CONTRACEPTION

• Voluntary prevention of pregnancy
• More than half of pregnancies every year are unintended in women younger than 20 years of age
• May still be at risk for pregnancy

TYPES

- Coitus Interruptus
- Natural Family planning
- Barrier Methods
- Oral contraceptives
- Intrauterine devices
- Sterilization
COITUS INTERRUPTUS

- Withdrawal or pull out method
- Primary cause of failure is lack of self control
- Failure rate – 27%
- Interruption may leave dissatisfaction

<table>
<thead>
<tr>
<th>Background</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>B.C. type</td>
<td>Natural</td>
</tr>
<tr>
<td>First use</td>
<td>&gt; 2000 years ago</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Failure rates (per year)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Perfect use</td>
<td>4%</td>
</tr>
<tr>
<td>Typical use</td>
<td>15-28%</td>
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</table>

<table>
<thead>
<tr>
<th>Usage</th>
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<tbody>
<tr>
<td>Reversibility</td>
<td>Yes</td>
</tr>
<tr>
<td>User reminder s</td>
<td>Dependent upon self-control of man. Urinating between acts of sexual intercourse helps clear sperm from urethra.</td>
</tr>
<tr>
<td>Clinic review</td>
<td>None</td>
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</table>

<table>
<thead>
<tr>
<th>Advantages</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefits</td>
<td>No side effects</td>
</tr>
<tr>
<td>Disadvantages</td>
<td></td>
</tr>
<tr>
<td>STD</td>
<td>No</td>
</tr>
</tbody>
</table>

NATURAL FAMILY PLANNING

- Fertility awareness
- Periodic abstinence
- Acceptable in most religious groups
- Abstinence during high fertility times
- Avoids use of drugs, chemicals, and devices.
DIFFERENT TYPES

- Calendar method
- Basal body temperature method (BBT)
- Cervical mucus ovulation-detection method
- Symptothermal method
- Predictor test for ovulation

CALENDAR METHOD

- AKA rhythm method
- Widely practiced
- Must figure out the fertile days and abstain from intercourse during these days.
- Extremely unreliable

<table>
<thead>
<tr>
<th>Safe Times Using the Calendar Method</th>
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</thead>
<tbody>
<tr>
<td>Monday</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td>12</td>
</tr>
<tr>
<td>18</td>
</tr>
</tbody>
</table>

Shortest cycle 26 days  26-18=day 8
Longest cycle 30 days  30-11=day19
So, no sex from day 8 to day 19 of cycle.
**Basal Body Temperature Method (BBT)**

- Take body temp immediately after awakening
- Must be very disciplined
- Must abstain from sex during fertile periods
- BBT alone is not a reliable method to predict ovulation

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<table>
<thead>
<tr>
<th>Basal body temperature</th>
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<tbody>
<tr>
<td><strong>Background</strong></td>
<td></td>
</tr>
<tr>
<td>B.C. type</td>
<td>natural birth control</td>
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<tr>
<td>First use</td>
<td>1930s</td>
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<tr>
<td><strong>Failure rates (per year)</strong></td>
<td></td>
</tr>
<tr>
<td>Perfect use</td>
<td>0.3%</td>
</tr>
<tr>
<td>Typical use</td>
<td>3.14%</td>
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<tr>
<td><strong>Usage</strong></td>
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<tr>
<td>Reversibility</td>
<td>Immediate</td>
</tr>
<tr>
<td>User reminders</td>
<td>Dependent upon strict user adherence to methodology</td>
</tr>
<tr>
<td>Clinic review</td>
<td>None</td>
</tr>
<tr>
<td><strong>Advantages</strong></td>
<td></td>
</tr>
<tr>
<td>Periods</td>
<td>Prediction</td>
</tr>
<tr>
<td>Benefits</td>
<td>No side effects, can aid pregnancy achievement</td>
</tr>
<tr>
<td><strong>Disadvantages</strong></td>
<td></td>
</tr>
<tr>
<td>STD protection</td>
<td>No</td>
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</tbody>
</table>
Cervical Mucus Ovulation-Detection Method

- Interpreting amount & consistency of cervical mucus changes
- Before ovulation-thin, watery, clear mucus

Symptothermal Method

- Combines both BBT and cervical mucus-detection methods
- 13-20 women out of 100 will get pregnant using this method
Predictor Test for Ovulation

• Form of NFP
• Test kit detects surge of LH

Barrier Methods

Popular also as a protective measure against spread of STIs
• Spermacides
• Condoms
• Diaphragm
• Cervical cap
• Contraceptive sponge

Spermacides

• Variety of forms—foam, gel, cream, film, & suppositories
• Failure rate (used alone)—29%
• Must be used correctly to be effective
Advantages

- Small
- OTC
- May reduce risk of some STD's

Disadvantages

- May increase transmission of HIV
- May cause genital lesions/irritability
- Messy

Condoms

- Male condoms
  - Latex rubber
  - Polyurethane
  - Natural membranes
- Failure Rate- <3%
Female condoms

- Vaginal Sheath
  Sheath with closed end on one side and open end on other side
- Failure rate - 21%

Diaphragm

- Flexible, thin, rubber dome
- Fits over the cervix
- Failure rate (with spermicide) - 27%

Diaphragm cont.

- Can be inserted as long as 6 hours before sex
- Must apply spermicide every time sex repeated
- Must be left in place at least 6 hours after sex
Side effects

- Occasional allergic reactions
- Irritation of tissue from spermicide
- Urethritis
- Recurrent cystitis
- Toxic shock syndrome (TSS)

Contraindications

Women with-
- Pelvic relaxation (uterine prolapse)
- Large cystocele
- Hx. UTI's
- Latex allergies
Cervical Cap

• Thimble-shape, soft, flexible, latex device
• Fits snug around cervix
• Four different sizes
• Failure rate (in parous women)- 32%
• Failure rate (in nulliparous women)- 16%

<table>
<thead>
<tr>
<th>B.C. Type</th>
<th>Barrier</th>
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<tbody>
<tr>
<td>First use</td>
<td>1838</td>
</tr>
<tr>
<td>Failure rates (per year)</td>
<td></td>
</tr>
</tbody>
</table>
| Perfect use | Nulliparous: 9%  
Parous: 26% |
| Typical use | Nulliparous: 16%  
Parous: 32% |

Usage
- Reversibility: Immediate
- User reminders: Inserted with spermicide and left in place for 8 hours after intercourse
- Clinic review: For fitting and subsequent replacements

Advantages
- STD protection: Possible
- Benefits: May be left in place for 48-72 hours

Disadvantages
- Weight gain: None

Contraindications

Women with-
- Abnormal pap smear results
- Can't find right size from the 4 sizes
- Can't place or remove the device
- HX of TSS, vaginal or cervical infections
- Allergic reaction to cap or spermicide
Contraceptive Sponge

- Small round polyurethane sponge
- Contains spermacide
- Fits over cervix

Hormonal Methods

- > 30 different hormonal contraceptives in USA
- Administered:
  - Orally
  - Transdermal
  - Vaginal
  - Implantation
  - Injection
Combined Estrogen-Progestin Oral contraception

- Most common oral contraceptive
- Suppresses hypothalamus and anterior pituitary gland
- Monophasic / Multiphasic
- Failure rate- 5%

Combined Estrogen-Progestin Injections

- Contains estrogen and progestin
- Prevents ovulation
- IM injection
- Given every 28 days +/- 5 days

Transdermal Contraceptive Method

- Thin patch sticks to skin
- Releases estrogen and progestin
- Applied weekly times three
**Vaginal Ring**

- Soft, flexible, clear, plastic ring
- Releases estrogen and progestin
- Worn for 3 weeks followed by 1 week ring-free interval

**Progestin-Only Contraception**

- Oral Progestin- Mini Pill
- Injectable Progestin- Depo Provera
- Implantable Progestin- Norplant

**Oral Progestin (Mini Pill)**

- Contains progestin only
- Reduces and thickens cervical mucus
- Alters cilia in uterine tubes
- Failure rate- 8%
**Injectable Progestin**

- Depot Medroxyprogesterone (DMPA) AKA Depo Provera
- IM shot given every 12 weeks
- Failure rate: 3%
- Disadvantages
  - Prolonged amenorrhea/uterine bleeding
  - Increased risk for venous-thrombosis
  - No protection against STD's

**Implantable Progestin (Norplant)**

- 6 flexible, non-biodegradable, polymeric silicone capsules
- Stops ovulation and/or changes cervical mucus
- Provide up to 5 years of contraception
- Failure rate: <1%

**Intrauterine Devices**

- Small, T-shaped device inserted into the uterine cavity
- Medicated IUDs loaded with either copper or progestational agent
- Failure rate: 0.8%- 2%
Copper Levonorgestrel-releasing IUD

- **Advantages**
  - Constant contraception
  - No manipulation
  - Placed at any time
  - Reversible contraception

- **Disadvantages**
  - Increased risk of PID
  - Risk of bacterial vaginosis
  - Uterine perforation
  - No protection against HIV or STD's

**Contraindicated**

- Hx of PID
- Known or suspected pregnancy
- Undiagnosed genital bleeding
- Suspected genital malignancy
- Distorted intrauterine cavity
Teaching

✓ presence of thread

• If Pregnancy occurs remove IUD immediately

Female Sterilization

• Tubal occlusion
  • Bilateral tubal ligation
  • Failure rate - 0.5%
  • Permanent sterilization

Sterilization

- Uterine tubes ligated and severed (tubal ligation)
- Sperm duct ligated and severed (vasectomy)
Tubal reconstruction

- Reanastomosis
- Costly, difficult, and uncertain

Male Sterilization

- Male (vasectomy)
- Interrupts Vas deferens
- Highly effective
- Failure rate- 0.15%

Tubal Reconstruction

- Reanastomosis
- 90% Successful
- Only 50% fertility rate
CONTRACEPTION

OBJECTIVES

Distinguish between the different contraceptive methods - coitus interruptus, natural family planning, colander method, basal body temp. method, cervical mucus ovulation-detection method, symptothermal method, predictor ovulation test.

Identify the advantages and disadvantages of the different contraceptive methods - coitus interruptus, natural family planning, colander method, basal body temp. method, cervical mucus ovulation-detection method, symptothermal method, predictor ovulation test.

Distinguish between the different contraceptive barrier methods: spermicides, condoms, diaphragms, cervical cap, and contraceptive sponge.

Identify the advantages, disadvantages, any side effects, risk factors, and contraindications when using spermicides, condoms, diaphragms, cervical cap, and the contraceptive sponge.

Distinguish between the different hormonal contraceptive methods: combined estrogen-progestin oral contraceptives, combined estrogen-progestin injections, transdermal contraceptive system, and the vaginal ring.

Identify the advantages, disadvantages, any side effects, risk factors, and contraindications of the hormonal contraceptive methods: combined estrogen-progestin oral contraceptives, combined estrogen-progestin injections, transdermal contraceptive system, and the vaginal ring.

Discuss the use and pertinent facts of the intrauterine device.

Discuss the different sterilization methods – Female and male sterilization.