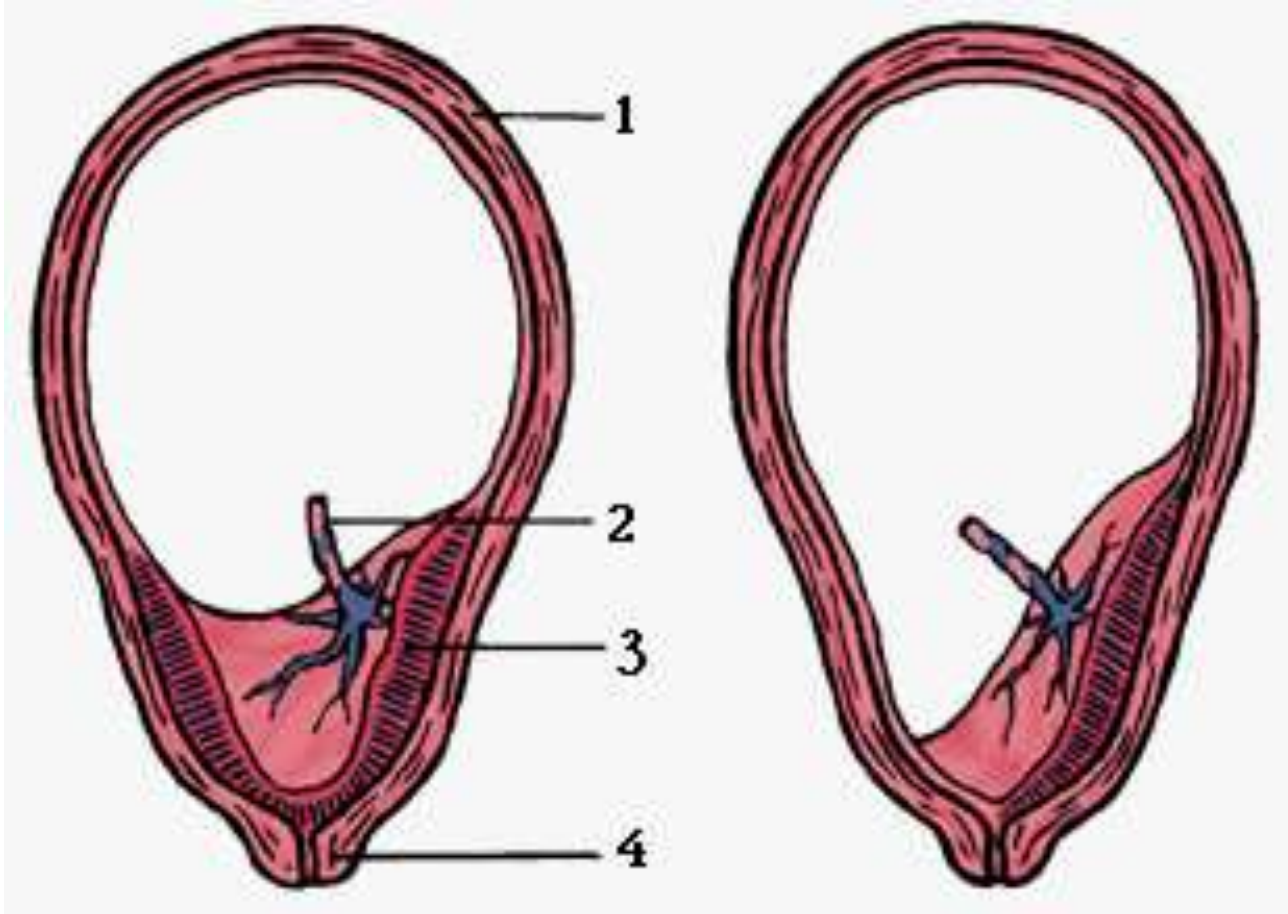


BLEEDING

- Placenta previa
- Placental abruption
- Dehiscence of cesarean scar
- Polyp
- Erosio portionis
- Trauma
- Carcinoma

- Risk factors:
- Multiparity
- Previous c- section
- Smoking
- Previous D&C

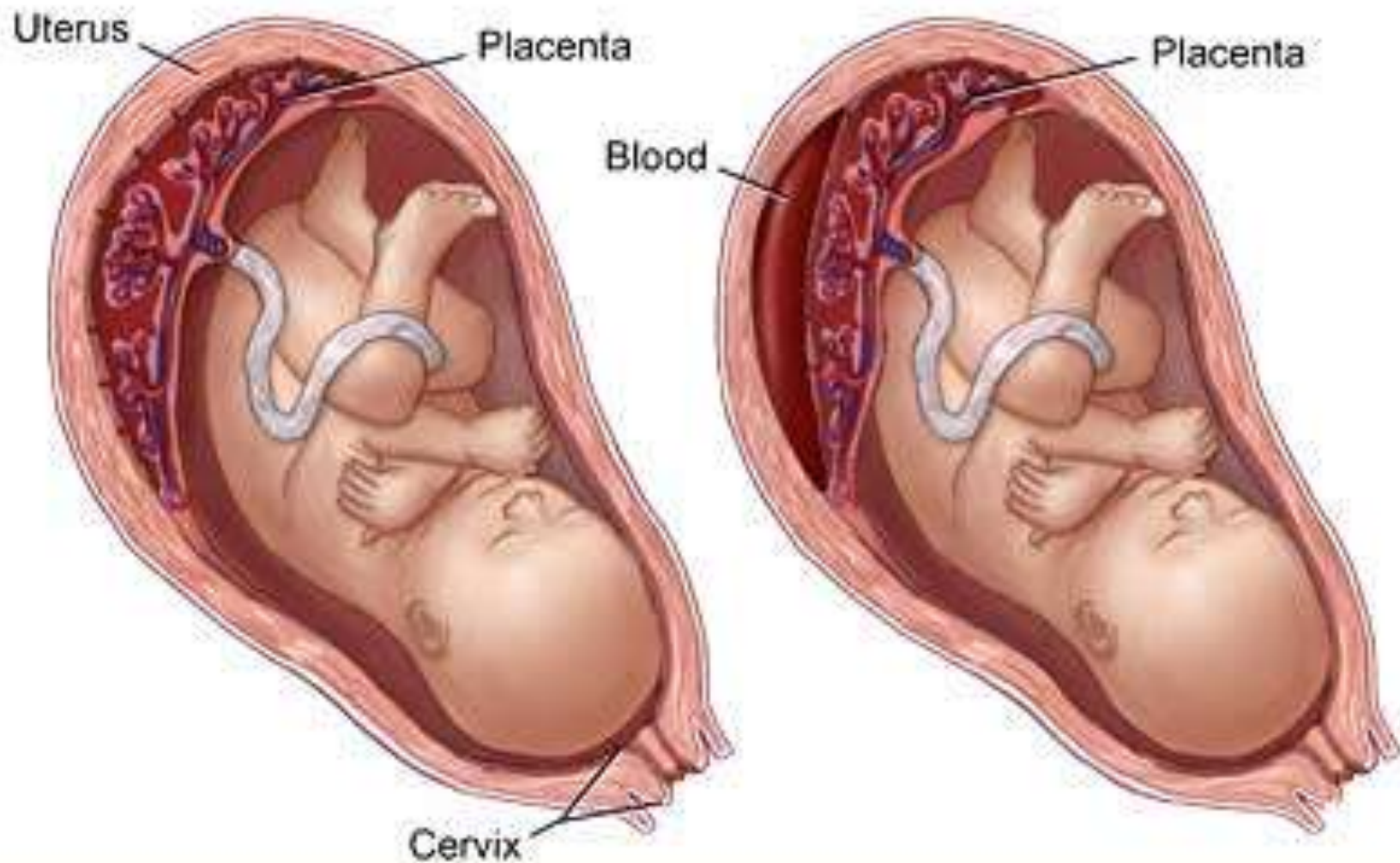




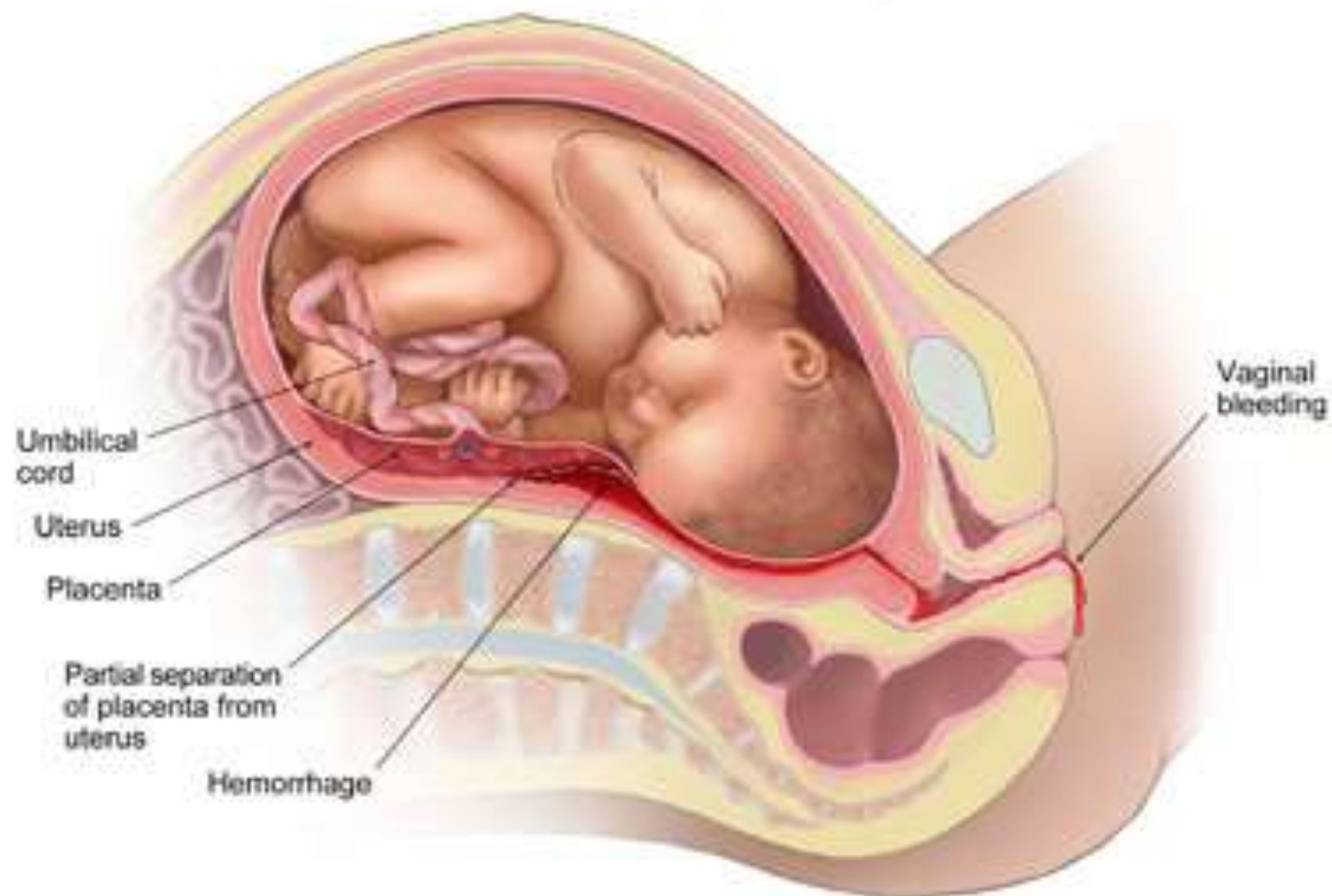
	BLEEDING	NO BLEEDING
FETUS MATURE	C-SECTION	OBSERVATION
FETUS IMMATURE	C-SECTION	OBSERVATION
IF IN LABOUR- C-SECTION		

Normal placenta

Placental abruption



Partial Placental Abruption

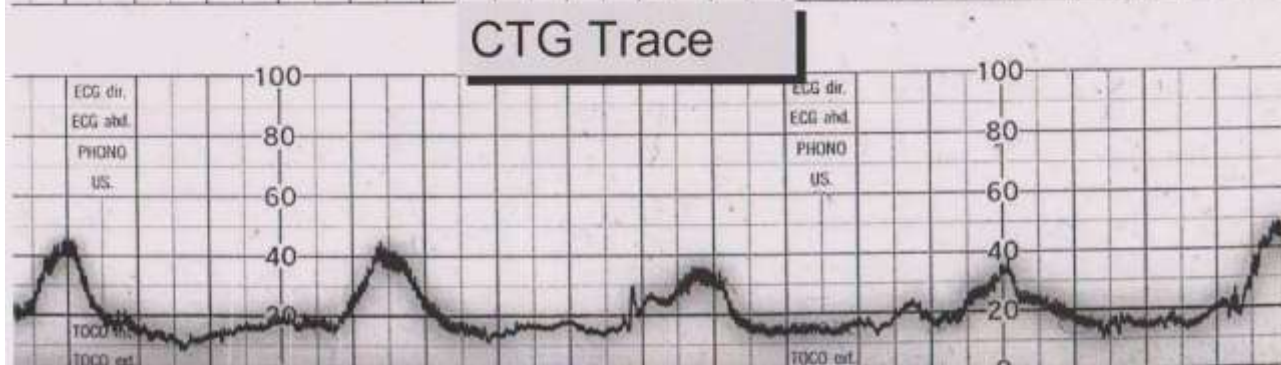
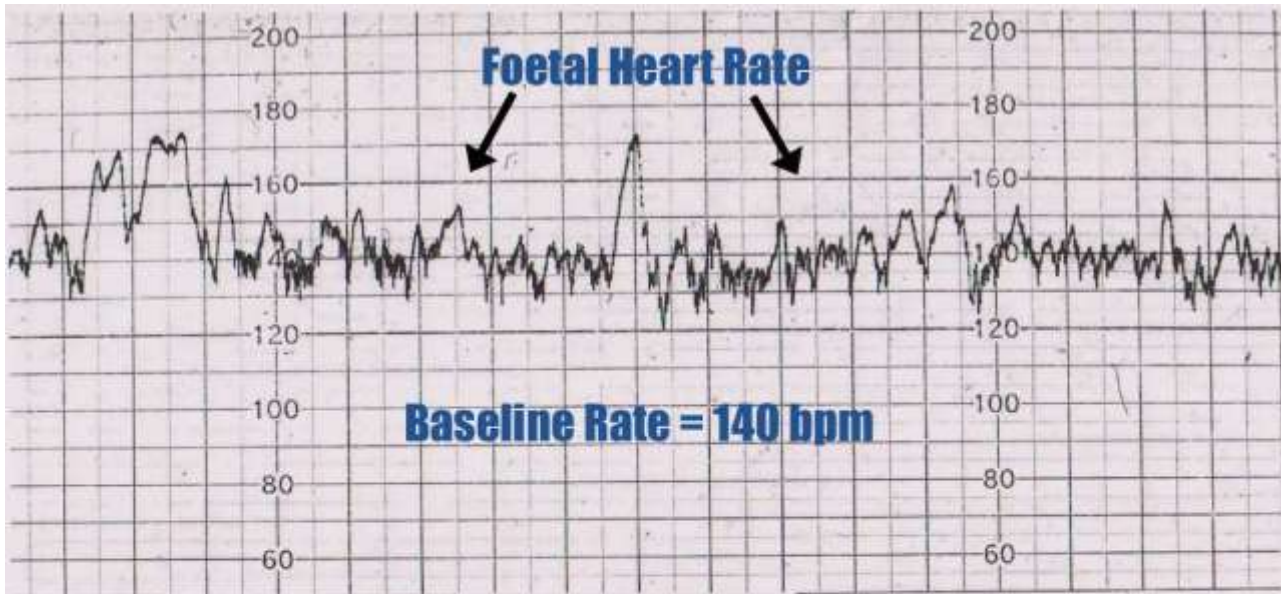


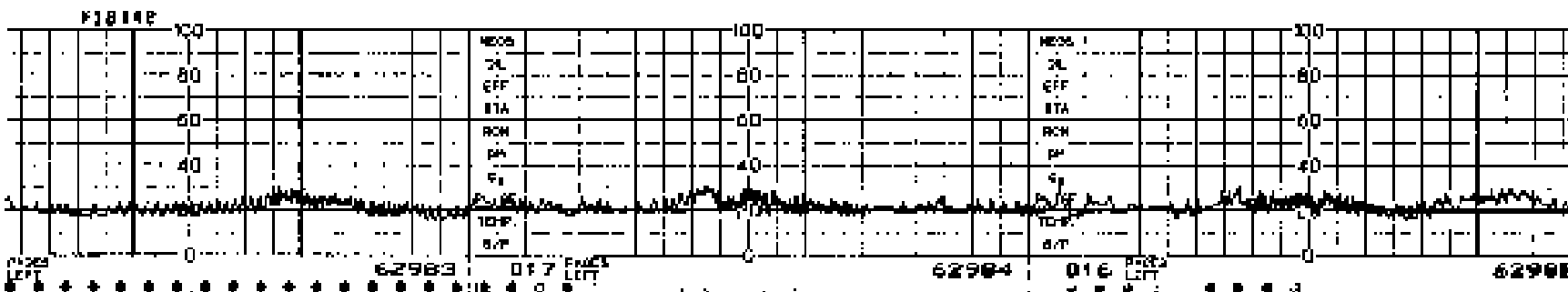
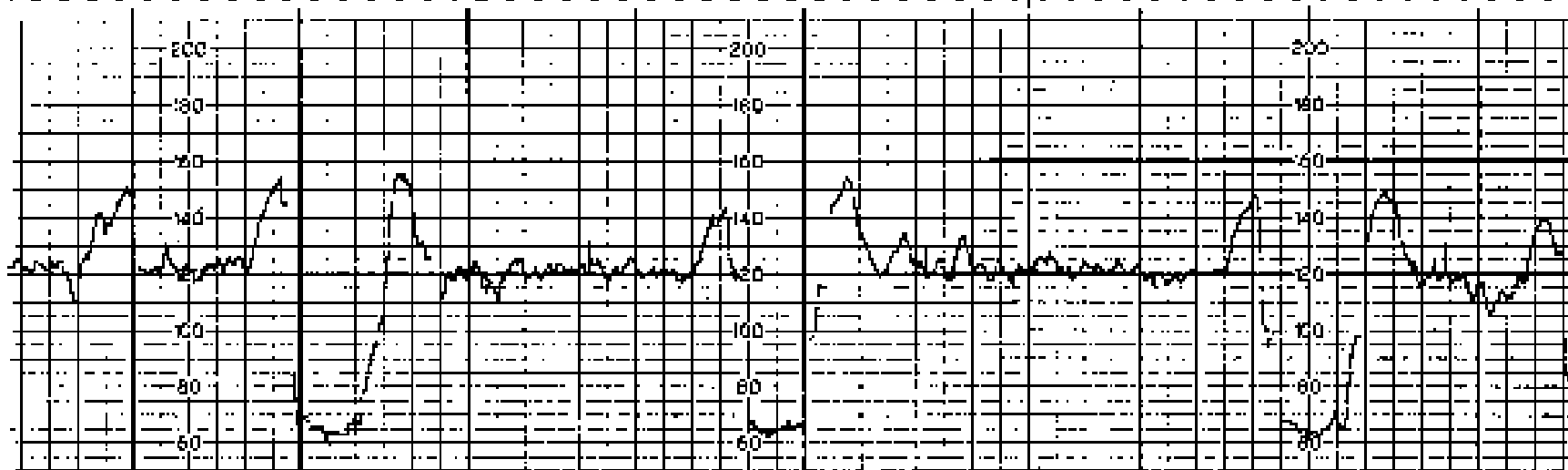
- Symptoms:
- Bleeding
- Fetal distress
- Tetanic contractions
- Sonography 50% sensitivity

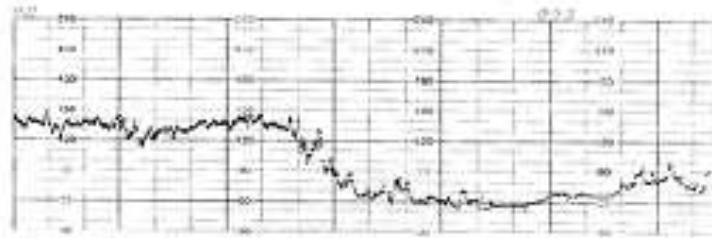
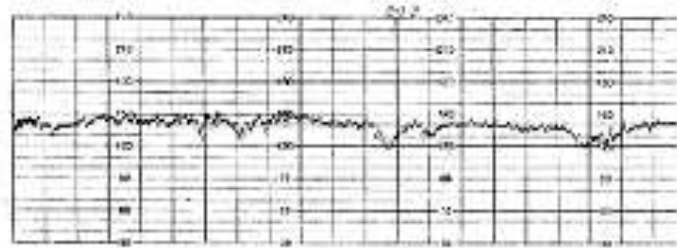
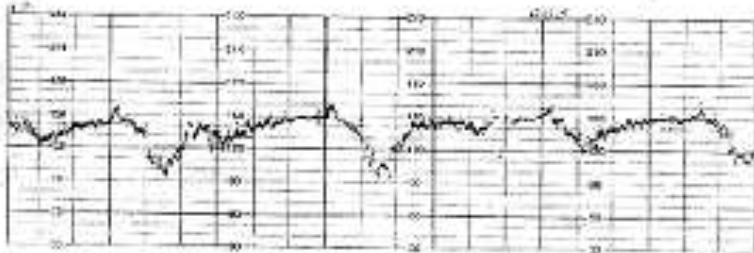
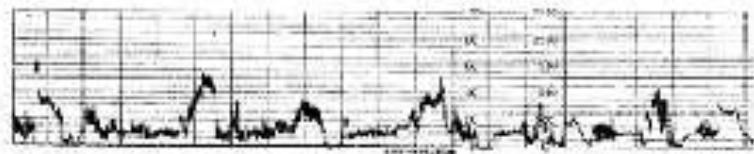
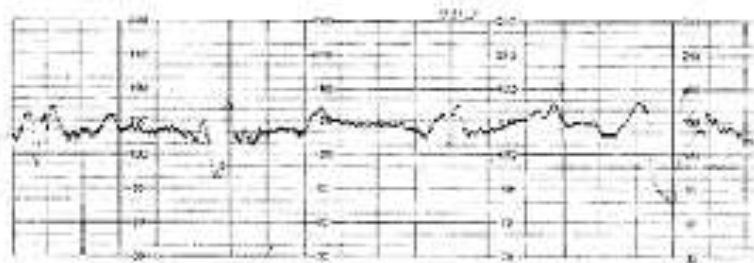
- Risk factors:
- Previous abruption
- Myoms
- Septum
- Maternal diseases
- Nicotine, cocaine
- Abdominal trauma

- Infection
- Umbilical cord prolapse
- Hospitalization
- EXAMINE THE PATIENT
- Control infectious parameters
- Antibiotics





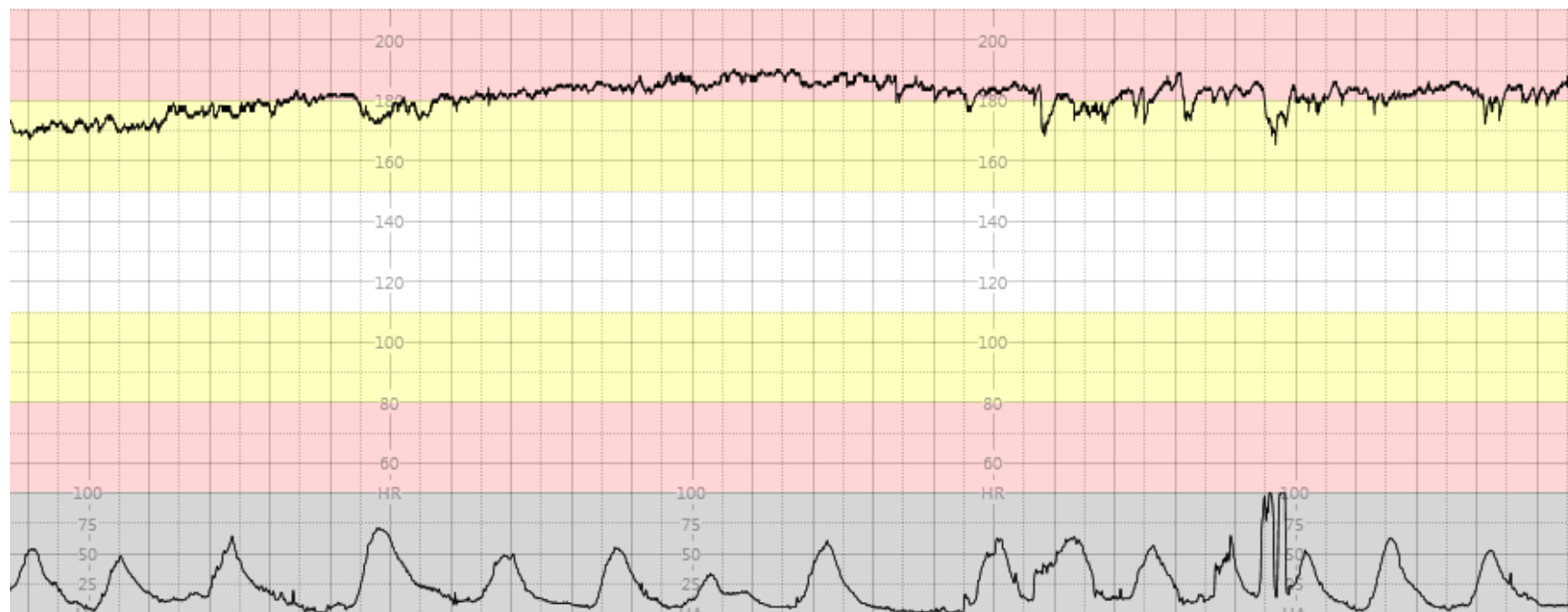


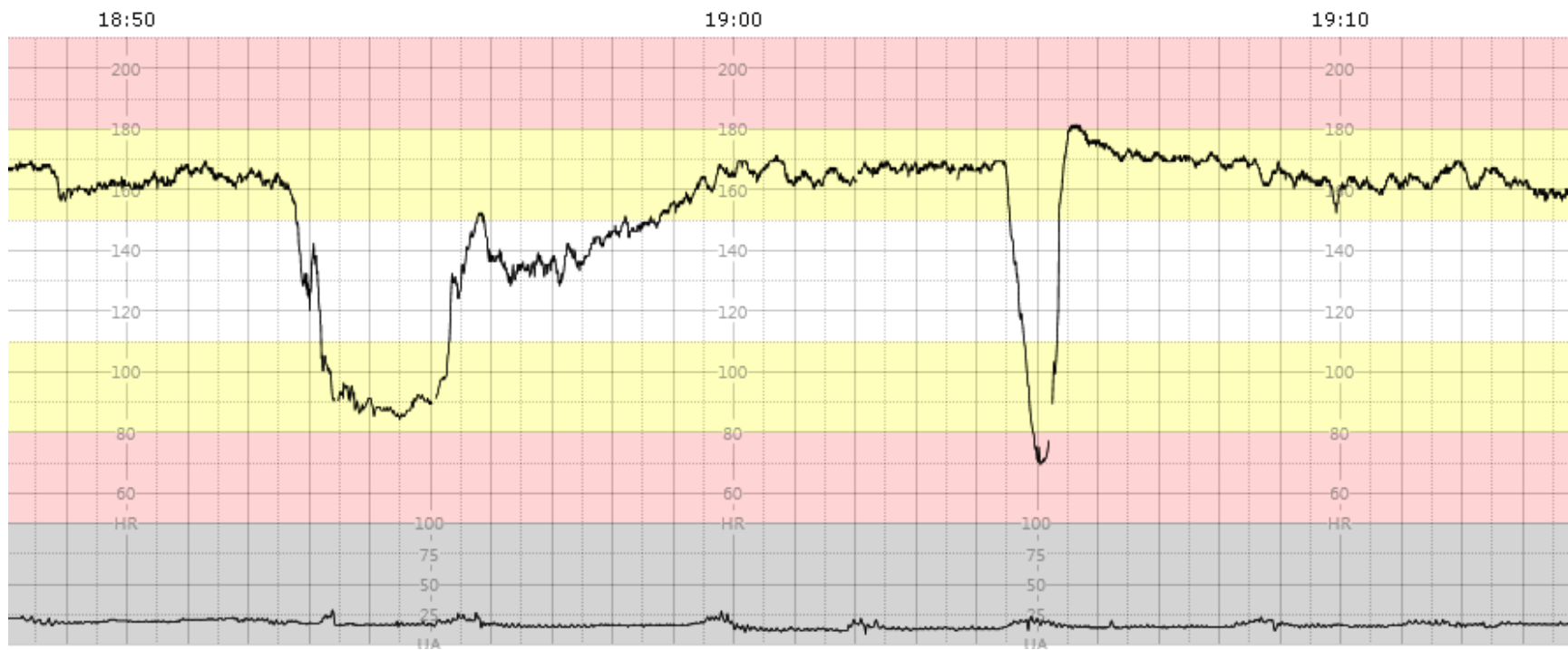


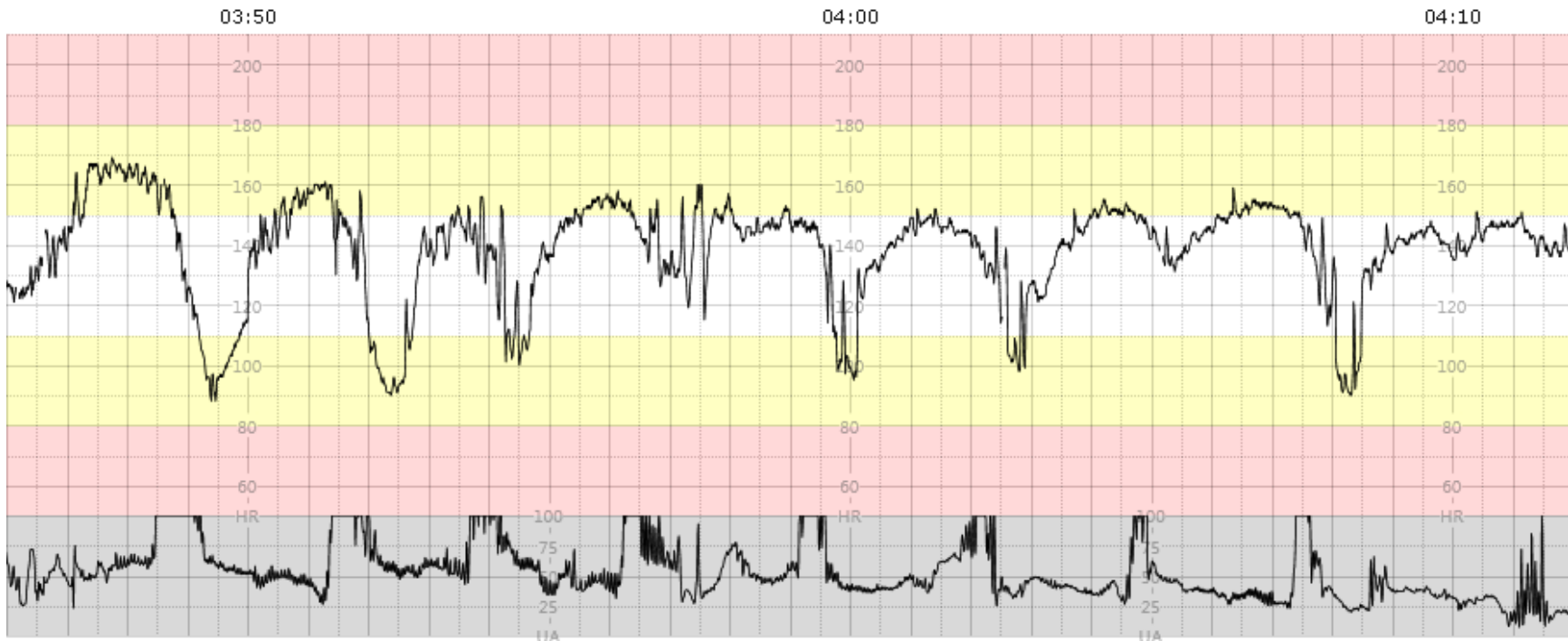
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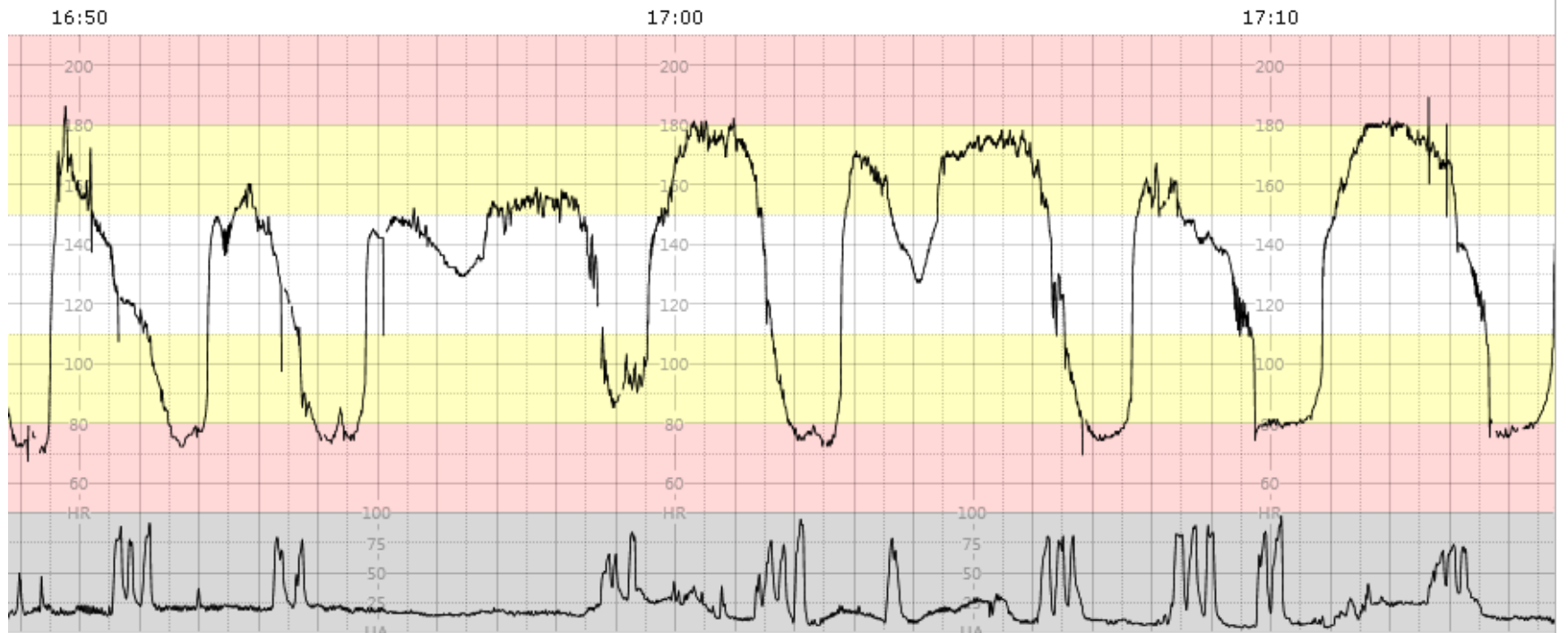
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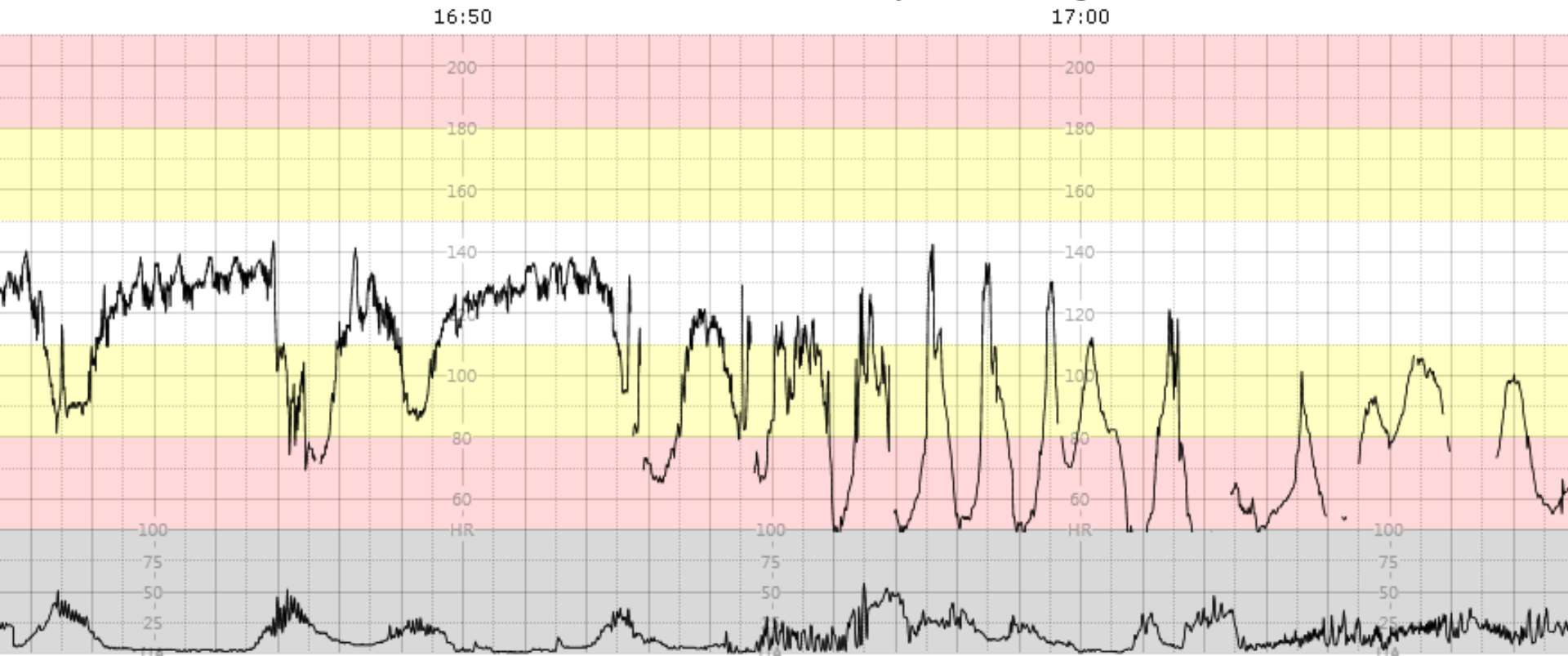








- Admitted to hospital, PV bleed. Weak contractions. Normal CTG trace. VE: Cx fully effaced, 2 cm dilated.
- After 2 hours: ARM. Bloodstained liquor draining. Sudden pain per abdomen Uterus tensed, 200 ml blood clot per vagina.



- Decision made for Emergency cesarean section.
- Cesarean Section. Babygirl born AS 2, 4, 5. Birthweight 3 670 g.

Fertility awareness based methods of family planning



- Dr Ewa Zbucka, NFPMC

- Contraindications to use OC/ IUD
- Discontinuation of OC/ IUD because of side effects
- Fear/ heard of side effects
- Post-pill/ IUD
- **Monitoring health and fertility**
- Perimenopause, breastfeeding
- Will I ever be a mother?
- Ethical or other reasons

Table 15-6: Positive Words Used to Describe Natural Means^{4,8}

- | | |
|------------------------|--|
| • Natural | • Honeymoon effect |
| • Physiologic | • Moral |
| • Feel competent | • Safe (reliable) |
| • Feminine | • Learn more about yourself |
| • Share responsibility | • Adventurous
(Those who want risk) |
| • Abstinence | |

Table 15-4: Positive Words Used to Describe Contraceptives⁴

- | | |
|--|-------------------------|
| • Effective/scientific | • Makes sex spontaneous |
| • Convenient | • Affordable |
| • Does not interfere with sex (some methods) | |

Table 15-5: Negative Words Used to Describe Natural Means⁴

- | | |
|-----------------------|----------------------------------|
| • Rhythm | • Observing bodily signs |
| • Unsafe (unreliable) | • Requires continuous motivation |
| • Tense | • Decreases sexual spontaneity |
| • Difficult | • Abstinence |

Table 15-3: Negative Words Used to Describe Contraceptives⁴

- | | |
|---------------|----------------------|
| • Unnatural | • Unsafe (medically) |
| • Tense | • Repulsive |
| • Messy | • Difficult to Use |
| • Frightening | • Side Effects |

ANATOMY, PHYSIOLOGY



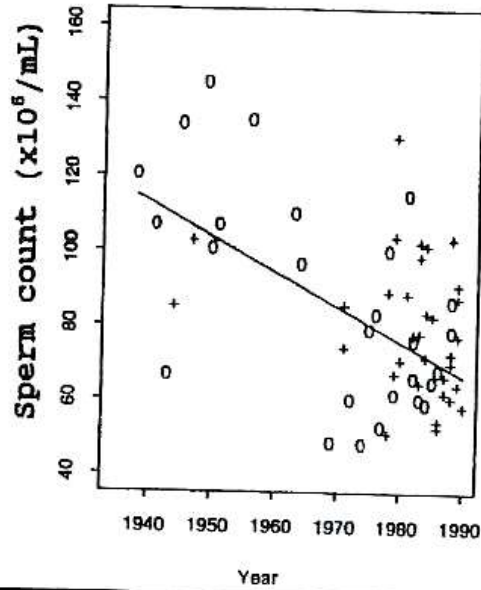
- **MEN**

- Volume > 1,5ml
- pH 7,2-8,1
- Concentration >15mln/ml
- Number >39mln
- Activity >32%
- Morphology >4% correct forms
- Living >58%

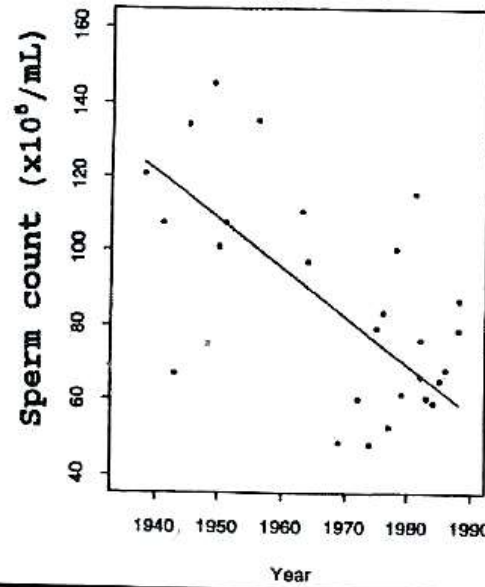


A HEALTHY MAN IS ALWAYS FERTILE

All studies



U.S. studies



Non-U.S. studies

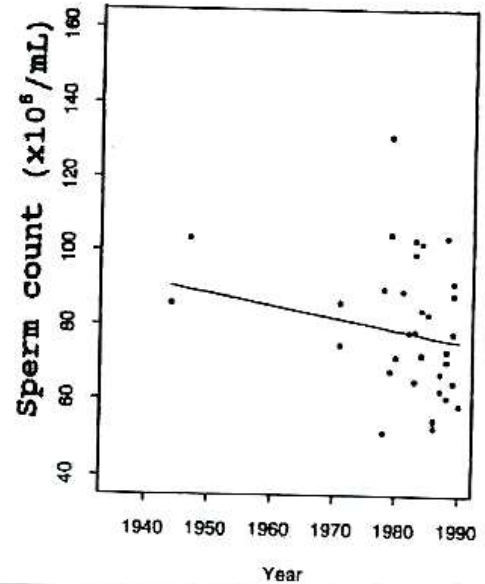
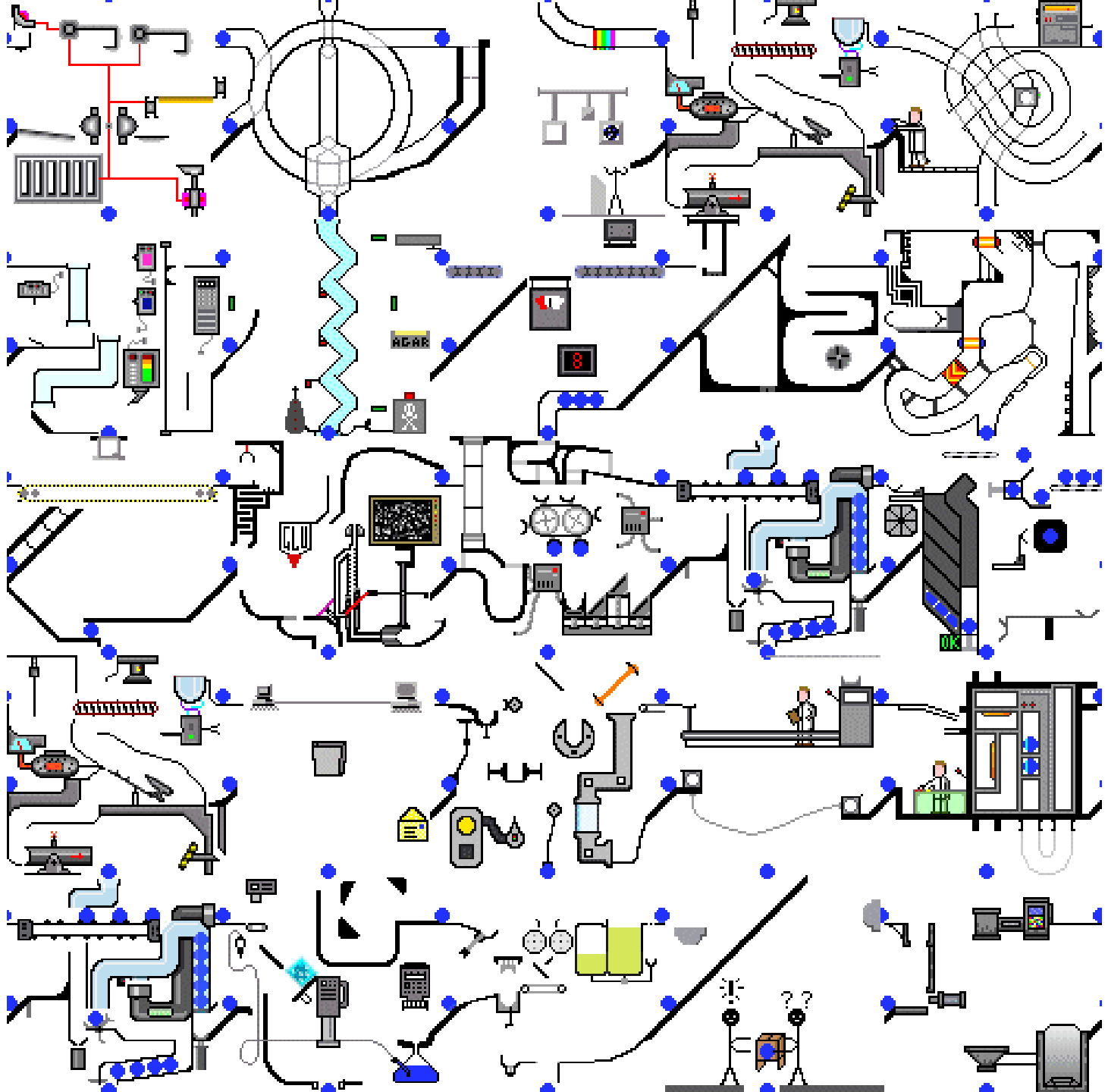
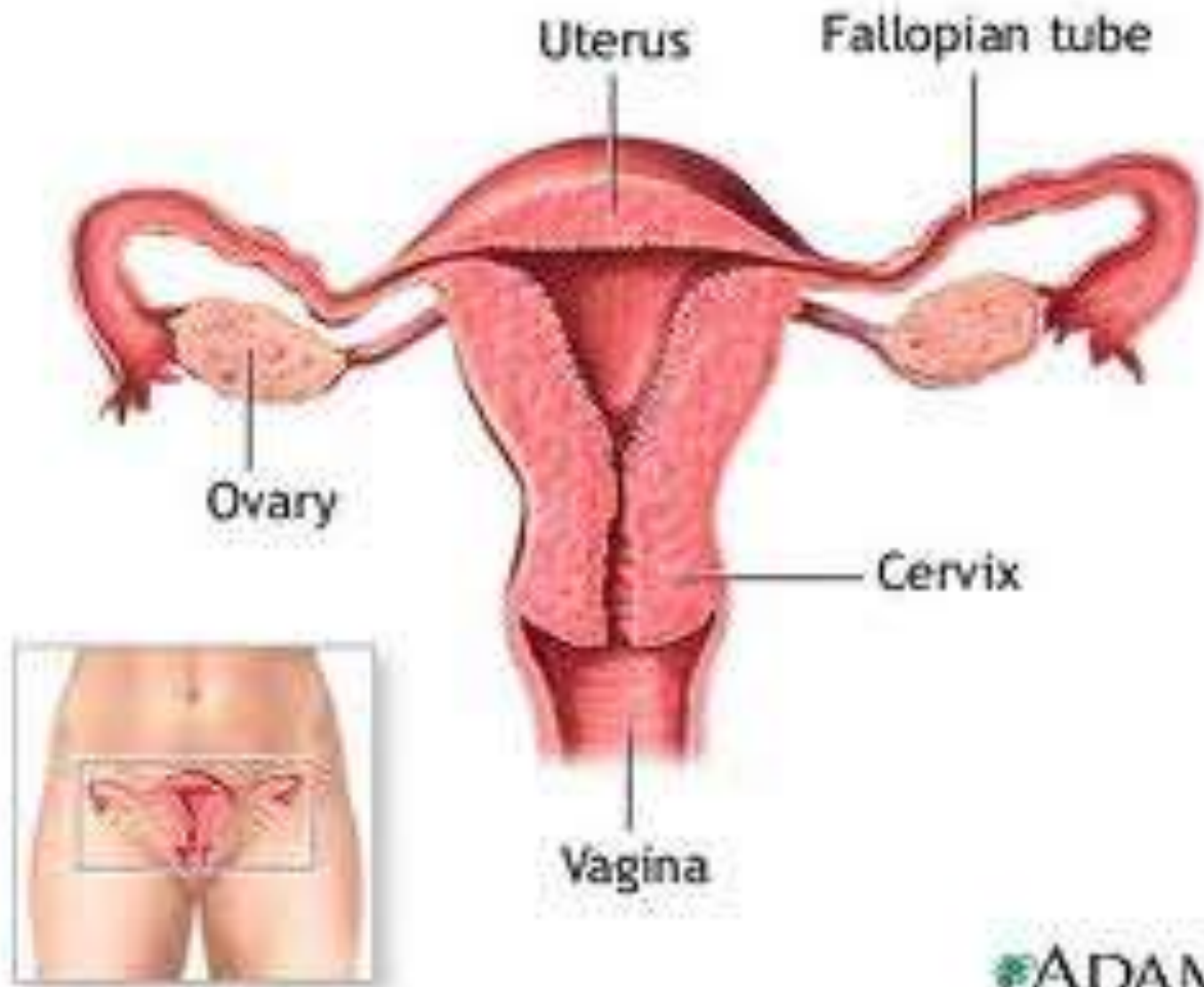


FIGURE 8-15: The 50-year decline in sperm counts: fact or fiction? (Reprinted with permission from the American Society for Reproductive Medicine: Becker S and Barhane K: A Meta-Analysis of 61 Sperm Count Studies Revisited. Fertil Steril 67: 1103-1108, 1997).

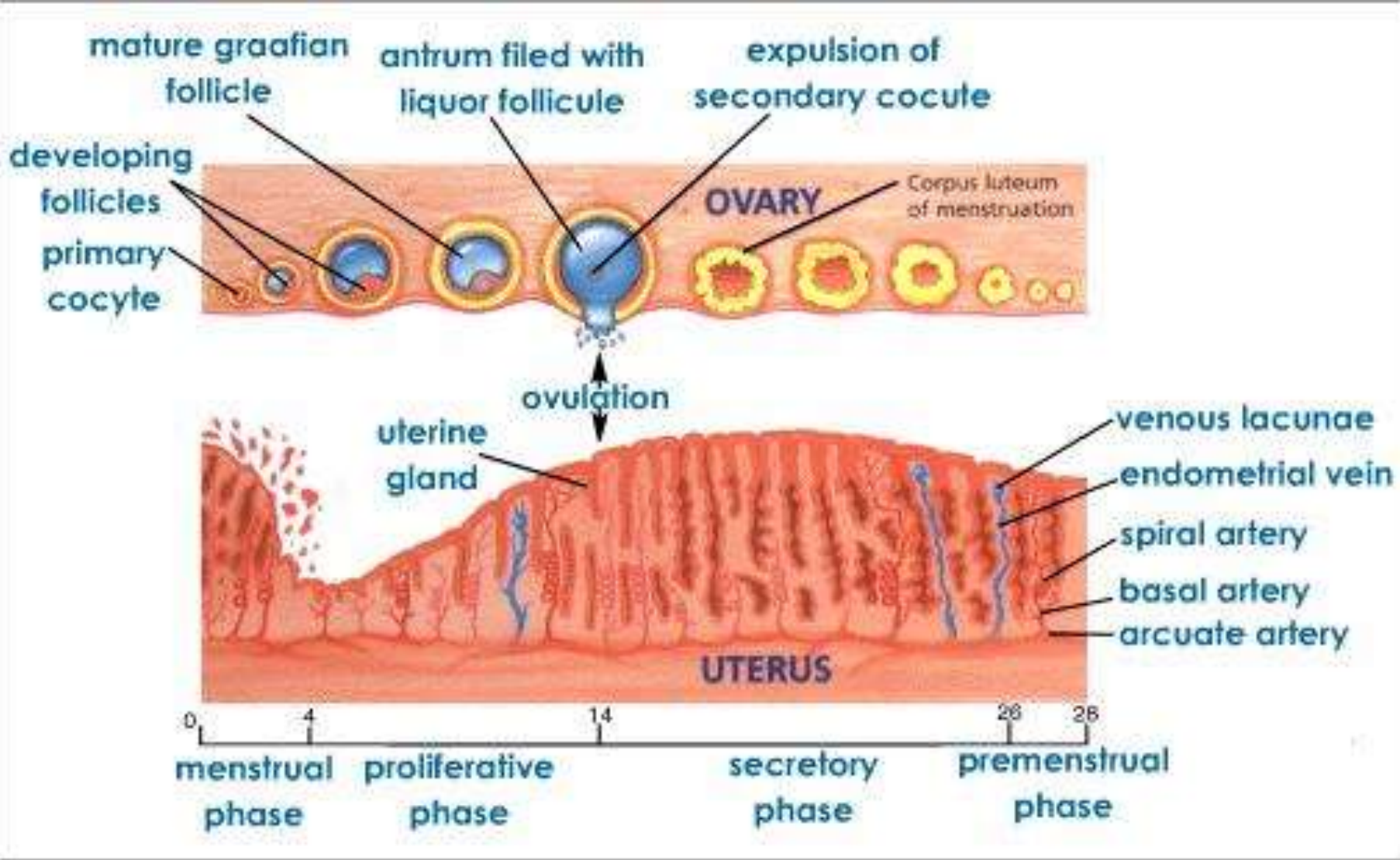
- **WOMEN**





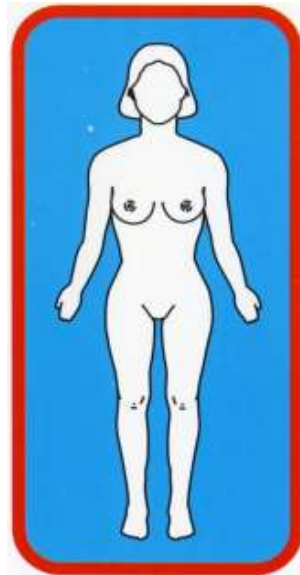
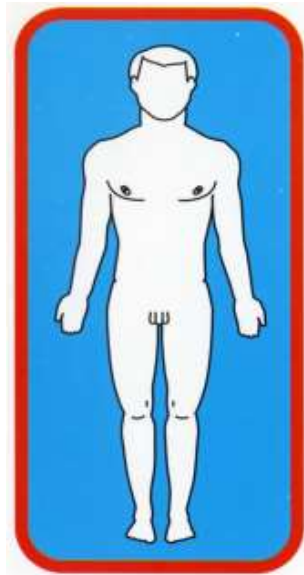
ADAM

ANATOMY

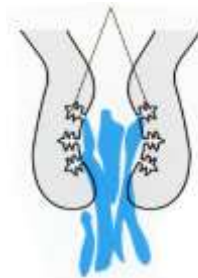


PHYSIOLOGY

The fertility of a couple is a sum of fertility of the man and woman and so in fact is conditioned by the cyclic fertility of the woman.

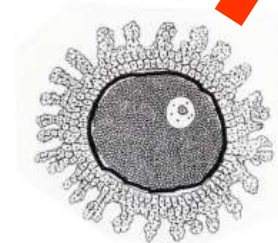


Sperm lives up to 7 days in fertile mucus



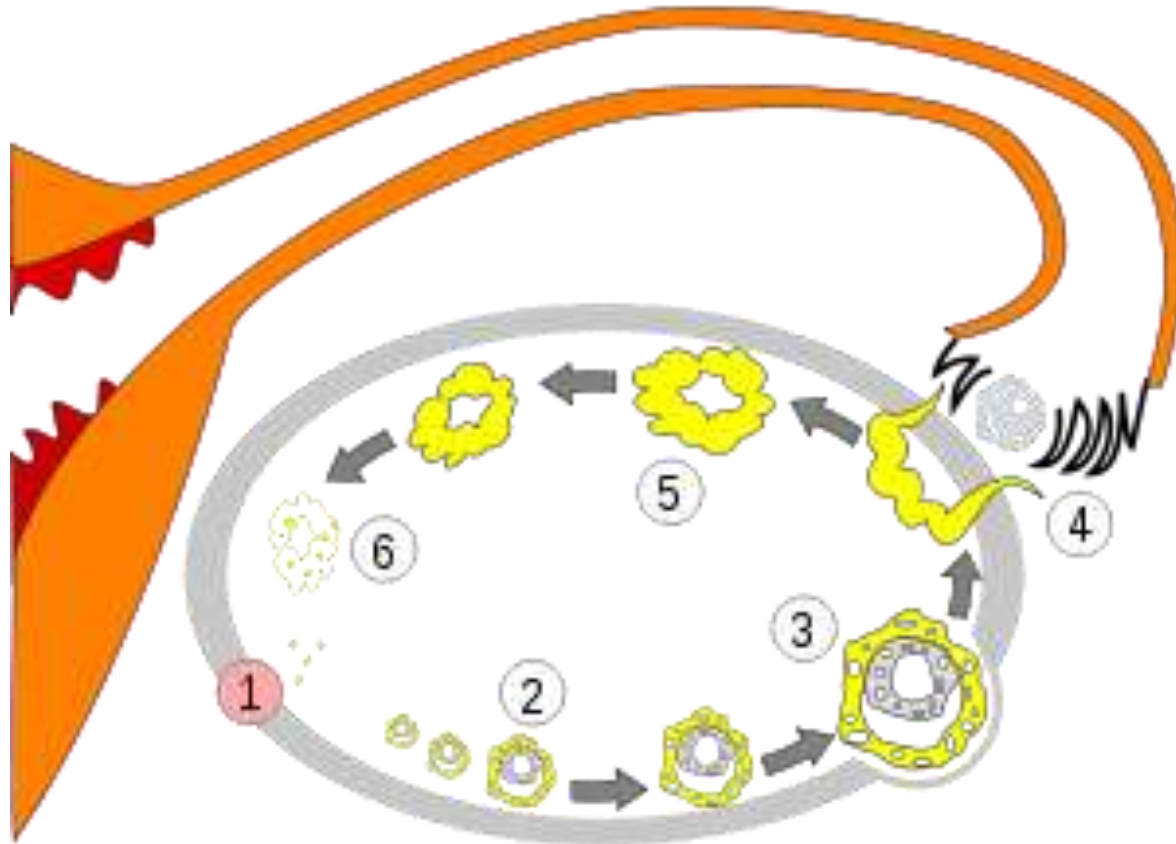
Cervix

Fertile mucus

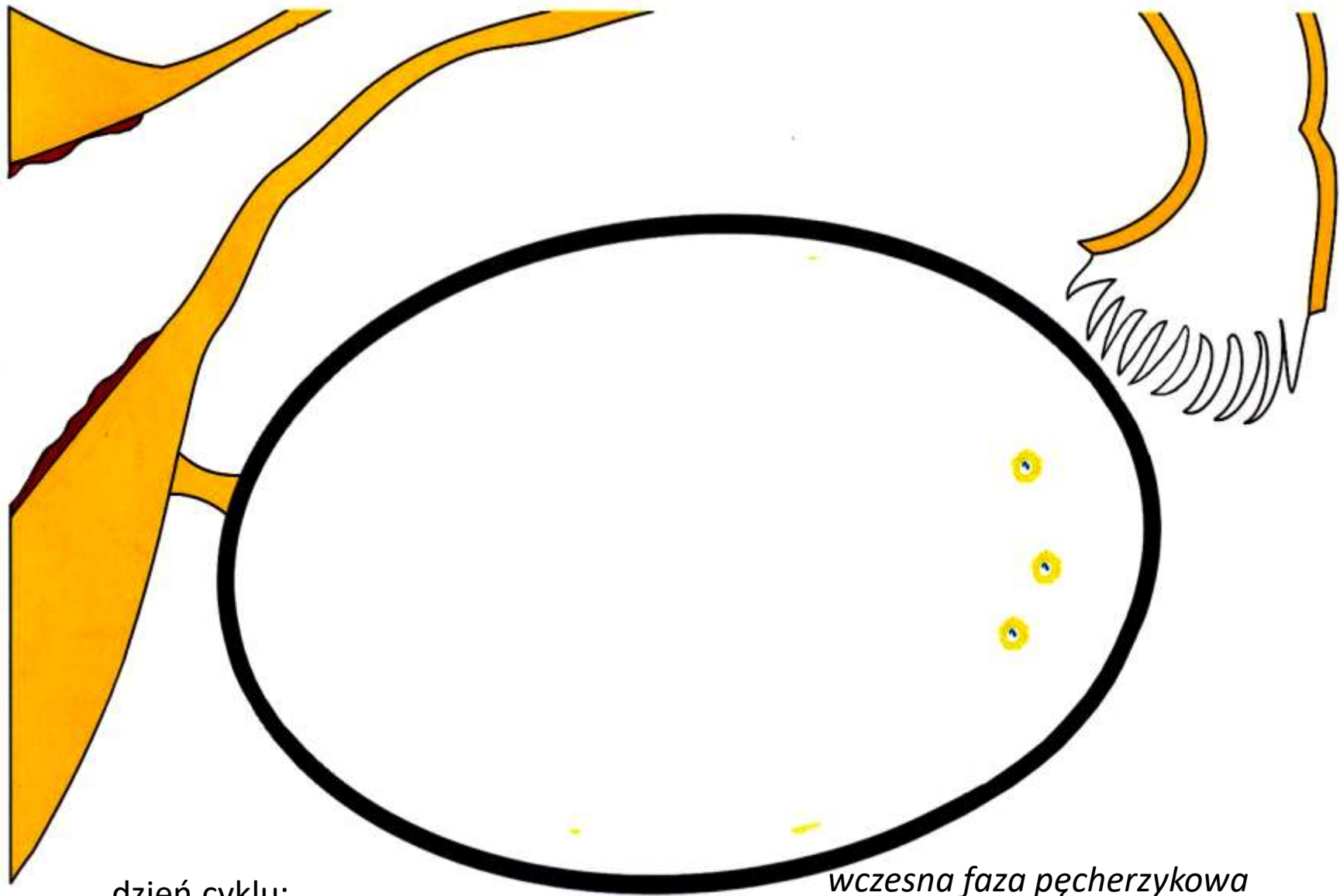


Egg lives up to 24 hours and can be inseminated up to 12 hours.





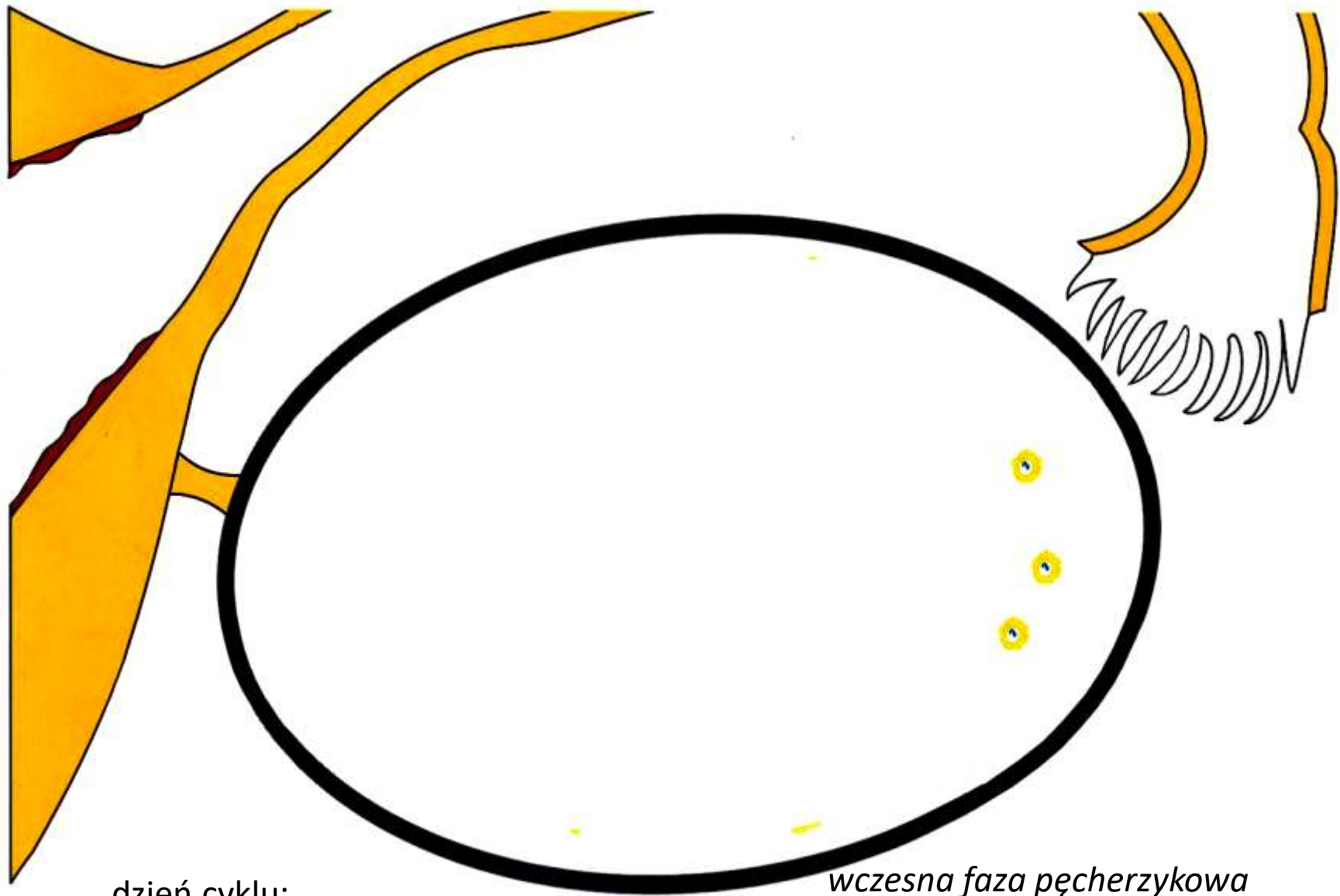
PHYSIOLOGY



dzień cyklu:



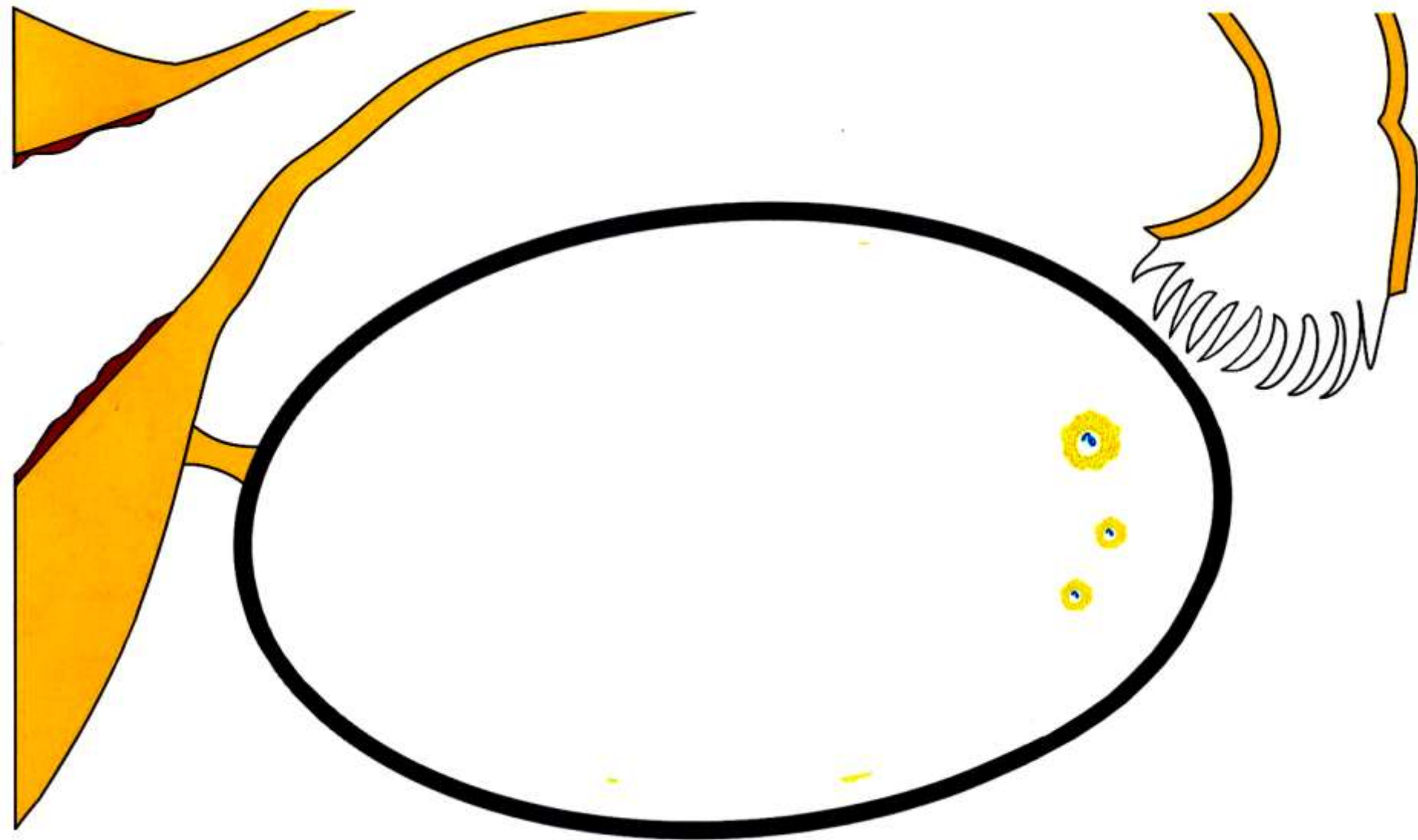
1 2 3 4 5



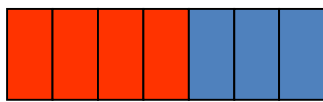
dzień cyklu:



1 2 3 4 5

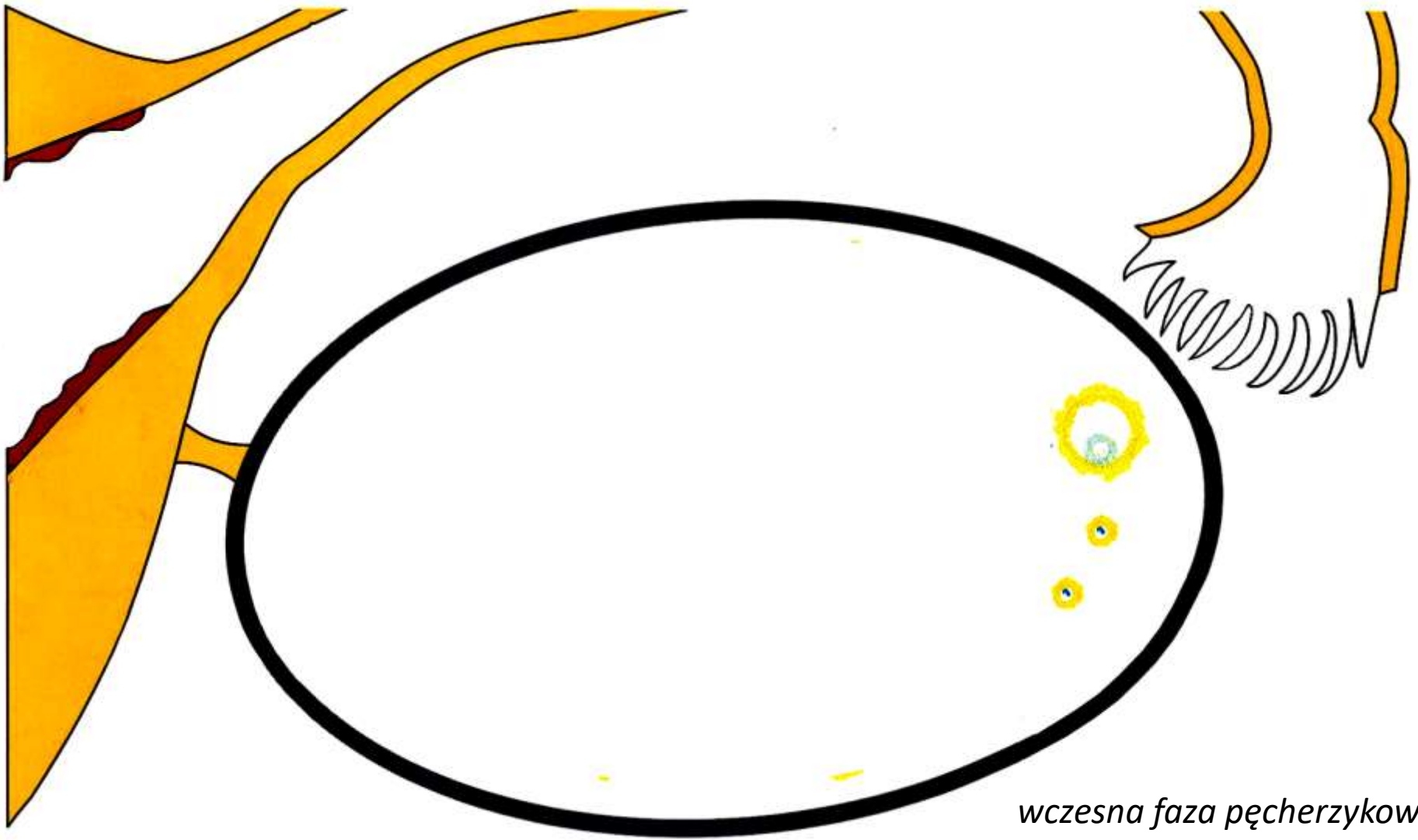


dzień cyklu:



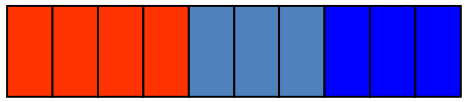
1 2 3 4 5 6 7

wczesna faza pęcherzykowa

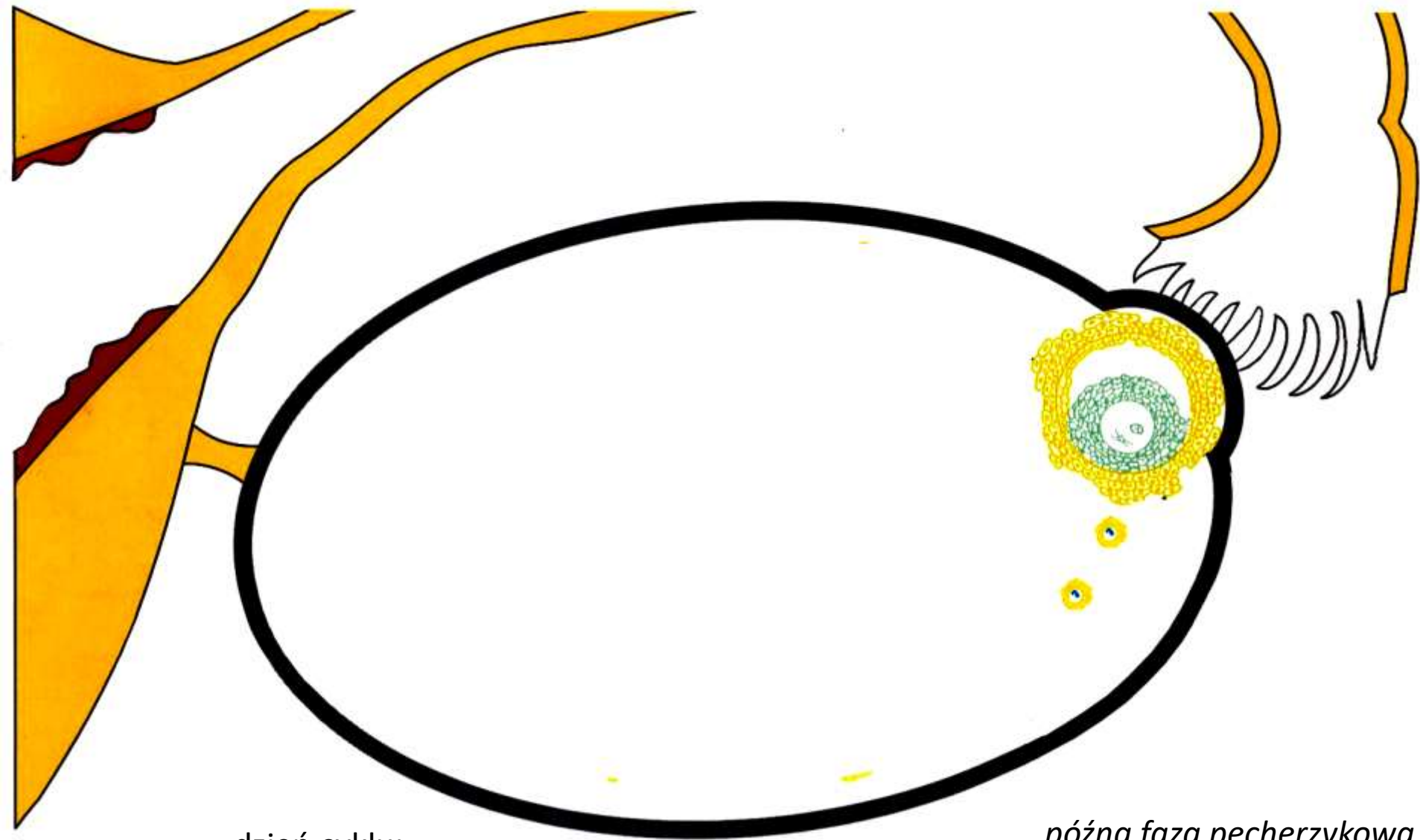


wczesna faza pęcherzykowa

dzień cyklu:



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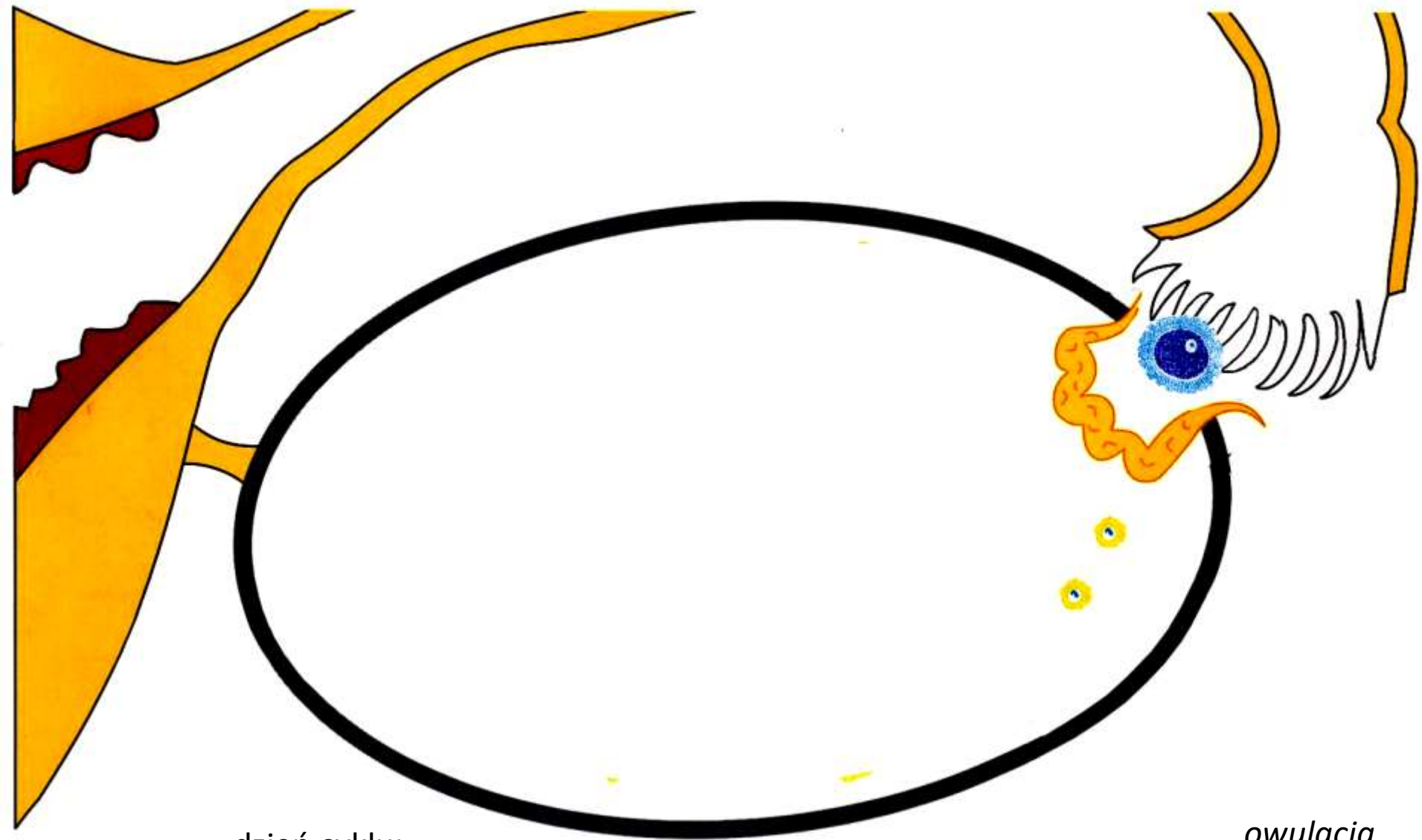


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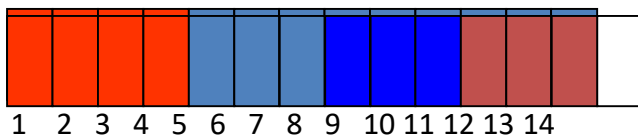


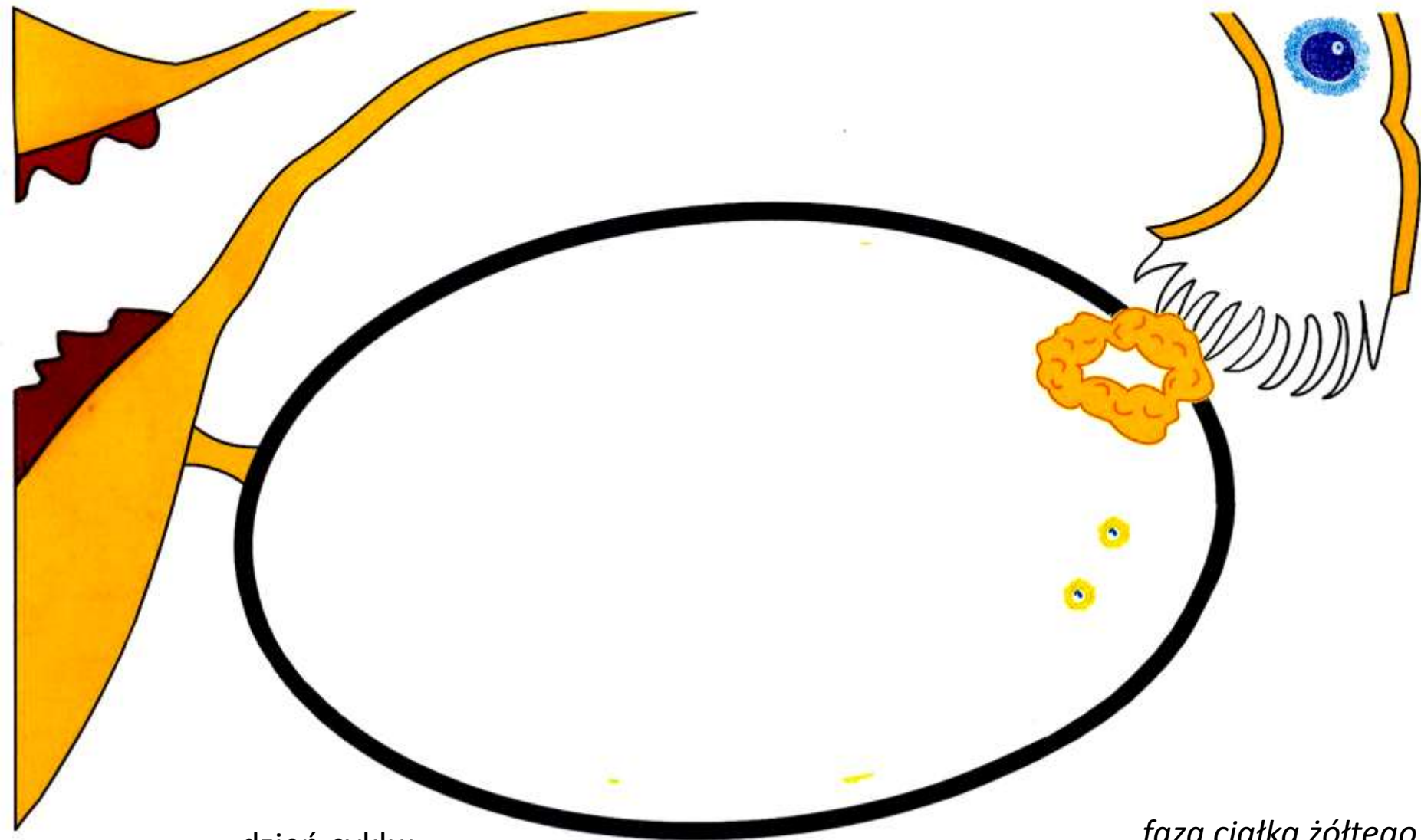
1 2 3 4 5 6 7 8 9 10 11 12 13

późna faza pęcherzykowa

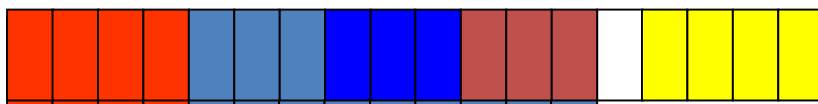


dzień cyklu:





dzień cyklu:



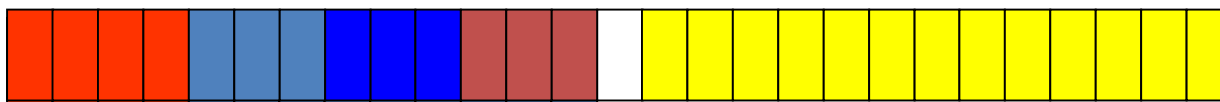
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

faza ciała żółtego

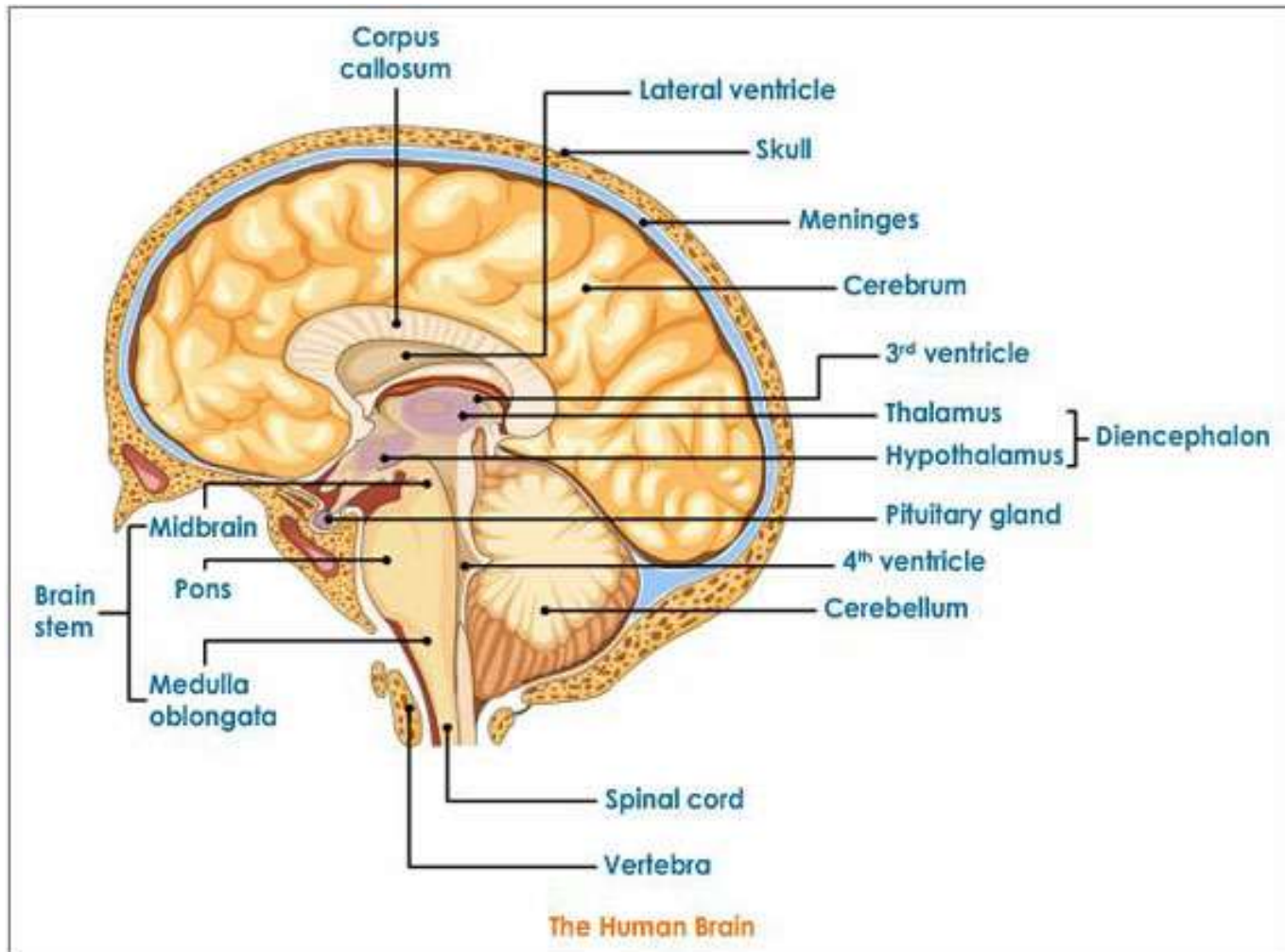


dzień cyklu:

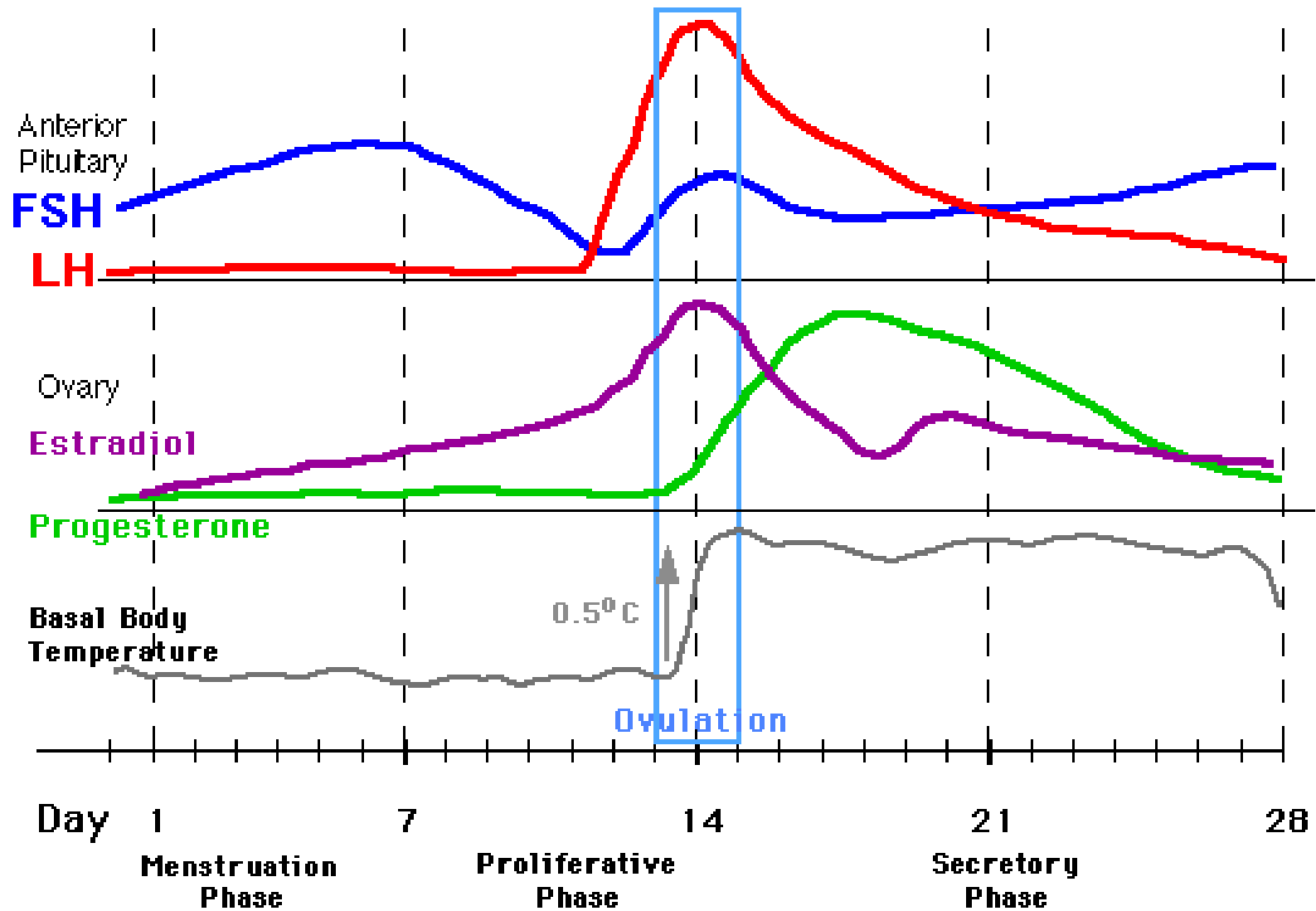
faza ciałka żółtego



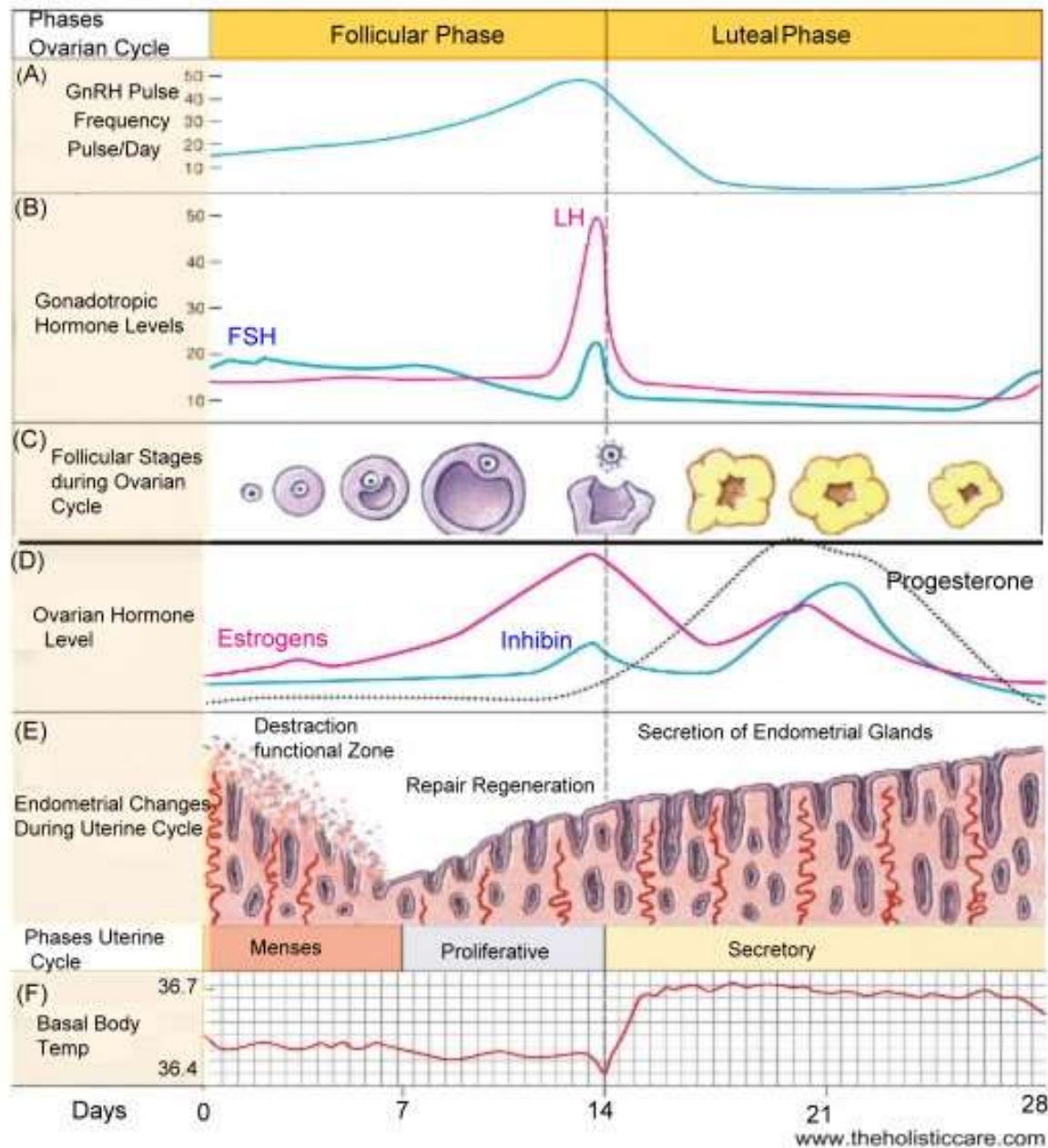
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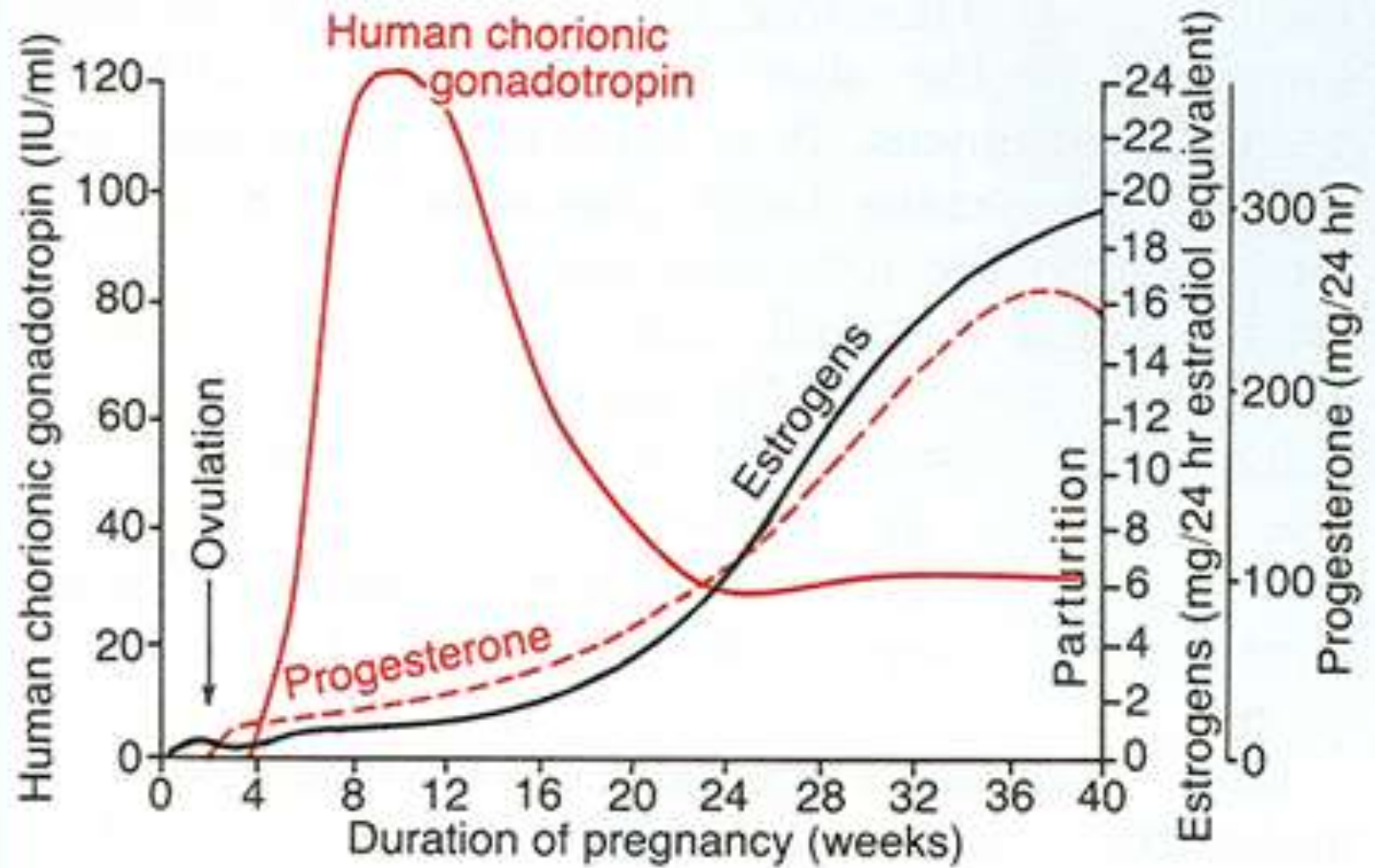
PHYSIOLOGY



PHYSIOLOGY



PHYSIOLOGY



PHYSIOLOGY- PREGNANCY

WHAT DO THE HORMONES DO?

Effects of Estrogen

Brain

Estrogen helps to maintain body temperature.

Estrogen may delay memory loss.

Estrogen helps to regulate parts of the brain that prepare the body for sexual and reproductive development.

Heart & Liver

Estrogen helps to regulate the liver's production of cholesterol, thus decreasing the build-up of plaque in the coronary arteries.

Ovary

Estrogen stimulates the maturation of the ovaries.

Estrogen stimulates the start of a woman's menstrual cycle – an indication that a girl's reproductive system has matured.

Vagina

Estrogen stimulates the maturation of the vagina.

Estrogen helps maintain a lubricated and thick vaginal lining.

Breast

Estrogen stimulates the development of the breasts at puberty and prepares the glands for future milk production.

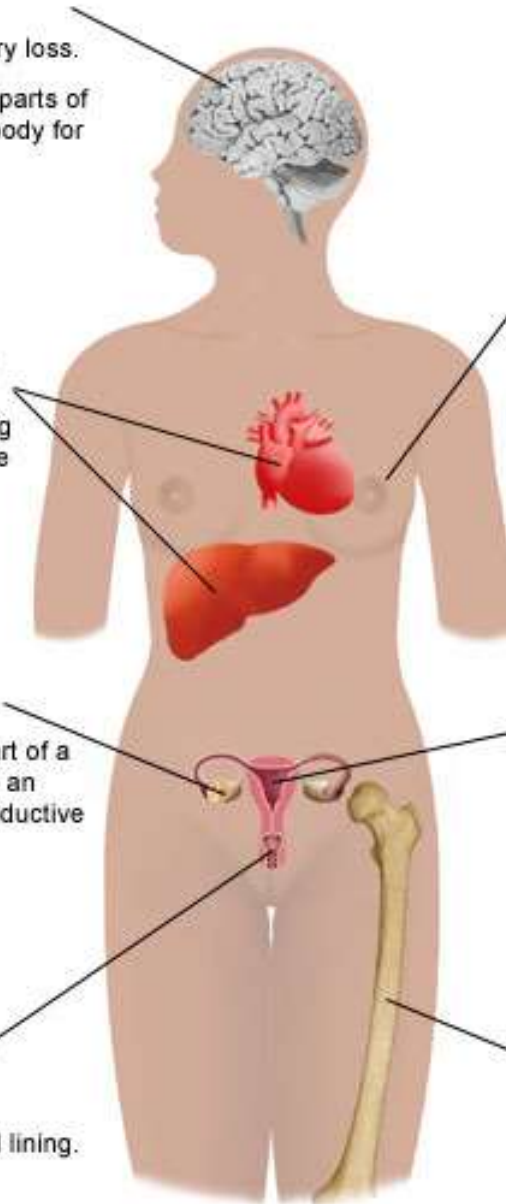
Uterus

Estrogen stimulates the maturation of the uterus.

Estrogen helps to prepare the uterus to nourish a developing fetus.

Bone

Estrogen helps to preserve bone density.



**TOO MUCH
ESTROGEN**

DVT

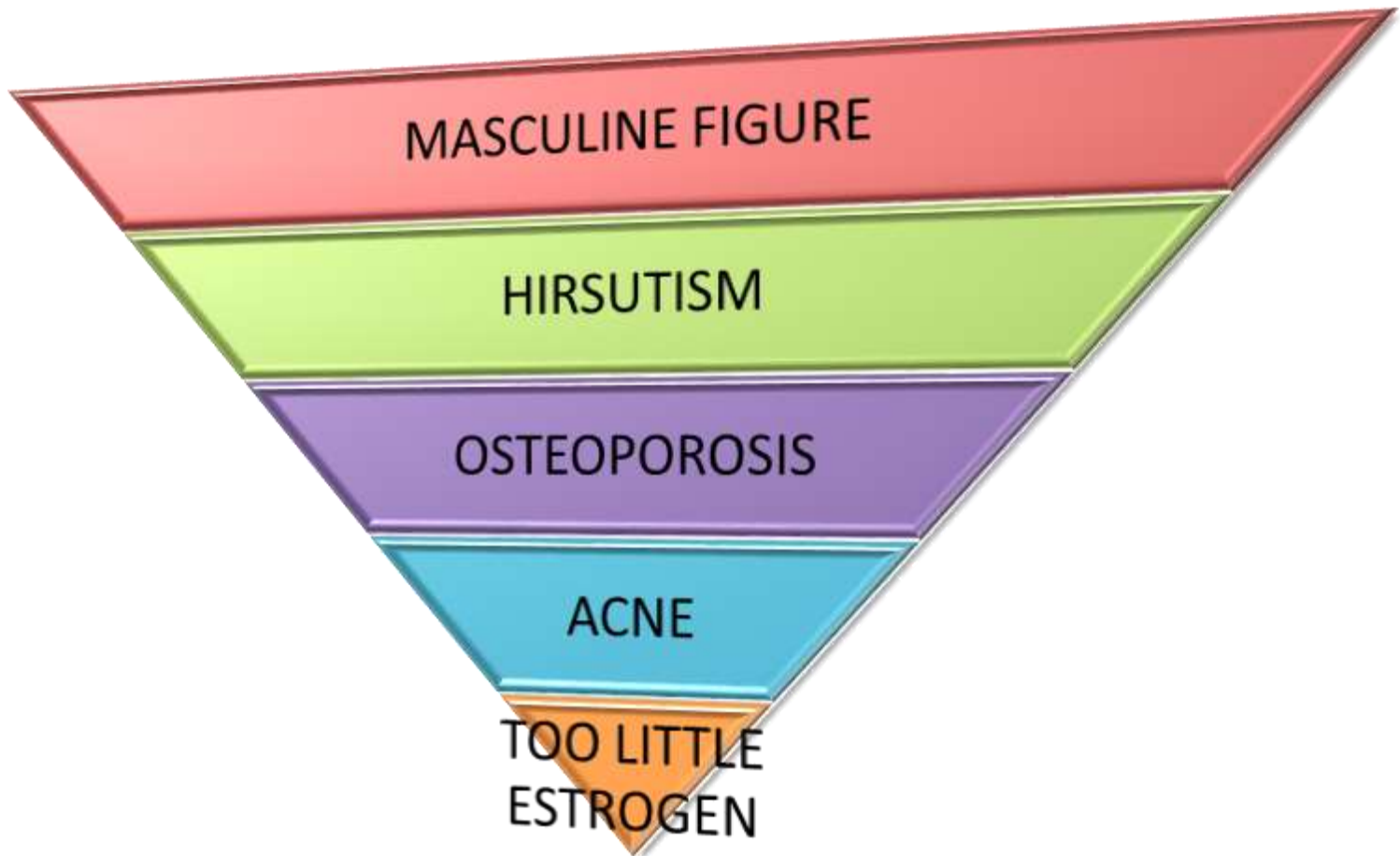
FEELING UNWELL

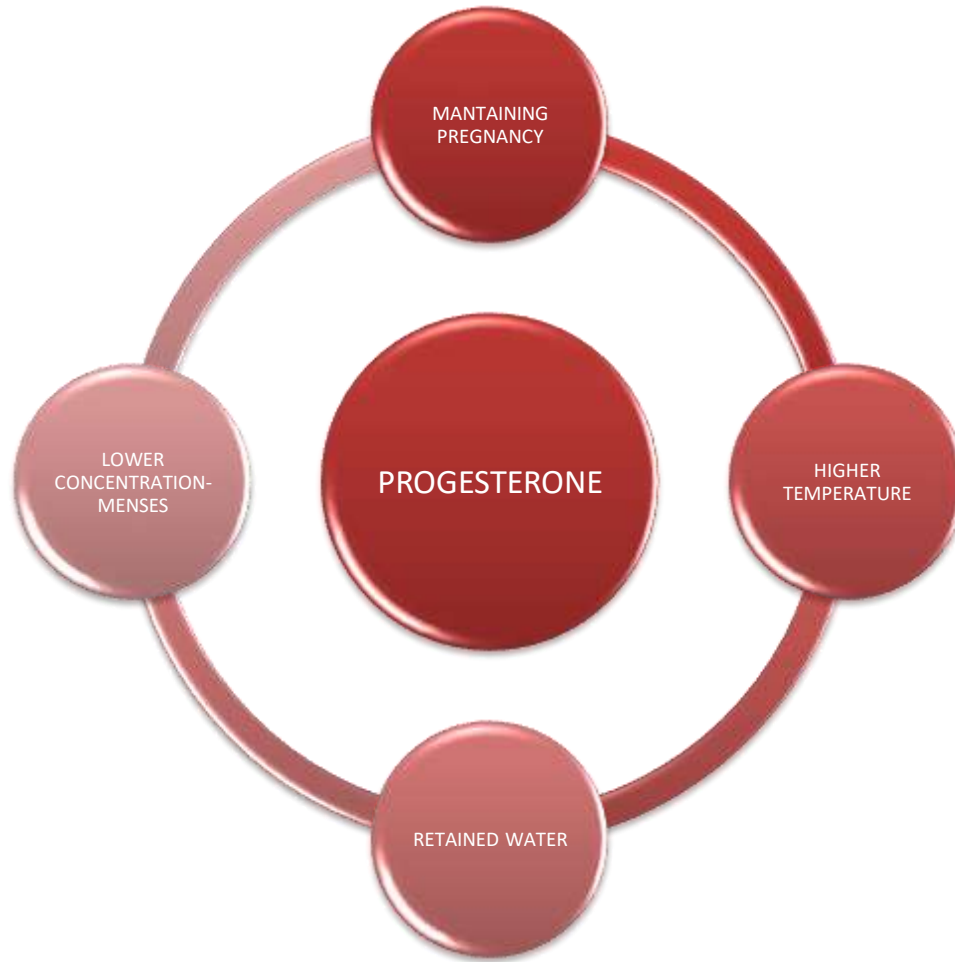
OBESITY

ENLARGEMENT OF BREASTS

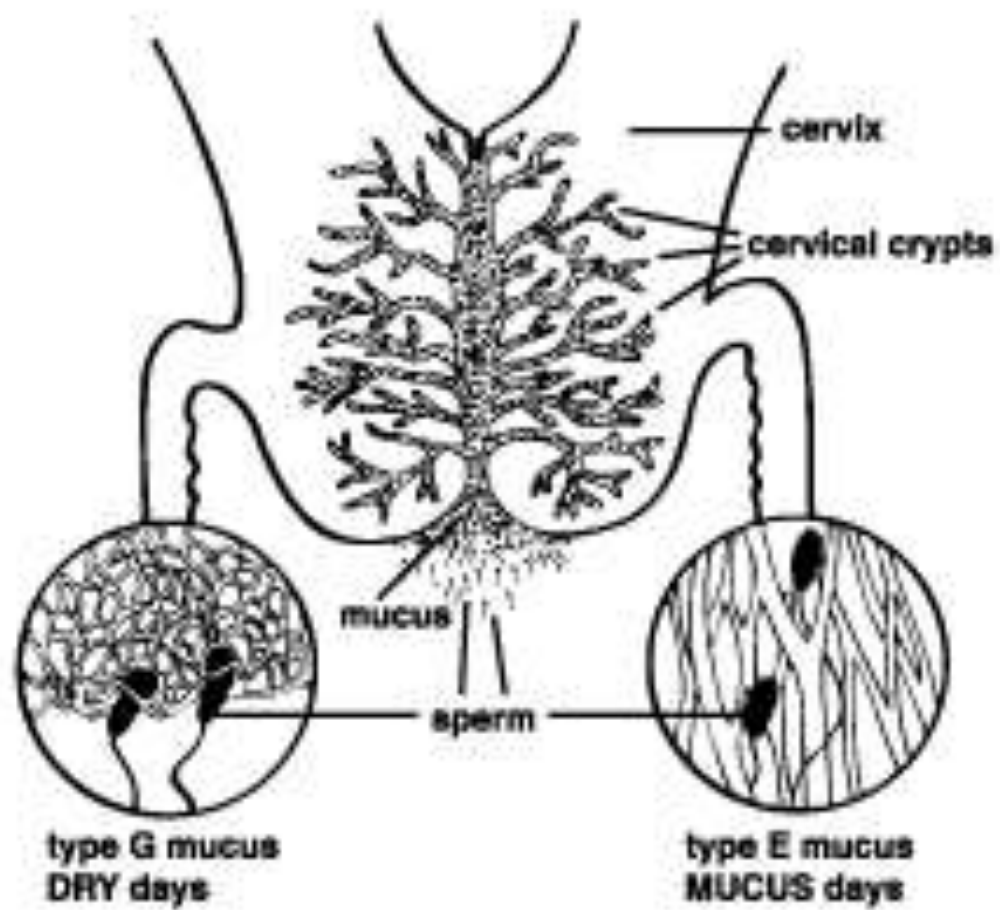
HEPATIC DISFUNCTION

OEDEMA









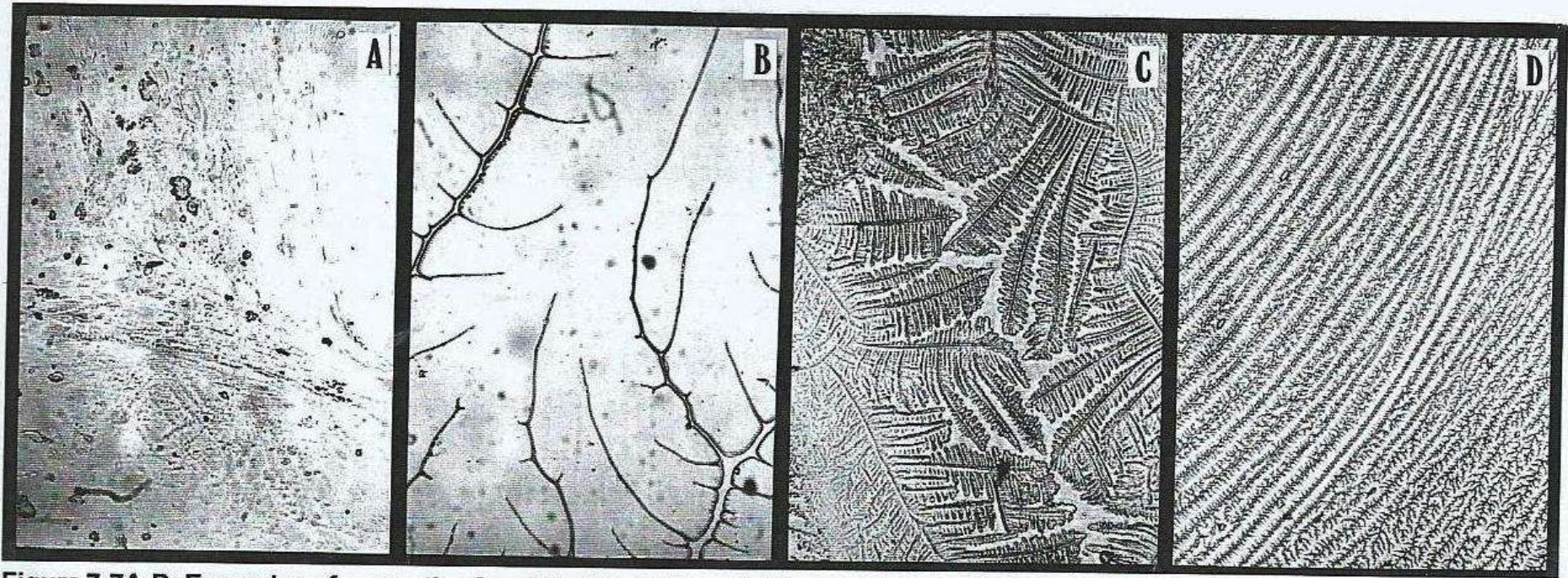


Figure 7-7A-D: Examples of a negative fern (A), channel formation when the fern is negative (B), a good positive fern (C), and the channel formation when the fern is good positive (D) (100X). (Reprinted with permission from the American College of Obstetricians and Gynecologists: Hilgers, T.W. and Prebil, A.M.: *The Ovulation Method – Vulvar Observations as an Index of Fertility/Infertility*. *Obstet Gynec.* 53:12-22, 1979).

Cervical mucus

Feeling:

dry



humid

wet



Appearance:

cloudy, sticky, tacky, dense

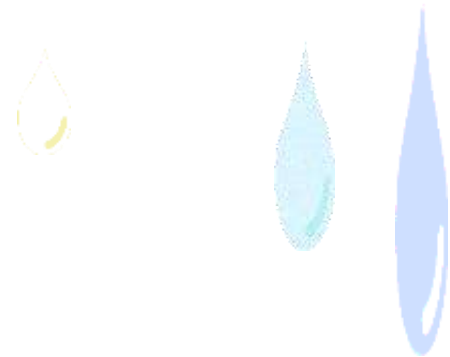
stretchy, transparent



Less fertile mucus



More fertile mucus



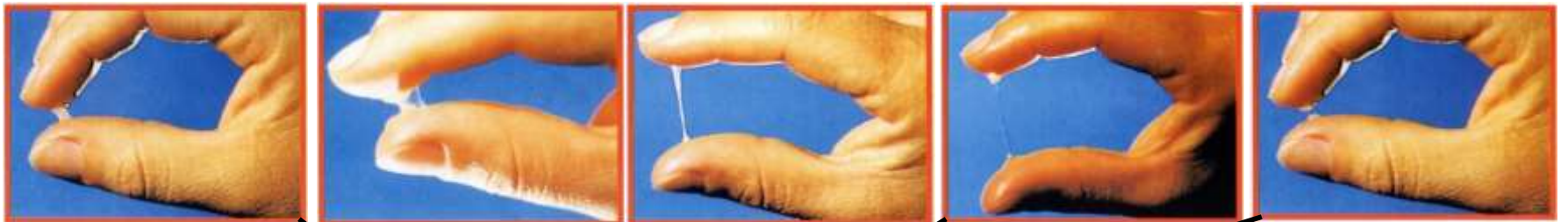
Śluz szyjkowy



Dzień cyklu																															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
Odczucie																															
KRWAWIENIE	KRWAWIENIE	KRWAWIENIE	KRWAWIENIE	SUCHO	SUCHO	SUCHO	SUCHO	SUCHO																							
Wygląd																															
KRWAWIENIE	KRWAWIENIE	KRWAWIENIE	KRWAWIENIE																												



Śluz szyjkowy



Dzień cyklu

1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---

2	23	24	25	26	27	28	29	30
---	----	----	----	----	----	----	----	----

Odczucie

KRWAWIENIE	KRWAWIENIE	KRWAWIENIE	KRWAWIENIE	SUCHO	SUCHO	SUCHO	SUCHO
------------	------------	------------	------------	-------	-------	-------	-------

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Wygląd

KRWAWIENIE	KRWAWIENIE	KRWAWIENIE	KRWAWIENIE						
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LEPKI	GĘSTY	ROZCIĄGLIWI	ROZCIĄGLIWI	GĘSTY															
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Table 7-3: Relationship of the Estimated Time of Ovulation Measured by Various Hormonal Methods and the Woman's Observation of the Peak Day, Published Evaluations^{22,25}

Investigator and Year of Study

Estimated Time of Ovulation to Peak Day	BILLINGS ^a Australia 1972		FLYNN ^b England 1976		CASEY ^c Australia 1978		HILGERS ^d USA 1978		CORTESI ^e Italy 1981	
	N	%	N	%	N	%	N	%	N	%
P-3	0	0.0	0	0.0	0	0.0	1	1.5	0	0.0
P-2	1	4.5	0	0.0	0	0.0	12	18.5	1	3.1
P-1	1	4.5	3	10.3	0	0.0	13	20.0	4	12.5
Peak Day	5	22.7	0	34.5	3	30.0	24	36.9	21	65.6
P+1	9	40.9	13	44.8	7	70.0	9	13.8	6	18.8
P+2	4	18.2	3	10.3	0	0.0	4	6.2	0	0.0
P+3	2	9.1	0	0.0	0	0.0	1	1.5	0	0.0
Np Peak	-	-	-	-	-	-	1	1.5	-	-
Totals	22	99.9	29	99.9	10	100.0	65	99.9	32	100.0

a. Used day after LH surge as estimated day of ovulation: P-2 to P+2 = 90.8 percent.

b. Used maximal mucus grading (MMG) which was defined as the maximum amount of clear mucus. Where equal scores occurred on two days, the second of these was taken as the maximum. Data has been recognized from the original to correlate MMG with the estimated time of ovulation as calculated as the day after the LH surge: P-1 to P+2=99.9.

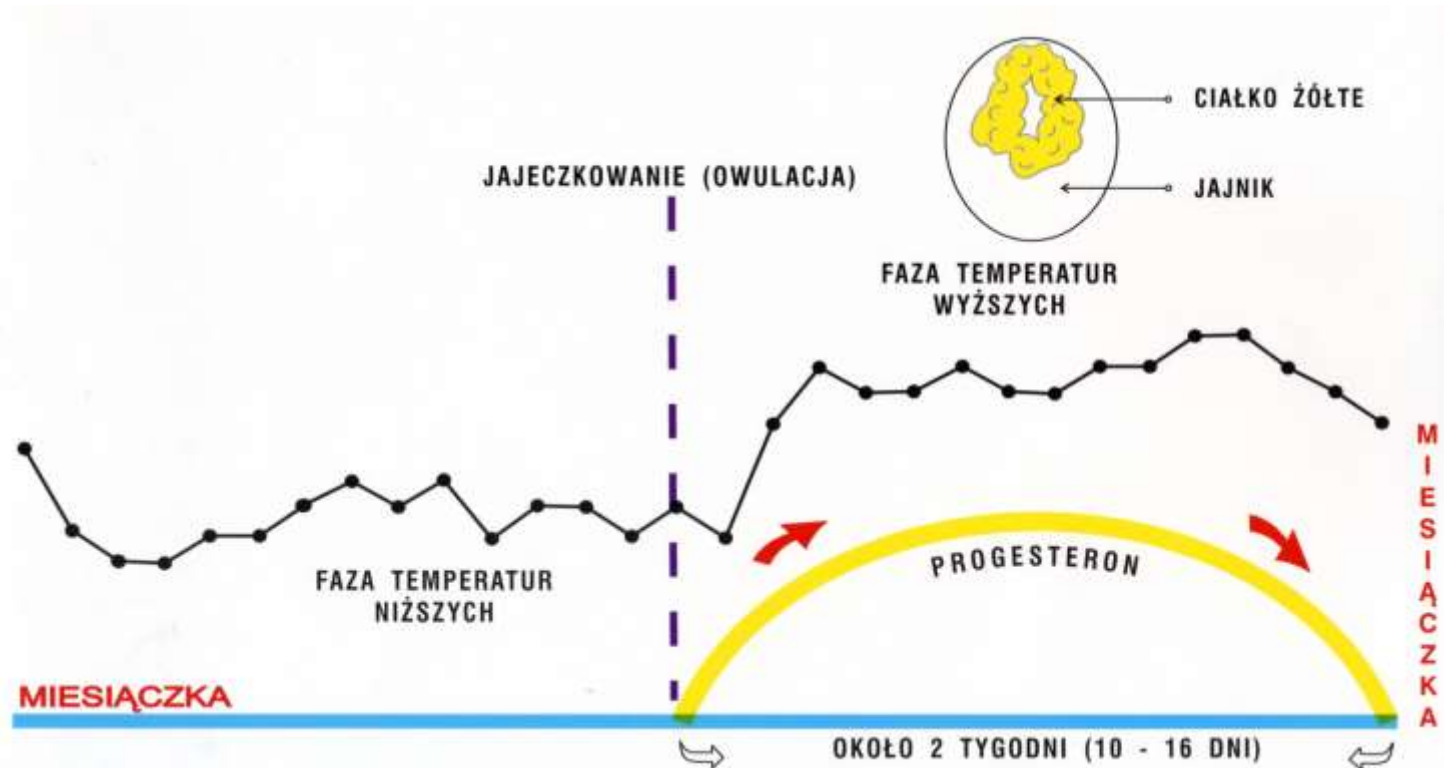
c. Used time between LH surge and rise in progesterone to estimate time of ovulation: Peak to P+1=100.0 percent.

d. Used midpoint in progesterone rise from 1.0-2.3 ng/ml to estimated time of ovulation: P-2 to P+2=95.4 percent.

e. Used day after LH Peak as estimated time of ovulation: P-2 to P+1=100.0 percent.

The changes in basic body temperature

After 3 hours of sleep, after waking up, before getting up in vagina, rectum or in mouth.



What can affect the basic temperature?

- illness
- medicine,
- tiredness,
- stress,
- climate change,
- alcohol,
- changing thermometer,
- different time of measurement...

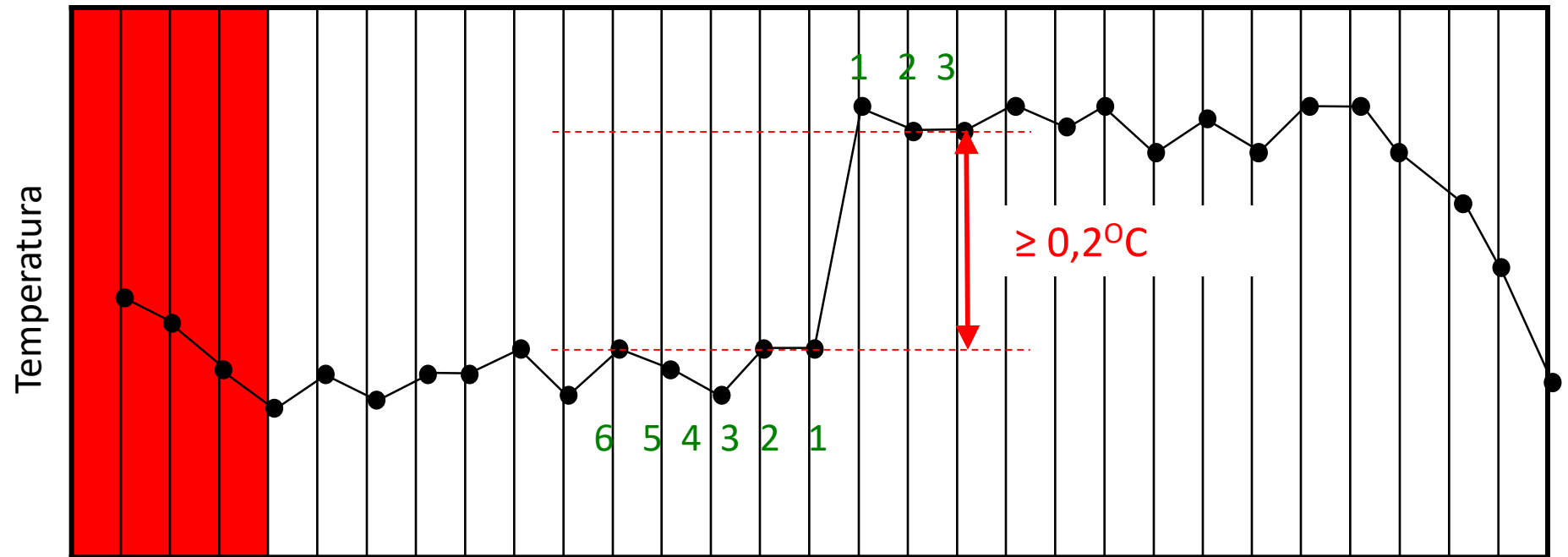


Podstawowa Temperatura Ciała (PTC)

Dzień cyklu

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

PTC



CERVIX

Beginning of cycle:

- low,
- closed,
- hard.

As biomarkers show:

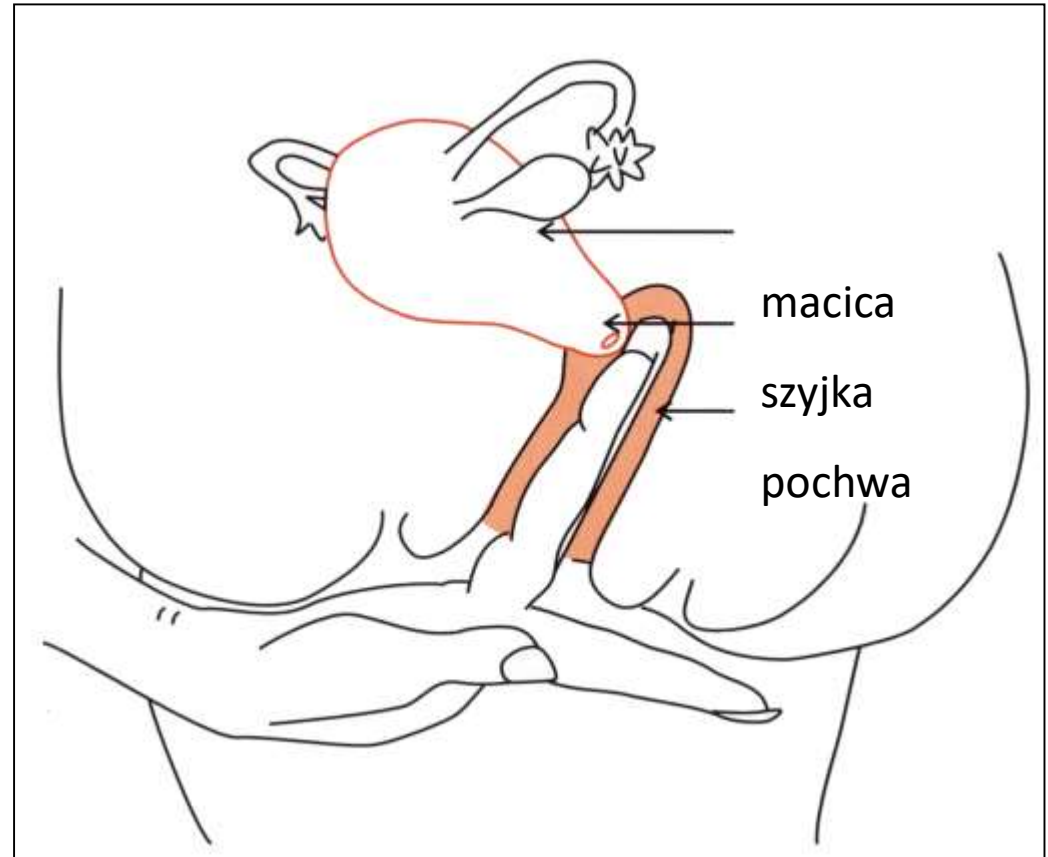
- higher,
- more open,
- soft.

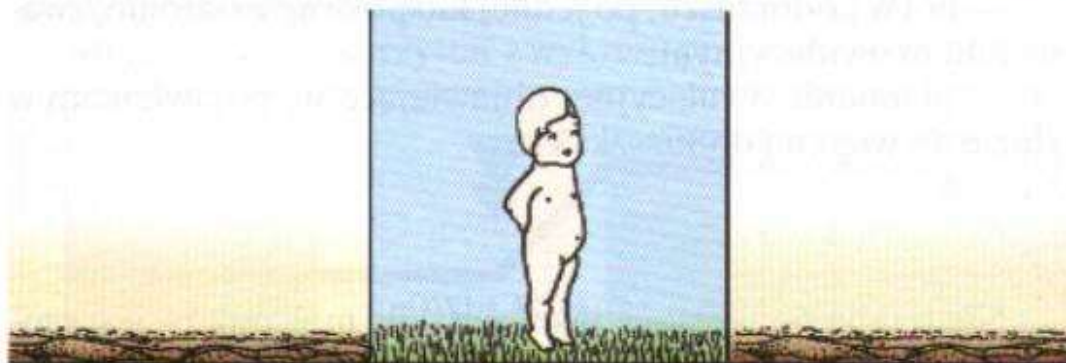
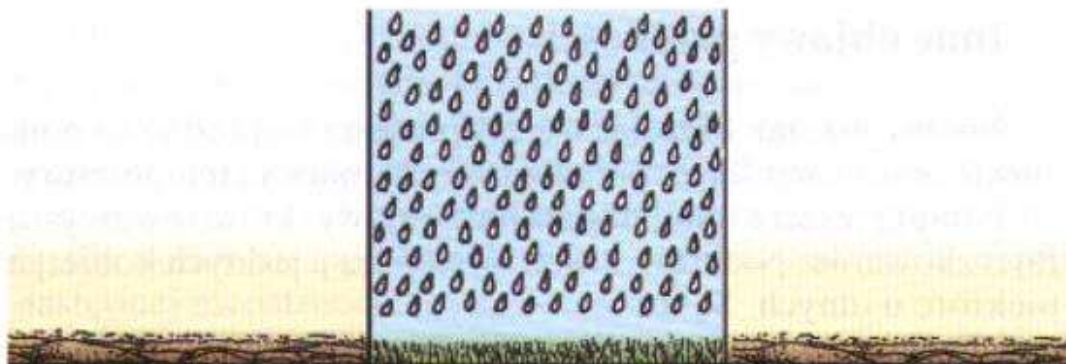
Ovulation:

- high,
- open,
- soft.

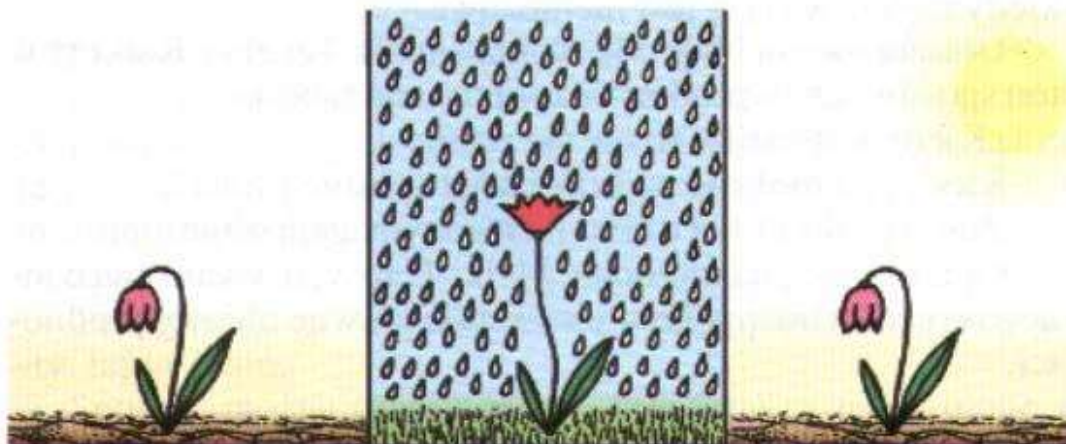
After ovulation:

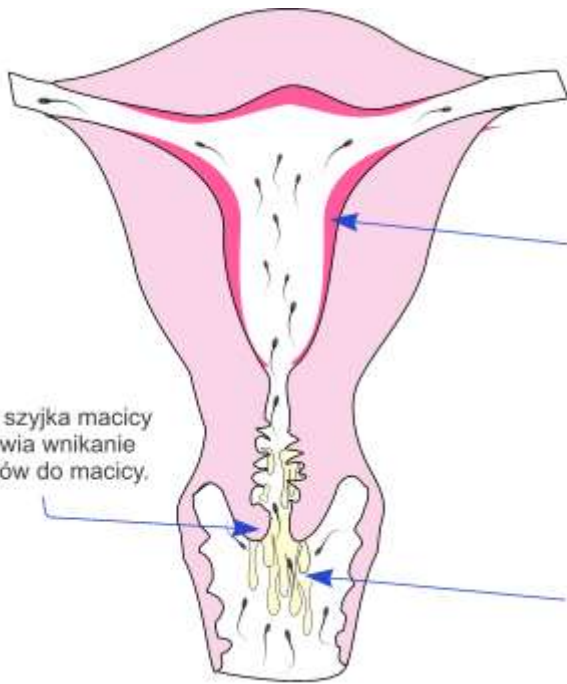
- low,
- closed,
- hard.





Rys. 13 i 14. Ilustracje Matki Teresy z Kalkuty

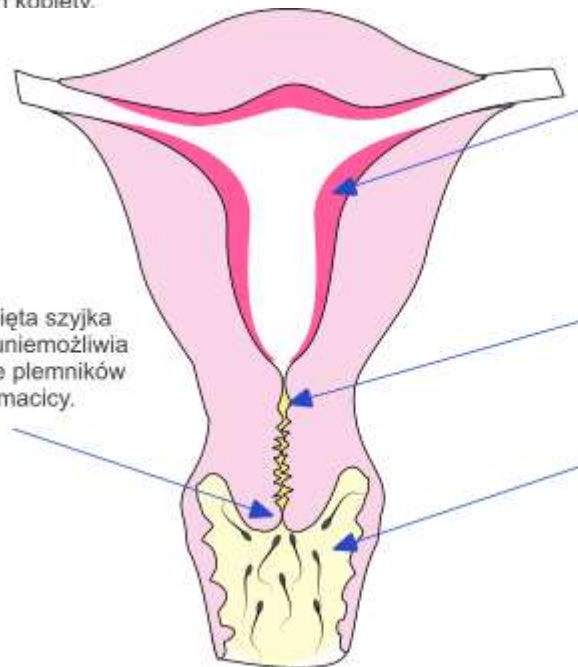




Błona śluzowa macicy (endometrium) w której rozrastają się naczynia krwionośne

Otwarta szyjka macicy umożliwia wnikanie plemników do macicy.

Śluz estrogenozależny, który jest doskonałym środowiskiem dla przeżycia plemników w narządach rodnych kobiet.



Rozrośnięta i mocno ukrwiona błona śluzowa macicy (endometrium) w której rozrastają się naczynia krwionośne

Gęsty śluz szyjkowy (czop śluzowy) wypełniający szyjkę macicy.

Kwaśne środowisko pochwy, w którym plemniki giną w ciągu kilku godzin.

Zamknięta szyjka macicy uniemożliwia wnikanie plemników do macicy.

Występowanie owulacji zależnie od długości cyklu

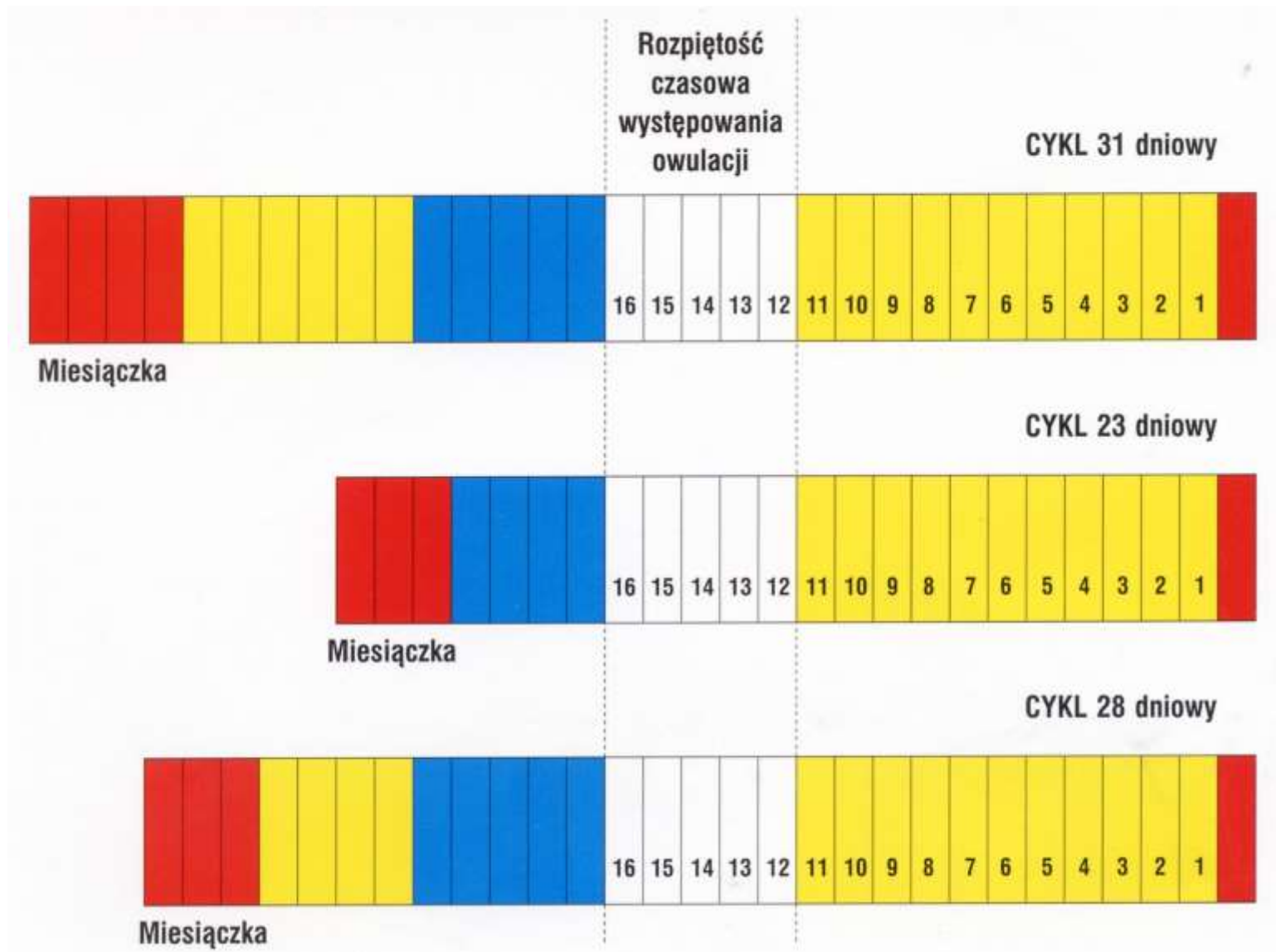


Table 7-3: Relationship of the Estimated Time of Ovulation Measured by Various Hormonal Methods and the Woman's Observation of the Peak Day, Published Evaluations^{22,25}

Investigator and Year of Study

Estimated Time of Ovulation to Peak Day	BILLINGS ^a Australia 1972		FLYNN ^b England 1976		CASEY ^c Australia 1978		HILGERS ^d USA 1978		CORTESI ^e Italy 1981	
	N	%	N	%	N	%	N	%	N	%
P-3	0	0.0	0	0.0	0	0.0	1	1.5	0	0.0
P-2	1	4.5	0	0.0	0	0.0	12	18.5	1	3.1
P-1	1	4.5	3	10.3	0	0.0	13	20.0	4	12.5
Peak Day	5	22.7	0	34.5	3	30.0	24	36.9	21	65.6
P+1	9	40.9	13	44.8	7	70.0	9	13.8	6	18.8
P+2	4	18.2	3	10.3	0	0.0	4	6.2	0	0.0
P+3	2	9.1	0	0.0	0	0.0	1	1.5	0	0.0
Np Peak	-	-	-	-	-	-	1	1.5	-	-
Totals	22	99.9	29	99.9	10	100.0	65	99.9	32	100.0

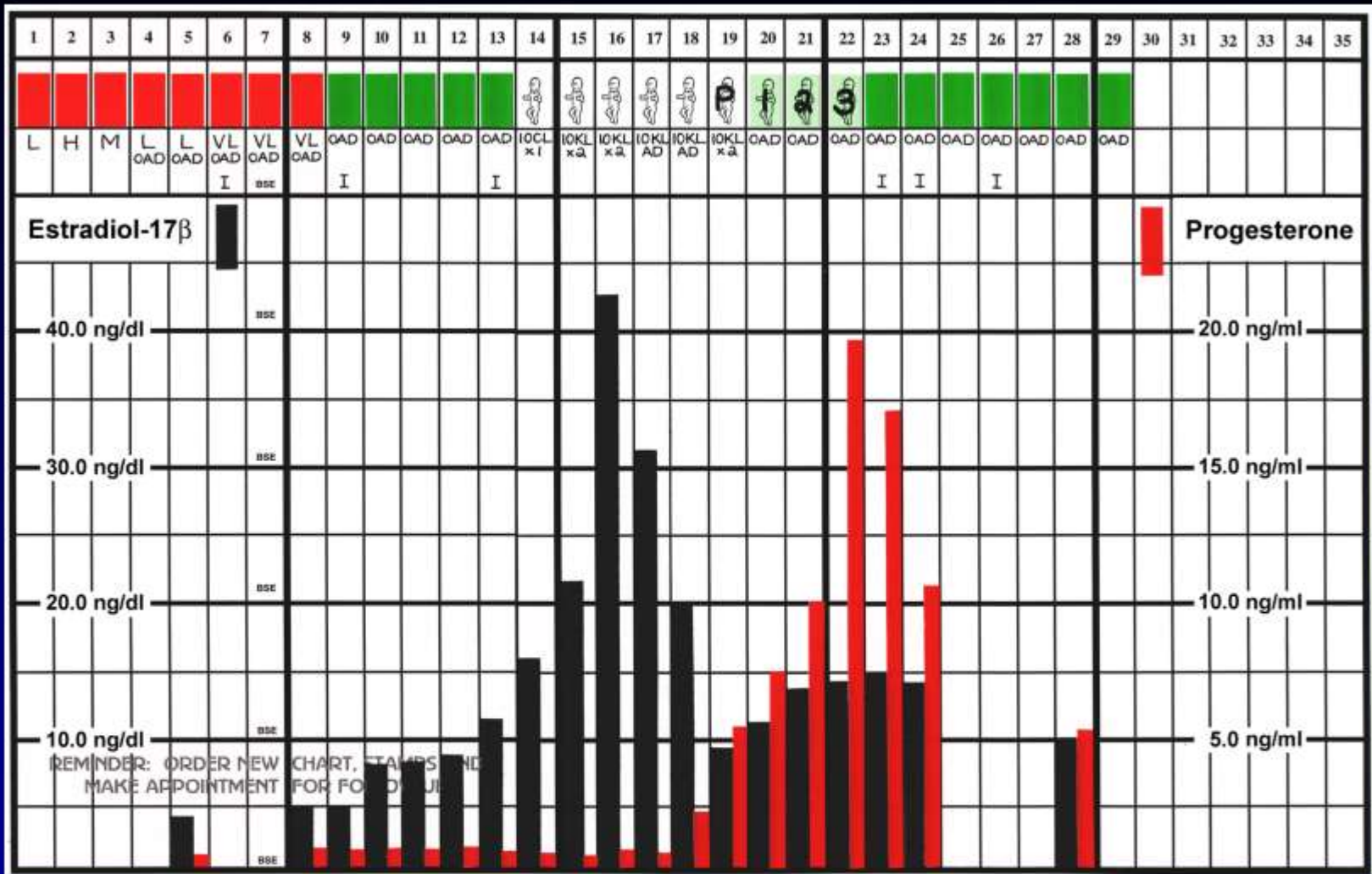
a. Used day after LH surge as estimated day of ovulation: P-2 to P+2 = 90.8 percent.

b. Used maximal mucus grading (MMG) which was defined as the maximum amount of clear mucus. Where equal scores occurred on two days, the second of these was taken as the maximum. Data has been recognized from the original to correlate MMG with the estimated time of ovulation as calculated as the day after the LH surge: P-1 to P+2=99.9.

c. Used time between LH surge and rise in progesterone to estimate time of ovulation: Peak to P+1=100.0 percent.

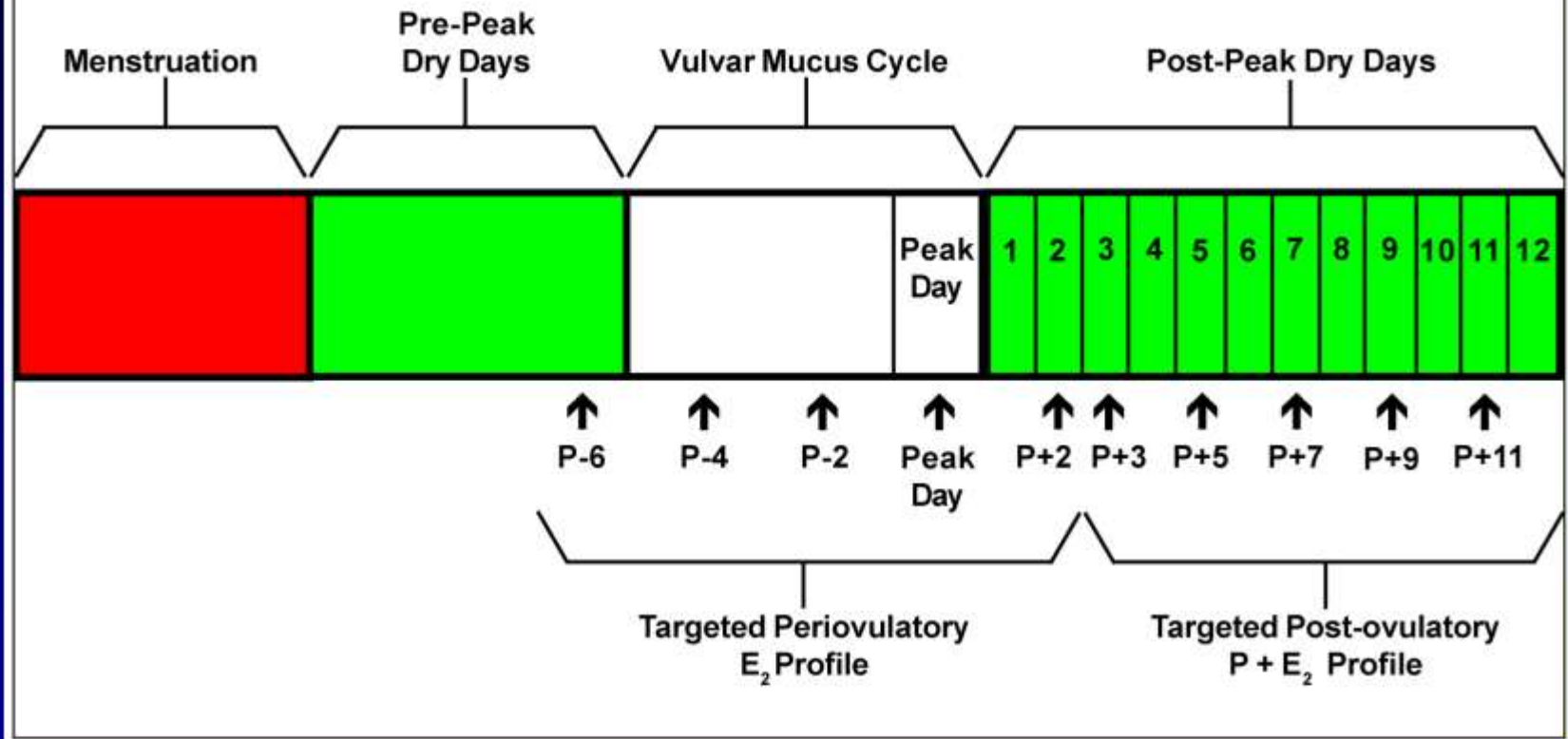
d. Used midpoint in progesterone rise from 1.0-2.3 ng/ml to estimated time of ovulation: P-2 to P+2=95.4 percent.

e. Used day after LH Peak as estimated time of ovulation: P-2 to P+1=100.0 percent.



The relationship of serum levels of estradiol-17β and progesterone during the course of the menstrual cycle and the occurrence of the mucus sign and the Peak Day (P) in one cycle of a woman with normal fertility.

CREIGHTON MODEL *FertilityCare*[™] System Targeted Periovulatory and Post-ovulatory Hormone Profiles



This schematic drawing of the **CrMS** demonstrates how it is used to target the periovulatory and postovulatory hormone profiles.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
M	M	M	M	L	VL																														
				o	o	o	o	x	o	o	2	o	o	8K	2	o	o	o	o	2	o	o	o	o	o	o	o	2							
H	H	M	L	VL	VL																														
			o	o	o	4	4	2	2	4	8c	10c	10K	10K	10K	10K	6c	o	o	o	2														
M	H	H	M	L	VL																			B	B	VL	VL	VL							
			o	2	o	o	o	4	4	2	8c	8K	10c	10c	8c	o	2	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	2	o	o
H	M	L	VL	VL	VL	VL	VL	VL	VL	VL	VL	VL						VL																	
		o	o	o	o	o	o	o	2	o	2	o	o	o	2	o	2	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o

INFERTILITY

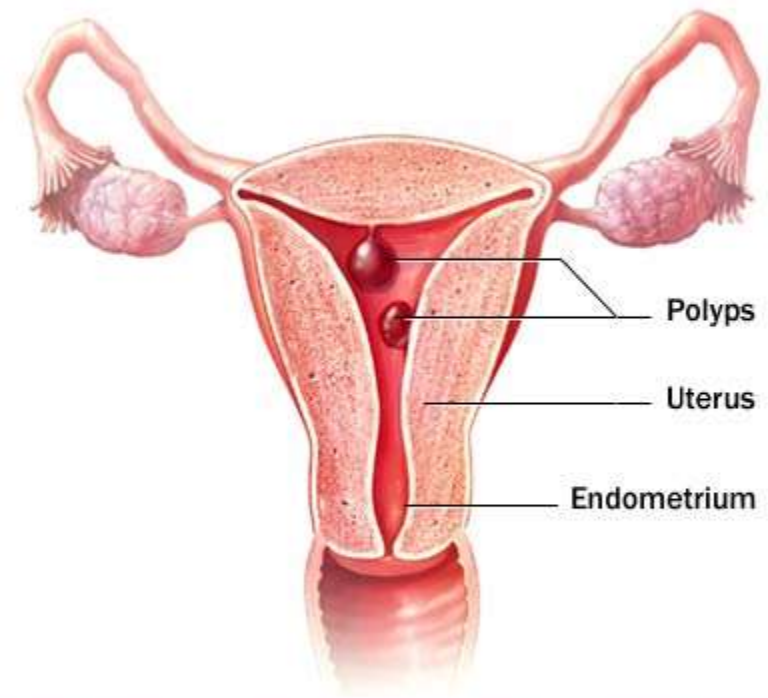
MISCARRIAGE

**LOW
PROGESTERONE**

**ABNORMAL
BLEEDING**

NAPROTRACKING[®] FOR A WOMAN'S HEALTH

- Irregular menses
- Intensity of menses
- Acyclic bleedings
- Intracyclic spotting

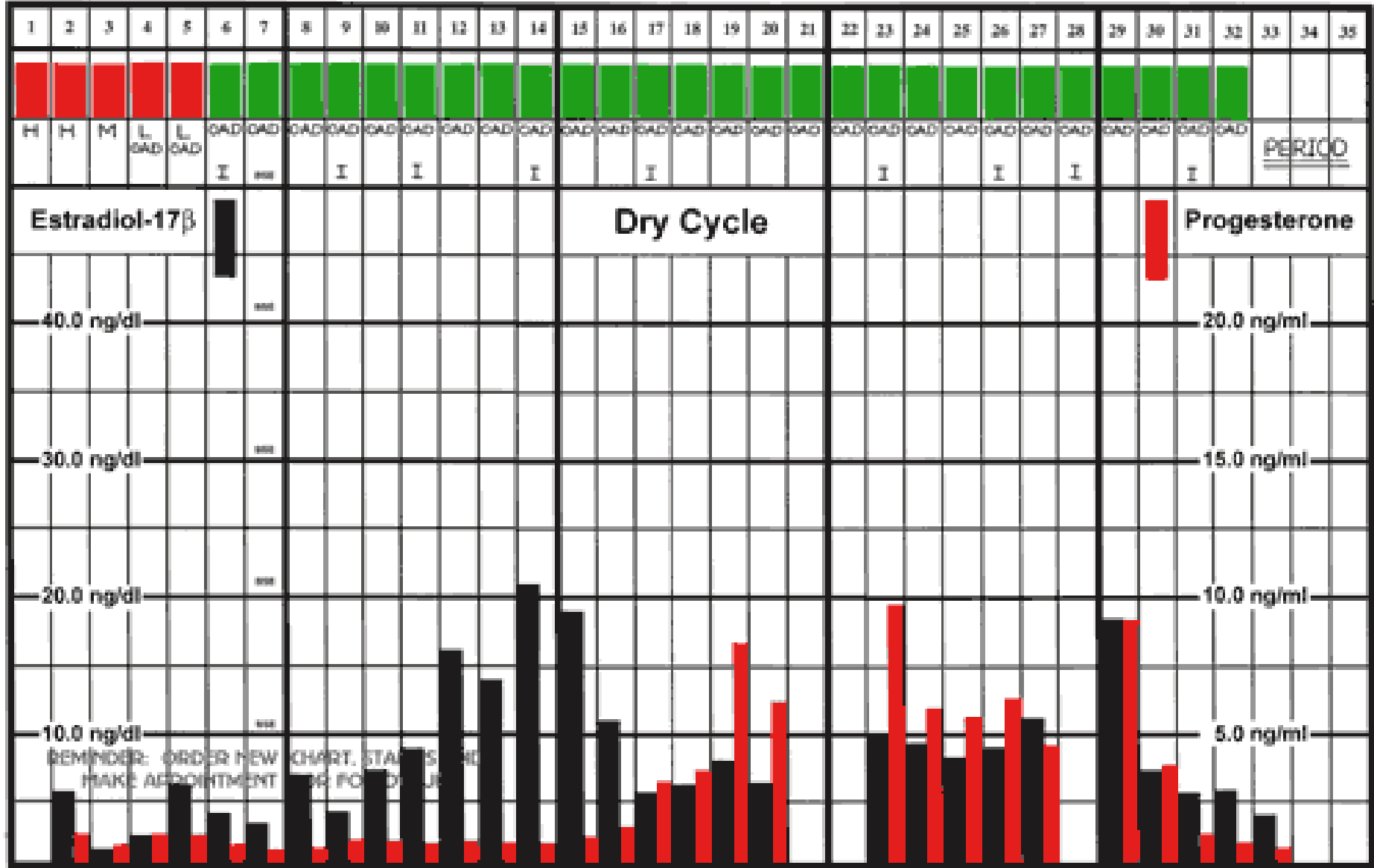


- Painful menses
- Infections



- Myomas
- Polyps
- Insufficiency of corpus luteum
- Other hormonal symptoms

- Changes in mucus
- Anovulation



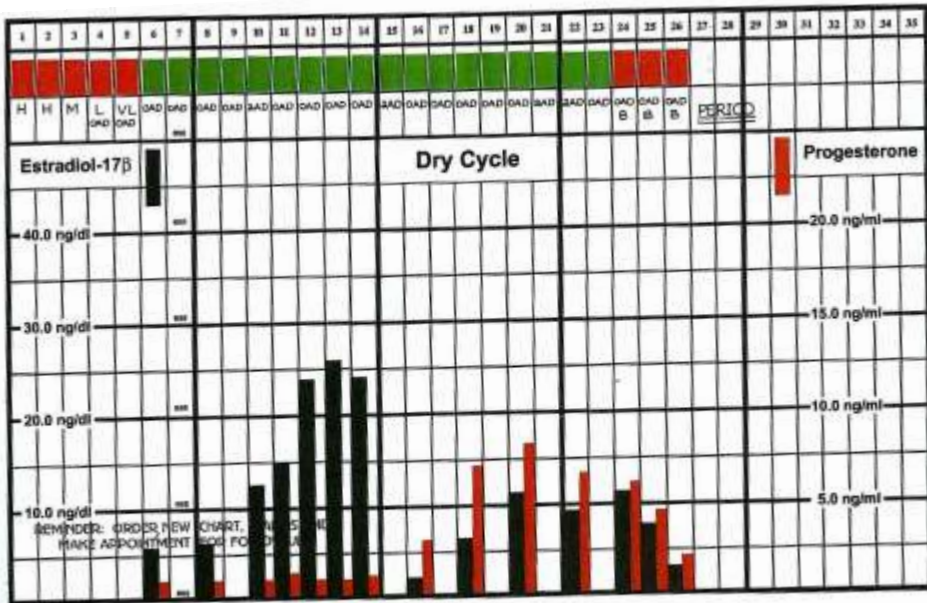


Figure 26-20: Another dry cycle with decreased hormone parameters (see text).

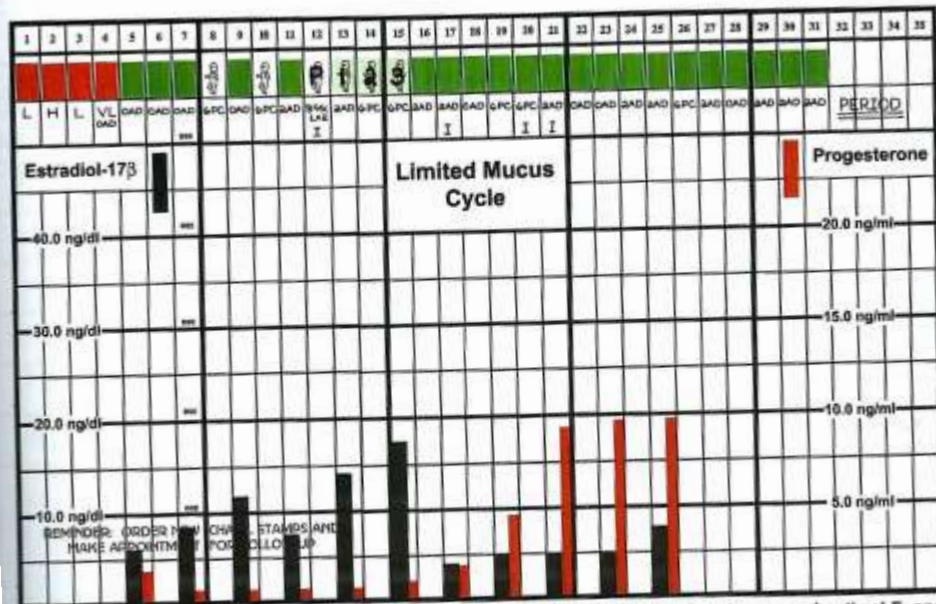
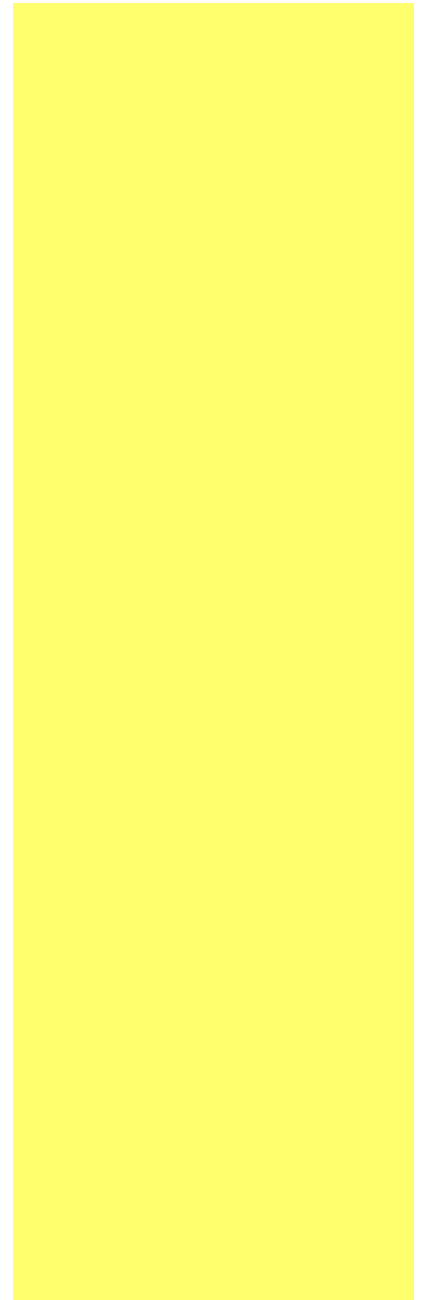
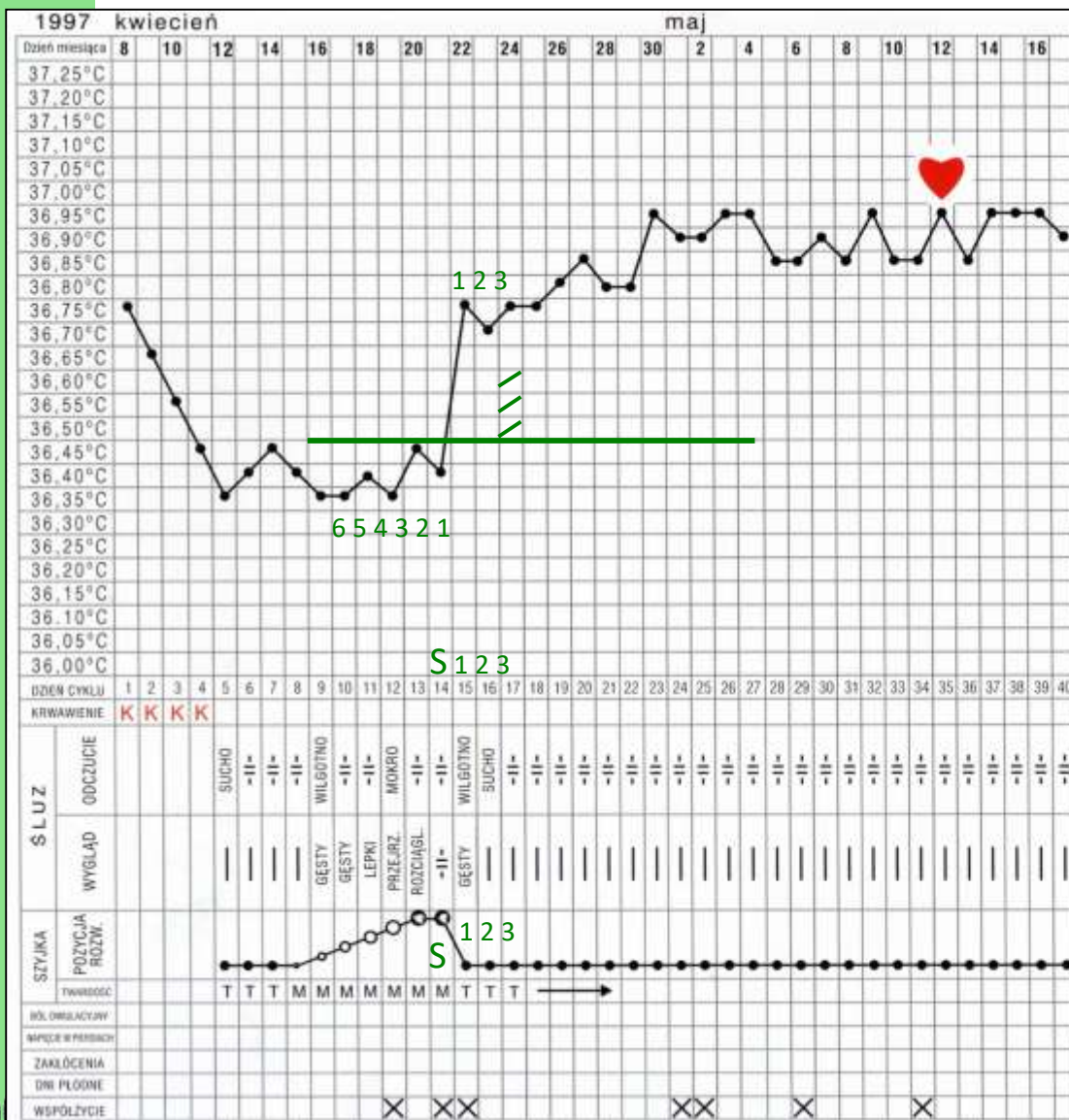


Figure 26-21: A very limited mucus cycle with prolonged post-Peak phase (19 days) and a very suboptimal E₂ and P profile.

- Pregnancy



Karta obserwacji cyklu – początek ciąży



WYZNACZANIE TERMINU PORODU:
dzień szczytu - 7 dni + 9 miesięcy

Termin: 14 stycznia 1998 roku.



The effectiveness of a fertility awareness based method to avoid pregnancy in relation to a couple's sexual behaviour during the fertile time: a prospective longitudinal study

[P. Frank-Herrmann](#) et al.

Human Reproduction pp. 1–10, 2007

- **RESULTS** After 13 cycles, **1.8 per 100** women of the cohort experienced an unintended pregnancy; 9.2 per 100 women dropped out because of dissatisfaction with the method; the pregnancy rate was 0.6 per 100 women and per 13 cycles when there was no unprotected intercourse in the fertile time.

Fertility Awareness-Based Methods: Another Option for Family Planning

[Stephen R. Pallone](#)

[*The Journal of the American Board of Family Medicine*](#)

- The available evidence suggests that FABMs, based largely on assessing cervical mucous, can provide effective contraception. Although these methods have not gained wide use, modern FABMs can be mastered by most motivated couples. **Physicians' and other medical personnel's limited knowledge of and experience with the methods inhibits broader use. Physicians should offer FABMs as a reasonable choice for family planning because there are no absolute contraindications.** A woman's informed decision to use such methods should be supported with accurate information and referral to a certified provider. Instruction is available in many communities and from online courses. Some of these methods can be taught during a single session.

- Thank you for your attention!