Contraception
HEAL 101: Health and Lifestyle
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Lecture 8

Contraception

Objectives

- List types of contraceptive methods
- Identify the method of action for each method
- Identify the efficacy of each method
- List the potential side effects
- Discuss key issues in planning a pregnancy
- Explain the importance of prenatal care and the physical and emotional aspects of pregnancy
- Describe the stages of childbirth and potential complications
- Review causes of infertility and available solutions

Concepts of Fertility Management

- Conception - fertilization of ovum by sperm
- Fertility - capacity to reproduce
- Contraception - methods of preventing conception
- Perfect failure rate - failures if contraceptive method is used perfectly
- Typical use failure rate - failures expected in actual use

Percentage of Women Experiencing Unintended Pregnancy Within First Year of Use

<table>
<thead>
<tr>
<th>Method</th>
<th>Typical Use</th>
<th>Perfect Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chamber</td>
<td>85</td>
<td>85</td>
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<tr>
<td>Spermicide</td>
<td>76</td>
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<tr>
<td>Spermicide + Contraception</td>
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<tr>
<td>Ovulation Method</td>
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<tr>
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</tr>
<tr>
<td>Pill</td>
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</tr>
<tr>
<td>IUD</td>
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<tr>
<td>Female Contraception</td>
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</tr>
<tr>
<td>Male</td>
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</tr>
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<tr>
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<tr>
<td>Copper IUD</td>
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<tr>
<td>Copper T 380A</td>
<td>0.8</td>
<td>0.6</td>
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<tr>
<td>Lippes 35</td>
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<td>0.1</td>
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<tr>
<td>Depo-Provera</td>
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</tr>
<tr>
<td>Norplant</td>
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<td>Norplant C</td>
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<tr>
<td>Male Sterilization</td>
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<td>0.10</td>
</tr>
<tr>
<td>Female Sterilization</td>
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</tbody>
</table>

Emergency Contraceptive Pills: Treatment initiated within 72 hours after unprotected intercourse reduces the risk of pregnancy by at least 75%. Laggin and Annas. Amanzome Method. IAM is a highly effective, permanent method of contraception.
Contraception in the World

Contraception In The United States

Contraception in China

Contraception in Japan
Contraception in Mexico

- Pills: 46%
- IUD: 8%
- Tubal Ligation: 3%
- Vasectomy: 2%
- Condoms: 1%
- Injectables: 19%
- Withdrawal: 11%
- Natural Methods: 10%
- Vaginal Methods: 5%
- Other: 2%
- No Method: 1%

Contraception in Bangladesh

- Pills: 75%
- IUD: 5%
- Tubal Ligation: 4%
- Vasectomy: 1%
- Condoms: 1%
- Injectables: 2%
- Withdrawal: 2%
- Natural Methods: 8%
- Vaginal Methods: 1%
- Other: 1%
- No Method: 1%

Barrier Methods

- Male condom
- Female condom
- Spermicides: foams, suppositories, jellies, and creams
- Diaphragm with spermicidal jelly/cream
- Cervical cap

Male Condoms

- Efficacy: Varies from < 85% to > 95%
- Method of Action
  - Latex sheath prevents ejaculate from entering female
  - Must be used every time from beginning
- Side Effects
  - Decreased spontaneity, skin irritation from latex or spermicide, some protection from STI
- Condoms Care
  - Water based lubricants only, protect from heat and light
How To Use a Condom

Female Condom

Spermicides: Foam, Sponge, Suppositories, Jellies
- Efficacy
  - Varies from 75% to 95%
  - Greatly increased when used with a condom
- Method of Action
  - Physical and chemical barrier
- Side Effects
  - Decreased spontaneity, skin irritation from spermicide, some protection from STI

Contraceptive Foams
**Vaginal Contraceptive Sponge**

- **Method of Action**: Latex dome blocks cervix, spermicide reservoir
- **Side Effects**: Decreased spontaneity, skin irritation from latex or spermicide, some protection from STI

**Diaphragm**

- **Efficacy**: Varies from 80% to 95%
- **Greatly increased when used with a condom**
- **Method of Action**: Latex dome blocks cervix, spermicide reservoir
- **Side Effects**: Decreased spontaneity, skin irritation from latex or spermicide, some protection from STI

**Placement of a Diaphragm**

1. Place spermicide inside and around the rim of the diaphragm.
2. Insertion: squeeze rim together; insert with spermicide-side up.
3. Check placement, making certain cervix is covered.

**Placement of a Cervical Cap**

- **Barrier method**: The cervical cap fits snugly over the cervix, preventing sperm from entering the uterus
Intrauterine Device

- Efficacy
  - Highly effective - 98%
- Method of Action
  - Somewhat unclear - abortifacient or contraceptive?
- Side Effects
  - PID, ectopic pregnancy, damaged uteri, STI

Hormonal Methods

- Oral contraceptives (OCs)
- Contraceptive Patch (Ortho Evra)
- NuvaRing
- Injectable Contraceptives (Depo-Provera)
- Implants (Implanon, Norplant)
Hormonal Methods

- **Efficacy**
  - Highly effective - 99%+
- **Method of Action**
  - Prevents ovulation, thickens cervical mucous
- **Side Effects**
  - Increased risk: CV disease smokers and older women, STI
- **Non-contraceptive Health Benefits**
  - Decreased risk: endometrial and cervical cancers, iron deficiency anemia
  - Lighter, more regular and less painful menstrual periods; protection from benign breast disease, ovarian cysts, acne, endometriosis, PMS; decreased risk ovarian and endometrial cancers

Early Warning Signs for Pill Users

- Abdominal pain (severe)
- Chest pain (severe, with cough, shortness of breath, or sharp pain on breathing in)
- Headache (severe), dizziness, weakness, numbness, especially if it occurs on one side only
- Eye problems (vision loss or blurring), speech problems
- Severe leg pain (calf or thigh)

OC Use and Ovarian Cancer

Other Hormonal Methods of Contraception

- **Emergency contraceptive pills (ECPs)**
  - Can be taken several days after unprotected sex
  - Plan B One-Step (nonprescription)
  - Next Choice (nonprescription)

![Plan B One-Step Emergency Contraceptive](image-url)
Surgical Methods
Vasectomy and Tubal Ligation

Abstinence

- Only 100% effective method!

Fertility Awareness Methods

- Monitoring of cervical mucus, body temperature and calendar

Surgical Abortion

- Landmark decision 1973 – Roe v. Wade
- Methods of surgical abortion:
  - Vacuum aspiration
  - Dilation and evacuation
  - Dilation and curettage
  - Induction abortion
  - Hysterotomy
  - Intact dilation and extraction
Vacuum Aspiration Abortion

- Mifepristone: steroid hormone that blocks progesterone
- Misoprostol: taken a few days later and causes uterine contractions
- Requires at least 2 visits to physicians
- Side effects include: cramping, heavy bleeding, pain and nausea

Medical Abortion

- Mifepristone (RU-486) Followed by Misoprostol

  - Mifepristone: steroid hormone that blocks progesterone
  - Misoprostol: taken a few days later and causes uterine contractions
  - Requires at least 2 visits to physicians
  - Side effects include: cramping, heavy bleeding, pain and nausea

Planning a Pregnancy

- Factors to evaluate
  - Emotional health: reasons for having a child
  - Maternal health: preconception care should include assessment of potential complications
  - Paternal health: men should avoid chemical exposure
  - Financial health: insurance, costs to raise a child, child care

Prenatal Care

- Schedule regular checkups
  - Measure weight gain and blood pressure
  - Monitor size and position of fetus
- Choose a practitioner (physician and/or midwife)
- Avoid all alcohol and drugs
- Avoid X-rays
- Monitor diet and exercise
- Avoid exposure to chemicals
Complications in Pregnancy and Delivery

- Preeclampsia - high BP with pregnancy
- Eclampsia - seizures from the high BP
- Cesarean section (C-section)
- Miscarriage
  - Rh factor problems
  - Ectopic pregnancy
  - Stillbirth
- Sudden Infant Death Syndrome (SIDS)

Infertility

- Causes in women
  - Endometriosis
  - Pelvic inflammatory disease (PID)
  - Sexually transmitted infections
- Causes in men
  - Low sperm count
  - Sexually transmitted infections

Treatment for Infertility

- Timing of sex to coincide with ovulation
- Surgery to correct structural problems
- Hormone treatment to improve ova and sperm health
- Fertility drugs
- Alternative insemination
- In vitro fertilization
- Gamete intrafallopian transfer (GIFT)
- Intracytoplasmic sperm injection (ICSI)
- Embryo transfer
- Other options
  - Surrogate motherhood
  - Adoption