



MEDICAL
UNIVERSITY
OF LODZ

CONTRACEPTION IN WOMEN

1. Diaphragm
2. Female's condoms
3. Intrauterine devices

Intrauterine devices

Contraindications:

- * tube inflammation
- * the suspicion of pregnancy
- * the infection in pelvis (PID)
- * unknown etiology of bleeding from genital organs
- * extrauterine pregnancy in the past
- * states of decreased immunity or immunosuppressive treatment
- * the bacterial infection of the endocardium or at women after artificial valve implantation
- * allergy on components of device
- * endometriosis

Complications:

- * abnormal bleeding
- * painfulness
- * the risk of device penetration to peritoneum, urinary bladder
- * the increased risk of miscarriage in case of pregnancy
- * infertility

Spermicides

- foam,
- cream,
- gel,
- intravaginal tablet,
- liquid)

active substance nonoksynol-9

Hormonal contraception

- Oral contraception
 - combined pill (estrogen and progestin components)
 - progestin-only minipill
- Transdermal and vaginal hormonal contraception
- Long-acting methods of contraception
- Emergency postcoital contraception

ORAL CONTRACEPTION

I. The combined pill composed of

- synthetic estradiol – ethynylestradiol
- progestagen
 - I generation - norgestrel
 - II generation - levonogestrel
 - III generation - gestoden, dezogestrel, norgestimat
 - IV generation - dienogest

II. Progestin-only mini pills

COMBINED PILLS

1. Stop of ovulation

- inhibition of gonadotropins secretion via an effect on both pituitary and hypothalamus:
- inhibition of follicle development

2. The progestin makes cervical mucus thick and impervious to sperms

3. The progestin produces

- not receptive endometrium to ovum implantation
- hypofunction of fallopian tubes

COMBINED PILLS

1. Monophasic

It contains the constant dose of ethynylestradiol and progestin.

2. Biphasic

It contains the constant dose of ethynylestradiol over the period of 21 days and two dose of progestin. Lower at the the first days and higher in second 10-days long phase.

3. Triphasic

It contains the various dose of ethynylestradiol and various dose of progestin increases gradually.

Mini-pills (progestin)

1. Change of cervical mucus (thick and impervious to sperms)
2. The progestin produces
 - not receptive endometrium to ovum implantation
 - hypofunction of fallopian tubes (sperm transport)
3. ovulation may be present

ADVERSE EFFECTS of hormonal pills:

- influence coagulation, increasing the risk of deep venous thrombosis, pulmonary embolism, stroke, heart infarction
- unknown effects on cancers of the breast, cervix and liver (contrary data)
- weight gain
- poor cycle control
- reduction in libido and decreased lubrication
- worse well-being and depression development (rare), depressive mood because decreased levels of serotonin concentration in the brain
- Progestin-only contraceptives worsen the condition of women who are already depressed
- hypertension development because of synthetic progesterone can increase the the breakdown of bradykinin (vasodilatation)
- acne
- melasma - skin discoloration
- increase cholesterol levels in bile, decrease gallbladder movement – gallstones formation
- may affect smell preference

Absolute contraindications to the use of hormonal contraception

1. thrombophlebitis, thromboembolic disorders (including a close family history), cerebral vascular disease, coronary occlusion present or in the past or conditions predisposing to these problems (familial V factor).
2. Markedly impaired liver function.
3. hormonal depended cancers.
4. abnormal vaginal bleeding.
5. known or suspected pregnancy.
6. severe hypercholesterolemia or hypertriglyceridemia
7. smoking and age>35 y.

Relative contraindications

1. Migraine headaches.
2. Hypertension.
3. Uterine leiomyoma.
4. Diabetes mellitus.
5. Elective surgery.
6. Seizure disorders.
7. Sickle cell disease or sickle C disease.
8. Gallbladder disease.
11. Severe organic heart disease.
12. Systemic lupus erythematosus.
13. Hyperlipidemia.
14. Smoking.
15. Hepatic disease.

Factors decreasing the effectiveness of hormonal oral contraception

1. Irregular taking

2. Gastrointestinal disorders (vomiting, diarrhoea)

3. Drugs interaction

a. Medications that increase liver metabolism (antiepileptic drugs, sleep-inducing drugs, tranquillizer, diuretics)

b. Antibiotics

- antituberculous, antifungal – increase of liver metabolism
- broad spectrum antibiotics – changes in natural bacterial milieu in digestive tract – disorders in ethynylestradiol metabolism

c. Drugs replacing hormones in connection with serum proteins

Other hormonal contraception

Transdermal system (combined)

Invaginal system

ring with progestin

Long-acting methods (Depot)

medroxyprogesterone 150 mg/3 mo

Emergency postcoital contraception

levonogestrel 750ug

levonogestrel 1500ug

Mechanism of action (24 hours):

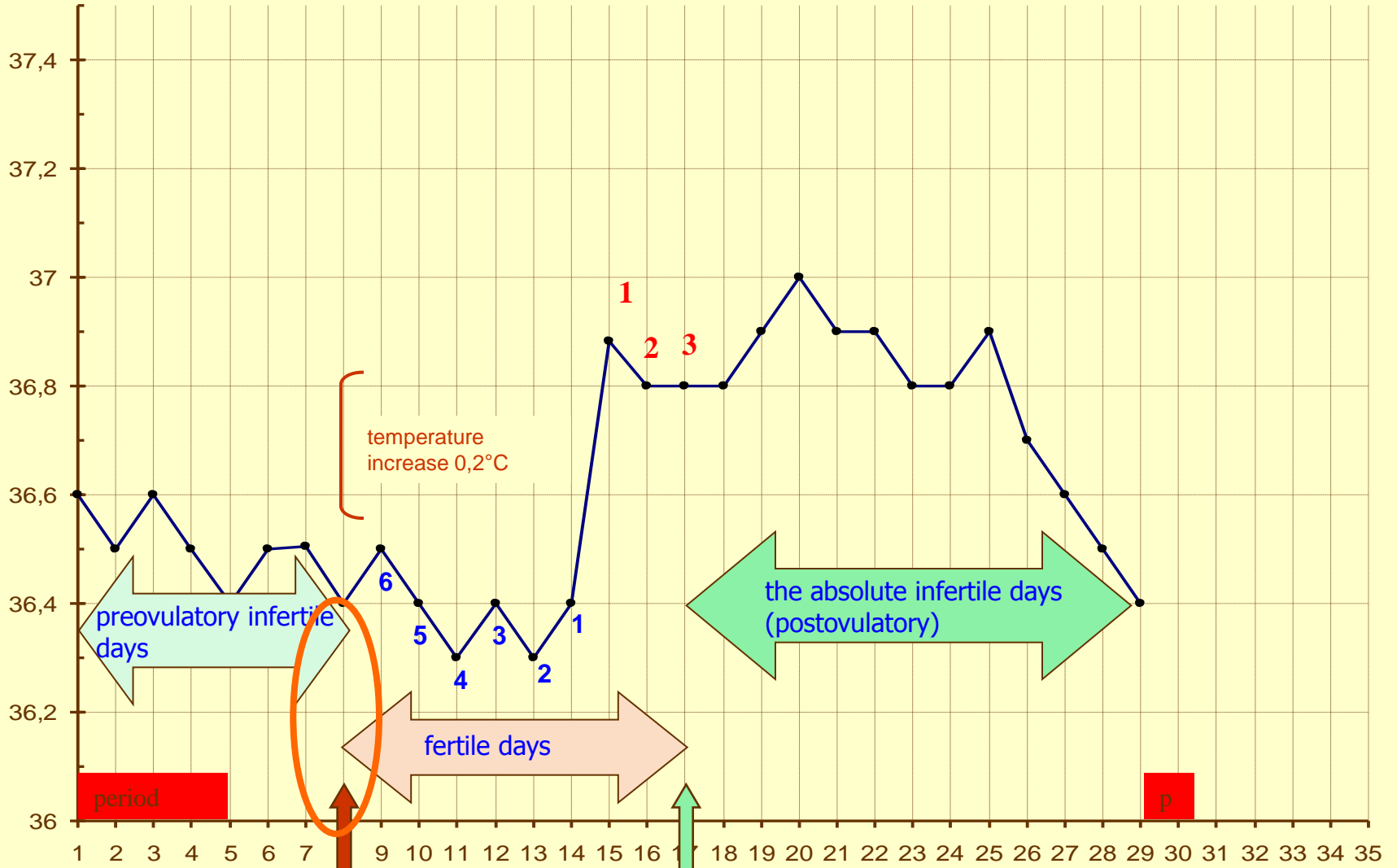
- delay ovulation
- thicken of cervical mucus
- difficulties of implantation of fertilized egg

The postcoital contraception can not be a method of pregnancy planning.

Mifepristone is an antiprogestogen which has been used as abortion agent.

NATURAL METHODS

1. Changes of basal body temperature
2. Changes of cervical mucus
3. Changes of cervical consistency
4. Calculation of fertile days



**fertile cervix mucus
calculations (x-21)**

**till evening of third day of higher
temperature**

ADVANTAGES OF NATURAL METHODS OF CONTRACEPTION

- Adaptation of sexual behaviour to the phases of natural sexual cycle. It causes deep ties of respect and trust in both of partners.
- It leads to responsible parenthood.
- Low costs.
- No side effects.
- Knowledge about function of the own body leads to early detection of any disorders.

DISADVANTAGES OF NATURAL METHODS OF CONTRACEPTION

- Effectiveness depends on the reliability of observations.
- Requires everyday observation and making notes.
- Necessity of periodic abstinence.
- Suitable for women in constant relationship.
- Ineffective in women with irregular cycles and irregular life style.

Male contraceptive

- 1. condoms**
- 2. vasectomy**
- 3. coitus interruptus**

Experimental methods

- 1. hormonal contraceptions – testosterone + progestins / GnRH analogs**