

# Abortion

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# Objectives

- After the class, students can understand
  - Spontaneous abortion
  - Induced abortion

# Definition

- Definition
  - Delivered by 20 weeks of gestation
  - Delivered when fetus is <500 grams
- Type
  - Spontaneous abortion/miscarriage
  - Artificial abortion

# Spontaneous Abortion

- Type
  - Threatened abortion
    - Without cervical dilation
  - Imminent/inevitable abortion
    - RoM, cervical dilation
  - Incomplete abortion
    - Expulsion of some products of conception

# Spontaneous Abortion

- Type
  - Complete abortion
    - Expulsion of all products of conception
  - Missed abortion
    - Dead fetus that is not expelled

# Spontaneous Abortion

- Type
  - Septic abortion
    - Serious infection of the uterine contents
  - Repeated/recurrent/habitual abortion
    - Two or more consecutive SA

# Spontaneous Abortion

- Cause
  - Chromosomal abnormalities
  - Luteal phase defects
  - Overt endocrine disorders
  - Severe chronic renal disorders
  - Immunologic abnormalities
  - Inherited maternal thrombotic disorders after 10 weeks of gestation
  - Reproductive organ abnormalities

# Spontaneous Abortion

- Symptom/sign
  - Cramps, low back pain
  - Bleeding, gush of fluid
  - Passage of tissue or clot-like materials

# Spontaneous Abortion

- Diagnosis
  - Urine pregnancy test
  - Decreased serum  $\beta$ -hCG
  - Underlying diseases/abnormalities
  - Genetic evaluations
  - Physical exams

# Spontaneous Abortion

- Management
  - Observation
  - Surgical or medical management

## Characteristic Symptom/Signs in Spontaneous Abortions

Type of Abortion	Vaginal Bleeding	Cervical Dilation*	Passage of Products of Conception†
Threatened	Y	N	N
Inevitable	Y	Y	N
Incomplete	Y	Y	Y
Complete	Y	Y or N	Y
Missed	N	N	N

\*Internal cervical os is open enough to admit a fingertip during digital examination.

†Products of conception may be visible in the vagina. Tissue examination is sometimes required to differentiate blood clots from tissue products of conception. Before the evaluation, products of conception may have been expelled without the patient recognizing it.

# Induced Abortion

- Vacuum curettage/suction curettage/uterine aspiration
  - Manual vacuum aspiration
    - Before 3 weeks
  - Machine vacuum aspiration
    - Before 13 weeks

# Induced Abortion

- Vacuum curettage/suction  
curettage/uterine aspiration
  - Procedure
    - May use dilator, misoprostol, antibiotics before the procedure for machine aspiration
    - Position the patient and insert a speculum
    - Clean the vagina and cervix

# Induced Abortion

- Vacuum curettage/suction curettage/uterine aspiration
  - Procedure
    - Apply local anesthesia (for machine aspiration, vasopressin may be mixed with local anesthetic, may give medicine for pain or sedation)
    - Apply Tenaculum, dilators for machine aspiration
    - Use 60ml syringe for manual aspiration, cannula for machine aspiration to suction out the products of conception
    - Examine tissues removed from the uterus

# Induced Abortion

## – Complication

- Cramps, pain, nausea, sweating, faint during the procedure
- Cramps, pain, bleeding/spotting after the procedure
- Infection
- Injury to the uterine lining or cervix, perforation
- Retained tissue or clot
- Emotional reaction

# Induced Abortion

## – Care

- No tampons, vaginal intercourse, douches for at least 1 week
- Take prescribed antibiotics
- Rest
- Take pain relievers

# Induced Abortion

- Dilation and evacuation
  - Purpose
    - Assess the cause of abnormal bleeding
    - Abortion (2nd 12 weeks) or after miscarriage
    - Polyps removal
    - Diagnose or treat uterine cancers
    - Control heavy uterine bleeding

# Induced Abortion

- Dilation and evacuation

- Procedure

- Conduct ultrasound to measure uterine size and gestational age
    - Prepare the patient, may use laminaria or misoprostol to open or soften the cervix
    - Position the patient and insert speculum

# Induced Abortion

- Dilation and evacuation
  - Procedure
    - IV general or local anesthesia around the cervix
    - Insert a tenaculum to hold the cervix
    - Dilate the cervix with dilators
    - Remove products of conception with curette

# Induced Abortion

- Complications
  - Bleeding
  - Infection
  - Perforation
  - Asherman's syndrome
    - Scar tissues or adhesions on the endometrium

# Induced Abortion

- Side effect
  - Vaginal discharge
  - Vaginal bleeding or spotting for about 2 weeks
  - Cramping

# Induced Abortion

- Care
  - No tampons, vaginal intercourse, heavy lifting
  - Rest
  - Take prescribed meds

# Induced Abortion

- Medical abortion
  - Methotrexate and Misoprostol
    - MTX IM or PO then misoprostol in 3 to 7 days

# Induced Abortion

- Medical abortion
  - Mifepristone and Misoprostol
    - Up to 7 weeks of gestation
      - Mifepristone 600mg PO, 48 hours later misoprostol 400mcg PO
    - Up to 9 weeks of gestation
      - Mifepristone 200mg PO, 24-48 hours later misoprostol 800mcg vaginal

# Induced Abortion

- Medical abortion
  - Side effects
    - Nausea/vomiting, diarrhea, headache, dizziness, fever and chills, bleeding, cramping

# Nursing Diagnosis

- Decisional conflict related to
  - Value system
- Fear related to
  - Abortion procedure
  - Potential complications
  - Implications for future pregnancies
  - What others might think

From textbook



# Nursing Diagnosis

- Anticipatory grieving related to
  - Distress at loss or feelings of guilt
- Risk for infection related to
  - Effects of the procedure
  - Lack of understanding of pre- and postoperative self-care

From textbook



# Nursing Diagnosis

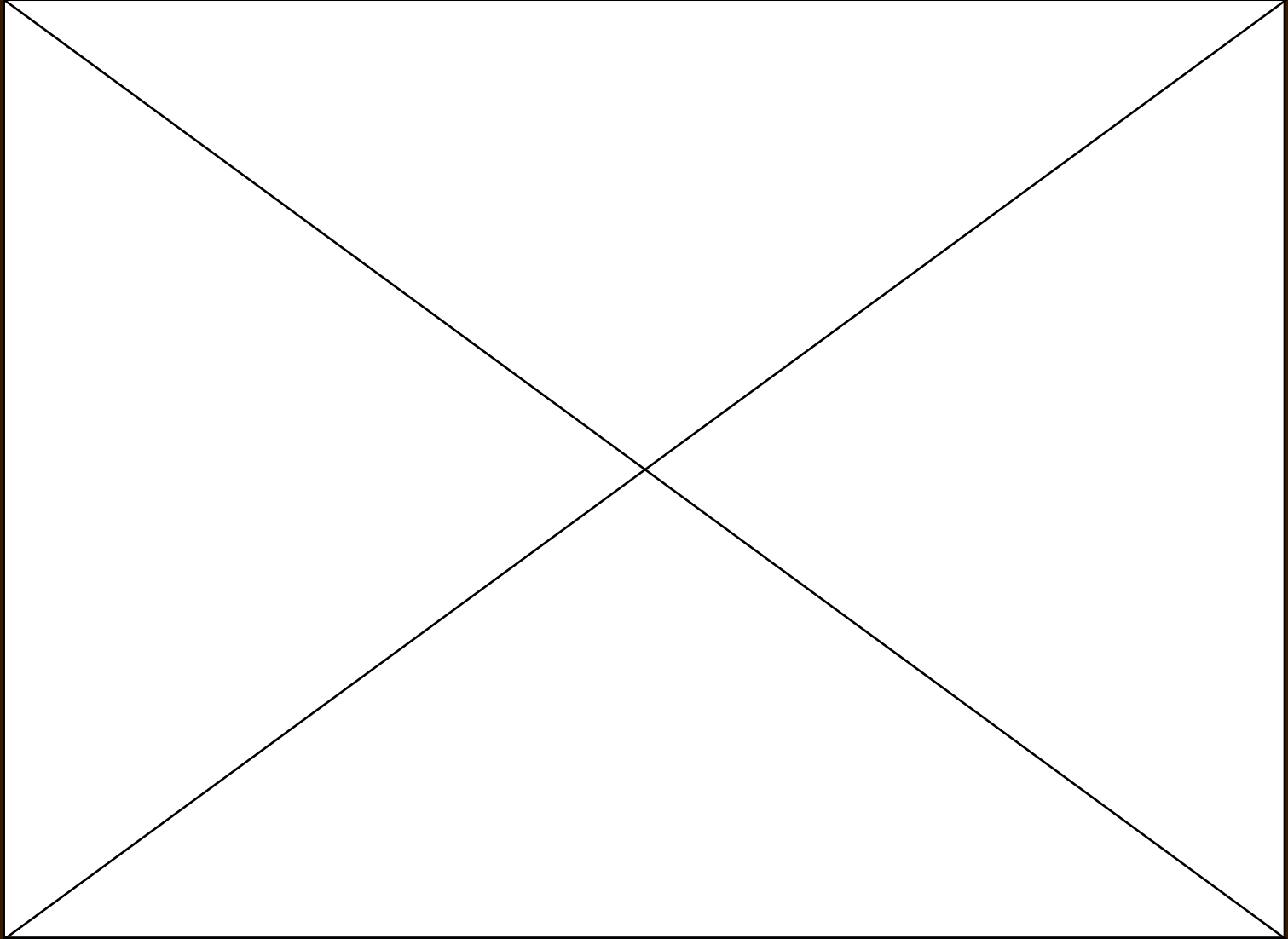
- Acute pain related to
  - Effects of the procedure or postoperative events

From textbook



# Summary

- Miscarriage is a delivery of fetus by 20 weeks of gestation or when fetus is <500 grams. Symptoms include cramps, low back pain, bleeding, gush of fluid, and passage of tissue or clot-like materials.
- Different procedure is used to induce abortion depending on weeks of gestation. Cares after abortion include not using tampons, vaginal intercourse, douches, heavy lifting for at least 1 week; taking prescribed antibiotics; resting; taking pain relievers/prescribed meds.



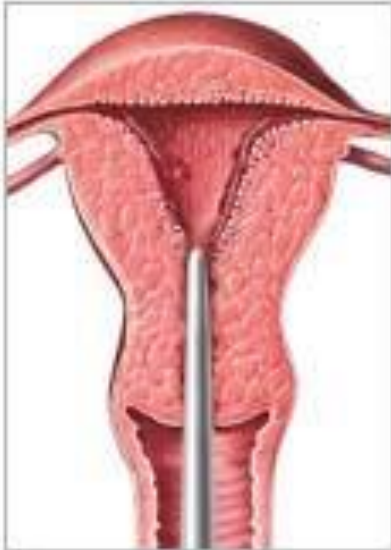
# Suction and Curettage



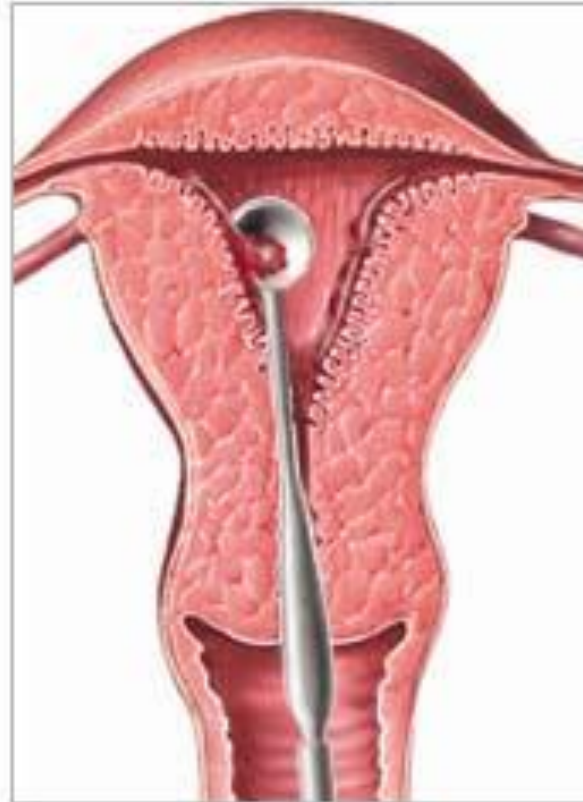
Tenaculum



Widening of cervical canal with dilator

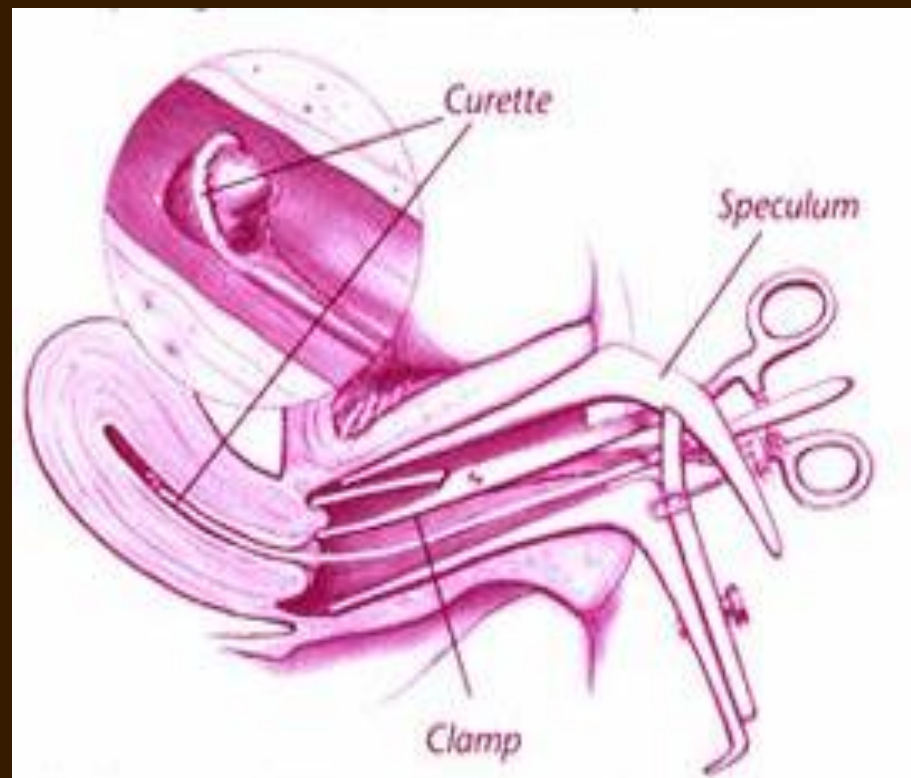
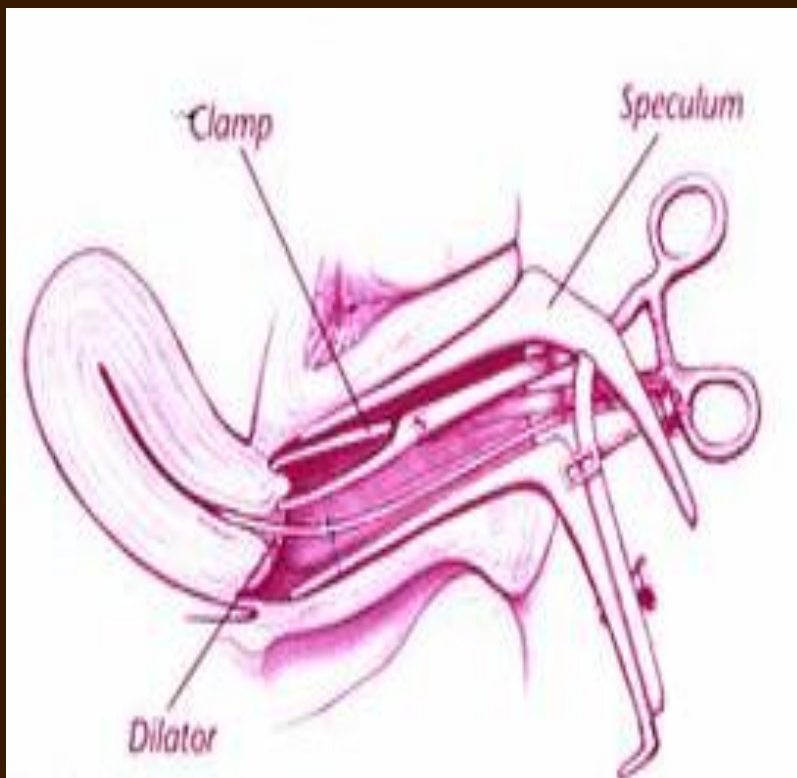


Uterine walls scraped with a curette



ADAM.

## Dilatation and Evacuation



## Dilatation and Evacuation

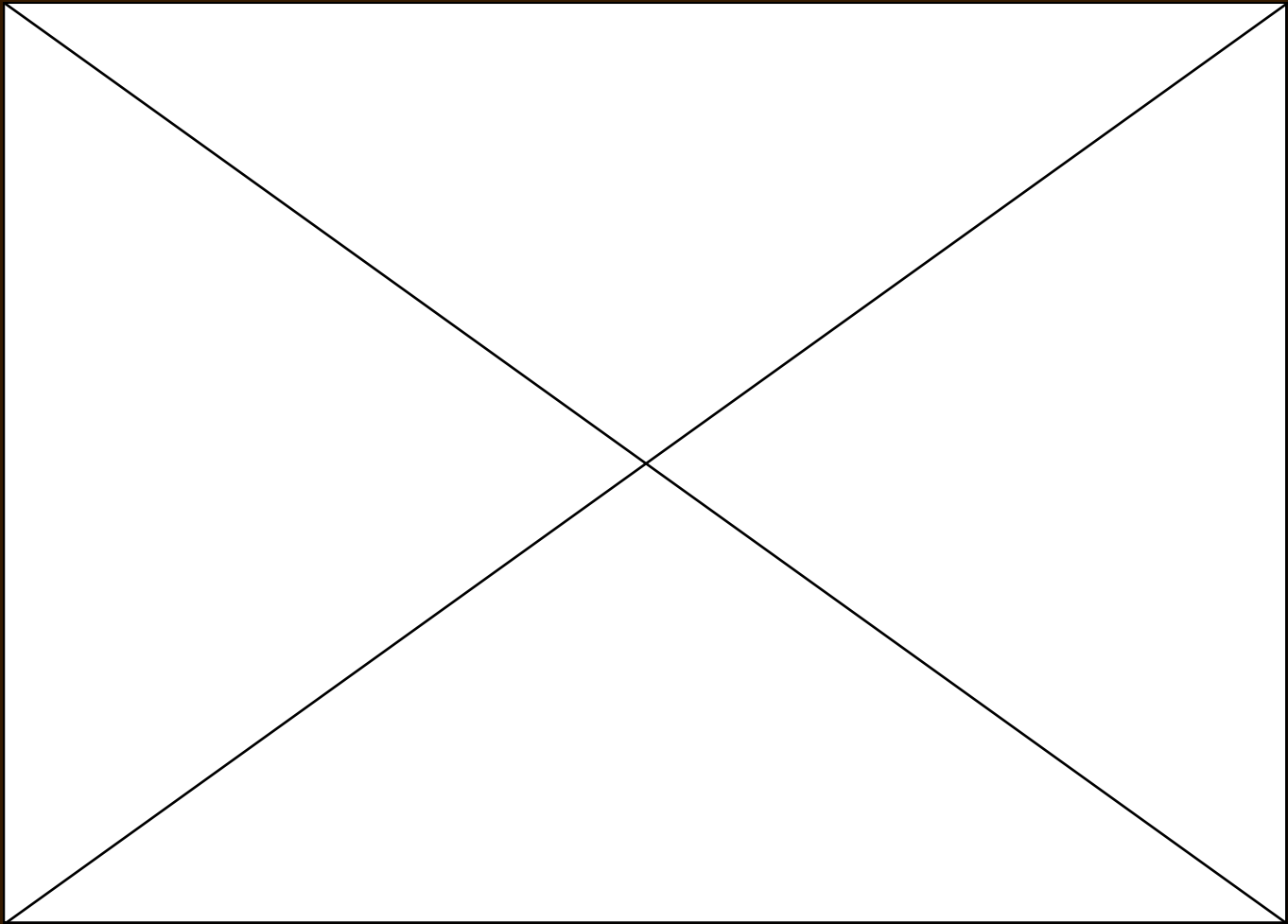
# Contraception

Ching-Yu Cheng

09/11/09

# Objectives

- After the class, students can understand
  - Various methods of contraception



## Contraception

# Coitus Interruptus

- Male withdraws the penis from the vagina before he ejaculates
- Does not protect against STIs

# Fertility Awareness Methods

- Periodic abstinence
  - For days before and 3 or 4 days after ovulation
- Calendar rhythm
  - Record 6 months of menstrual cycles
  - Subtract 18 from the shortest cycle, subtract 11 from the longest cycle

# Fertility Awareness Methods

- Mucus character
  - Safe from the 4th day after the last day of clear slippery mucus
- Standard days
  - Day 8 to 19 for women with 26 to 32-day cycles
- Cervical mucus ovulation
  - From the fourth day after the last day of wet, clear, slippery mucus
  - About 12cm during ovulation (estrogen & progesterone)

# Fertility Awareness Methods

- Basal body temperature
  - Varies from 36.2 to 36.4
  - Increase about .4 to .8 when progesterone increases at early luteal phase
  - Remain elevated plateau until 2 to 4 days before menstruation
  - Fertile during day of temperature drops or first elevation and 3 consecutive days of elevated temperature

# Fertility Awareness Methods

- Symptothermal
  - Second symptoms + other method
- Ovulation prediction kit
  - Detects the sudden surge of LH that occurs about 12 to 24 hours before ovulation

# Spermicides

- Chemical barrier method
  - Nonoxynol-9, chlorhexidine
- 70% to 80% effective
- Tablets, foam, cream, jelly, film

# Spermicides

- Place in the vagina close to the cervix
  - Place films and tablets 30 minutes before sex
- Prevent gonorrhea, Chlamydia
  - Chlorhexidine is anti-HIV
  - >2 times/day of N-9 or use as a lubricant during anal intercourse may increase risk of HIV infection
- Side effects
  - Irritation, itching, burning of sex organs, UTI of female, increase risk of birth defects if pregnant

# Condom

- Male condom
  - Latex, polyurethane, animal membrane
- Female condom
  - Plastic pouch
  - For one time use, can be inserted up to 8 hours

# Condom

## Notes

- Store in cool places
- Use one at a time and cannot be reused
- Use before expiration date
- Use only water-based lubricant

# Diaphragm

- Rubber dome with various sizes
- Refit when
  - Body weight changes of 10 or more pounds
  - Have pelvic surgery
  - Give birth or abortion
  - Pain or pressure during sex felt by partner
  - Every 2 years

# Diaphragm

- Note
  - Put in place up to 6 hours before sex
  - Need to use with spermicide, re-apply spermicide if is placed longer than 2 hours, re-apply before each sex
  - Leave in place for about 6 hours but less than 24 hours
  - Use only with water-base lubricants
  - Use only mild soap, water, cornstarch to clean and storage

# Cervical Cap

- Rubber or plastic dome shaped cap with various sizes
- Must use with spermicide, no need to re-apply spermicide for each sex
- Can remain in place for up to 48 hours
- Not use during menstruation phase

# Estrogen-progestin

- Action
  - Suppress hypothalamus and anterior pituitary and cause insufficient FSH and LH and inhibits ovulation
  - Alter endometrium, tubal and uterine motility
- Type of OCPs
  - Monophasic pills: fixed dosages of estrogen and progestin
  - Biphasic or triphasic pills

# Estrogen-progestin

- Route
  - Oral, transdermal, vaginal (NuvaRing)
- Advantages, Side effects, Contraindications
- Med interaction
  - Anticonvulsants, Systemic antifungals, Antituberculosis drugs, Anti-HIV protease inhibitors, Some herbal supplements (St. John's wort)

# Estrogen-progestin

- OCPs 91-day pills
  - Seasonale (levonorgestrel/ethinyl estradiol)
  - 12 weeks of active and 1 week of inactive pills
- Transdermal patch
  - Norelgestromin/ethinyl estradiol
  - Apply to upper outer arm, upper torso, lower abdomen, buttocks
  - Once a week for 3 weeks and rest for 1 week (withdrawal bleeding occurs)

# Estrogen-progestin

- Vaginal ring (NuvaRing)
  - Etonorgestrel/ethinyl estradiol
  - Worn for 3 weeks and rest for 1 week (withdrawal bleeding occurs)
  - May cause vaginitis, leukorrhea, vaginal discomfort

# Progestins

- Oral progestins (Minipill)
  - Take at the same time every day
- Injectable progestins (Depot-Provera)
  - 150mg, IM (do not massage)
  - During the first 5 days of the cycle and give every 11-13 weeks
  - May cause bone mineral density decrease (not recommended for longer than 2-years' use)

# Progestins

- Implantable progestins (Norplant)
  - Six flexible, polymeric silicone capsules (single-rod implant is available)
  - Subdermally implanted in the inner aspect of the nondominant upper arm for up to 5 years
  - Contains levonorgestrel
  - Prevent some ovulatory cycles and will thicken cervical mucus

# Intrauterine Device

- Levonorgestrel IUD (Mirena)
  - Lasts 5 years
  - Actions
    - Damage or kill sperms
    - Make the vaginal mucus thick and sticky
    - Prevent endometrium from growing

# Intrauterine Device

- Copper IUD (ParaGard)
  - Lasts longer than 10 years
  - Action
    - Toxic to sperm
    - Fluid produced by the uterus and tubes contains WBC, copper ions, enzymes, and prostaglandins that kill sperm

# Intrauterine Device

- Considerations
  - Reproductive tract infection including STIs, PID, more than one partner or at high risk of STIs, uterine abnormalities, had septic abortion, uterine bleeding of unknown origin, allergy to copper

# Intrauterine Device

- Advantages

- Mirena can reduce menstrual bleeding, cramps, and endometriosis, and improve irregular menstrual bleeding
- Prevent endometrial hyperplasia or cancer
- Decrease risk of PID
- Does not cause weight gain

# Intrauterine Device

- Risks
  - Copper IUDs may cause an increase in menstrual bleeding or cramping within the first year after insertion
  - Perforation or expulsion
  - Ovarian cysts may form for Mirena user
  - If pregnant
    - Miscarry, give birth prematurely, ectopic pregnancy

# Intrauterine Device

- Insertion

- May be done at mid-cycle since the cervix is dilated
- Prepare the patient and do a gyn exam to measure the uterine size and orientation
- Insert speculum and clean the vagina and cervix
- Insert a tenaculum to hold the cervix
- Insert a probe through the cervix to determine length of insertion
- Insert the IUD and cut the string (leave about 3cm)

# Intrauterine Device

- Removal
- Care
  - Cramping and light bleeding for few days
  - Check the string after every period
  - Watch for complications

# Recommendations for Selection of Hormonal Contraceptives

Consideration	Estrogen plus progestin	Progestin-only
Recommended for women who:	<ul style="list-style-type: none"> <li>• Are healthy</li> <li>• Are breast-feeding (6 weeks after delivery)</li> <li>• Smoke (if younger than 35) without other health risks</li> <li>• Have diabetes (if younger than 35) without complications</li> <li>• Have controlled high blood pressure and do not smoke</li> <li>• Have controlled cholesterol levels</li> <li>• Have had an abortion</li> </ul>	<ul style="list-style-type: none"> <li>• Cannot take estrogen. Health risks related to estrogen use are not present with progestin-only pills.</li> <li>• Are breast-feeding</li> <li>• Have migraines with aura</li> <li>• Have high blood pressure or coronary artery disease</li> <li>• Smoke and are older than 35</li> <li>• Have sickle cell disease</li> </ul>
Not recommended for women who:	<ul style="list-style-type: none"> <li>• Smoke and are older than 35</li> <li>• Have diabetes and are older than 35</li> <li>• Have a risk for blood clots, including a family history of clots or a past clot in the lung (pulmonary embolism) or leg (thrombophlebitis)</li> <li>• Have had a stroke</li> <li>• Have coronary artery disease or heart failure</li> <li>• Have (or had) breast cancer</li> <li>• Are pregnant or may be pregnant</li> <li>• Have (or had) liver cancer, noncancerous tumors of the liver, active hepatitis, or poor liver function</li> <li>• Have uncontrolled high blood pressure</li> <li>• Have undiagnosed abnormal vaginal bleeding</li> <li>• Have migraine headaches with neurological symptoms or migraine aura</li> <li>• Have lupus with heart, blood vessel, or kidney symptoms</li> <li>• Have sickle cell disease</li> <li>• Have high triglyceride levels</li> <li>• Are taking certain medicines (check with your health professional)</li> </ul>	<ul style="list-style-type: none"> <li>• Are or may be pregnant</li> <li>• Have active breast cancer or history in past 5 years</li> <li>• Have undiagnosed abnormal vaginal bleeding</li> <li>• Have active hepatitis</li> <li>• Have active colitis</li> <li>• Are taking certain medicines (check with your health professional)</li> </ul>

# Emergency Contraception

- Action
  - Prevent ovulation by inhibiting follicular development if OCPs are taken before ovulation
  - Little effect on ovarian hormone production or endometrium if OCPs are taken after ovulation
- Kinds
  - 2 doses of levonorgestrel
  - High dose of oral estrogen or combined estrogen-progestin
  - Copper IUD

# Emergency Contraception

- Time
  - OCPs should be taken within 120 hours of unprotected sex or birth control mishap
  - IUD should be inserted within 8 days of unprotected sex

# Permanent Birth Control

- Tubal ligation
  - Can be done with electrocoagulation, bands, clips
- Tubal implants (Essure)
  - Inserted into tubes
  - Scar tissue grows and blocks the tubes
  - Must use other forms of birth control for 3 months and check for blockage of tubes

# Permanent Birth Control

- Vasectomy

- Action

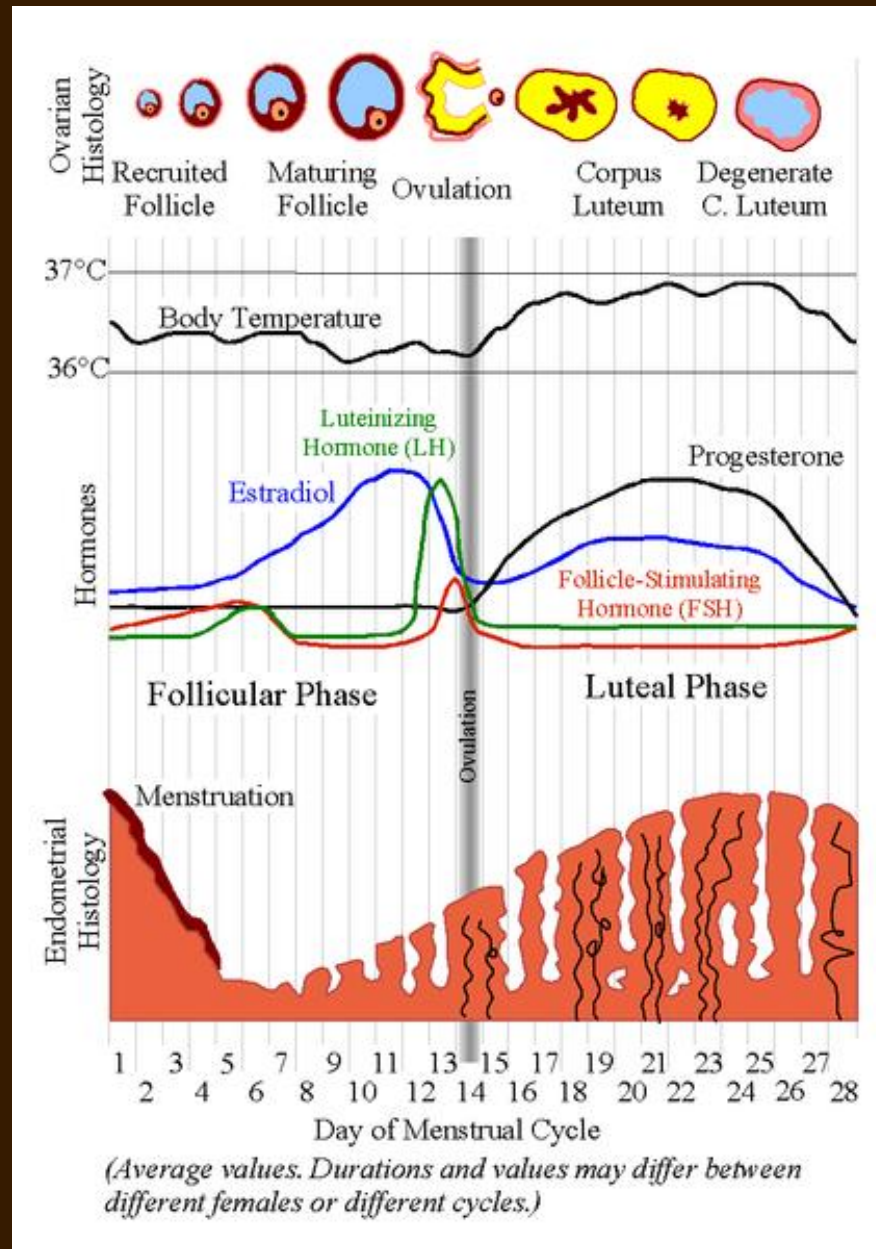
- Clamp, cut, or seal vas deferens to prevent sperm from mixing with the semen

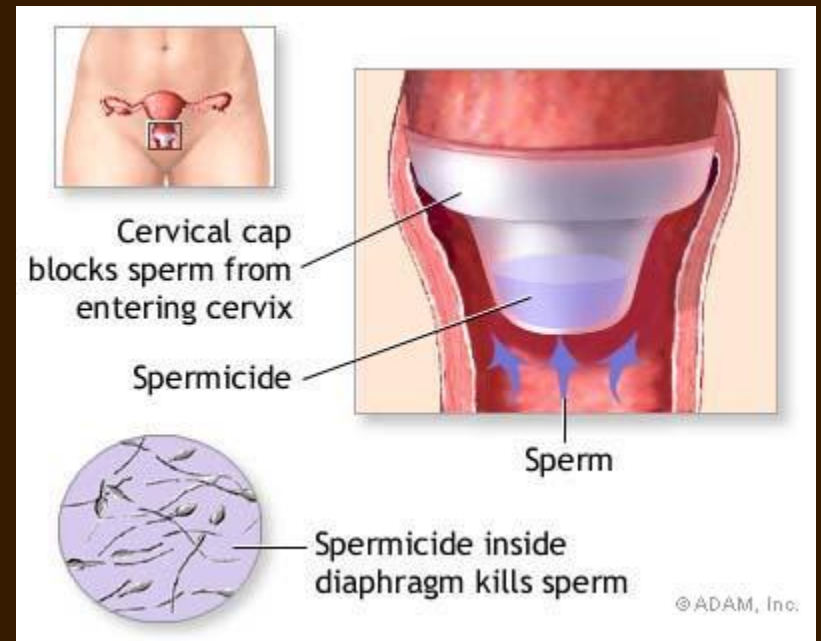
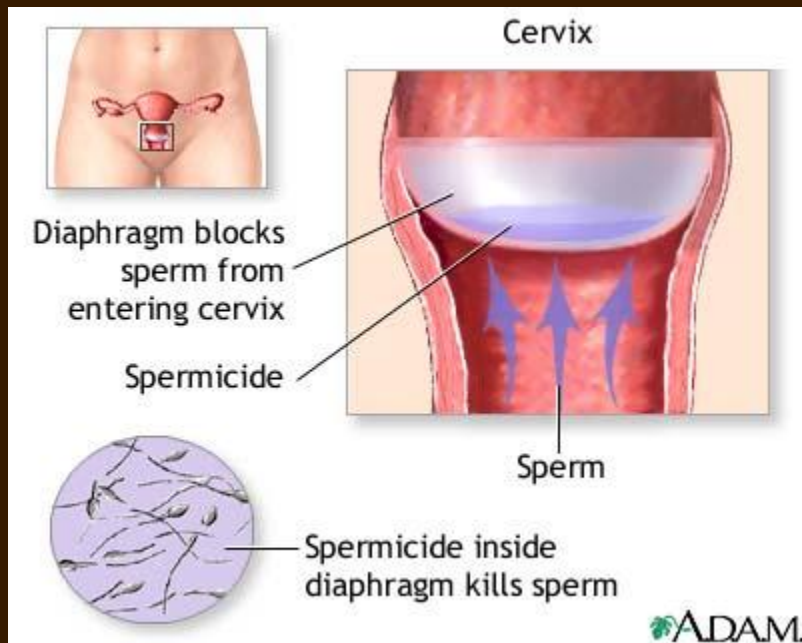
<http://www.youtube.com/v/8A-clzn3QbA>

- Must have sperm count for blockage of tubes
  - Can apply ice intermittently on scrotum

# Summary

- Basal body temperature varies from 36.2 to 36.4 depending on menstrual cycle.
- Condoms should be store in cool places, use one at a time and cannot be reused, use before expiration date, and use only water-based lubricant.
- Depot-Provera is given by IM during the first 5 days of the cycle and given every 11-13 weeks.
- IUD functions by damaging or killing sperms, making the vaginal mucus thick and sticky, and preventing endometrium from growing.







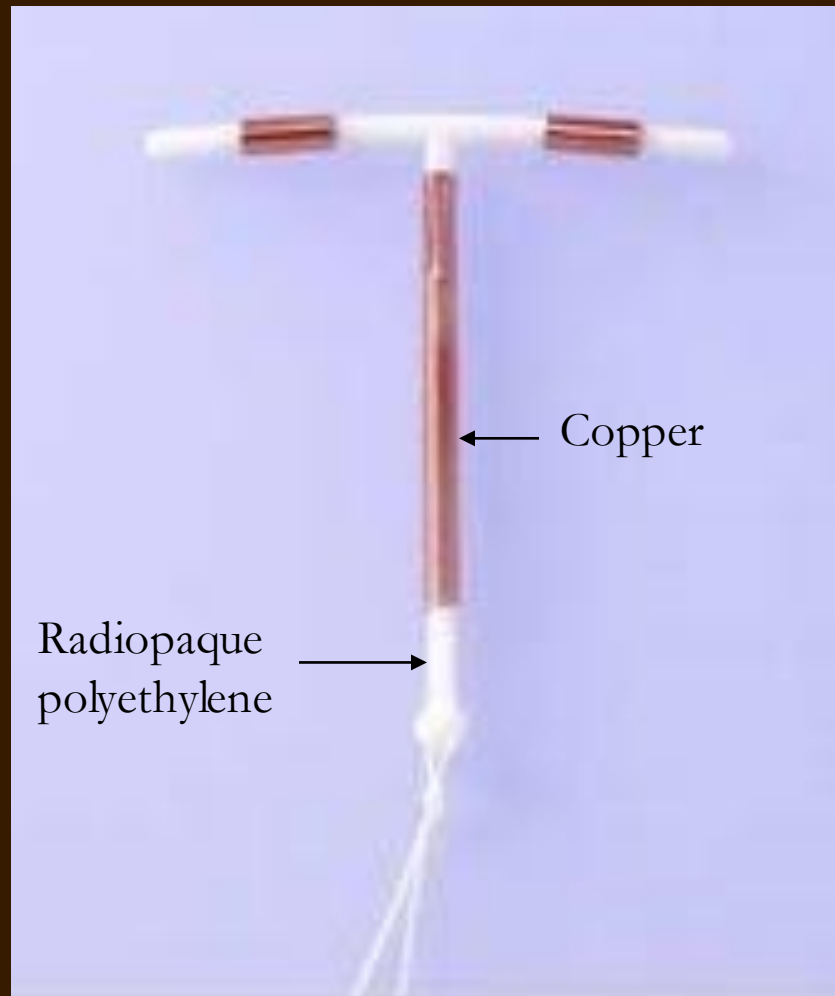


NuvaRing





Mirena



ParaGard

# Summary page

- Spontaneous abortion
- Induced abortion