



WELCOME

Your courtesy is appreciated

- Please remember to turn all electronic devices to silent mode
- If you are attending with a young child please use discretion, we ask that you try not to disrupt another's learning experience



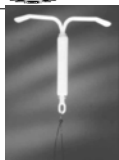
A PNP's Guide to Prescribing Birth Control

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Methods



LNG IUS



Single-rod Implant



Injectable



Oral Contraceptive Pills



Vaginal Ring



Patch



Contraception Decision Making

- Effectiveness: "Will it work?"
- Safety: "Will it hurt me?"
- Non-Contraceptive Benefits: "How else can it help me?"
- Personal Considerations





The Need for Contraception

- Teen without contraception has an 85-90% chance of becoming pregnant in a year.
- In 2000, 48% of all sexually transmitted infections were among 15-24 year olds



Adolescent's Contraceptive Choice Considerations

- Sexual Practices
- Access and Cost
- Ease of use
- Pregnancy and STI Risk
- Health Benefits
- Tolerance of Side Effects
- Estrogen contraindications
- Confidentiality



Adolescent Counseling on Contraception

- Emphasize no STI protection with hormonal contraceptives
- Discuss condom use
- Discuss emergency contraception
- Encourage parental participation



Combined Estrogen and Progestin Contraception





Combined Oral Contraceptive Pills

- Estrogen Effects
 - Maintain endometrium
 - Prevent unscheduled bleeding
 - Prevent follicle development
- Progestin Effects
 - Inhibit ovulation
 - Thicken cervical mucus



Combined Oral Contraceptive Pills

- **Mechanism of Action:**
 - Blocks the luteinizing hormone (LH) surge
 - Inhibits ovulation
 - Thickens cervical mucus
 - Inhibits capacitation of the sperm
 - Slows tubal motility
- **Route of Administration and Frequency:**
 - Oral administration
 - Requires daily adherence



Estrogen Contraindications

- History of migraine with aura
- History of thromboembolism
- First degree relative with thromboembolism
- Active hepatitis
- Uncontrolled hypertension
- Undiagnosed abnormal vaginal bleeding



Combined Oral Contraceptive Pills

- **Efficacy**
 - Perfect use: 0.3% failure rate
 - Typical use: 8% failure rate
- **Cost:** \$15–\$35/monthly pill-pack
- **Counseling Issues**
 - Break through bleeding may occur
 - Monthly bleeding is decreased
 - Reminders for taking the pill at the same time everyday
 - Dual OCP and condom protection is optimal
 - Quick Start





Combined Oral Contraceptive Pills

Advantages

- Reduces dysmenorrhea
- Decreases menstrual bleeding and anemia
- Menstrual regularity
- Improves acne
- PID protection
- Ovarian and endometrial cancer protection
- Prevents ovarian and breast cysts
- Decreases hirsutism
- Lowers risk of ectopic pregnancy



Combined Oral Contraceptive Pills

Disadvantages:

- Must be taken daily
- No STI protection
- Rare health risks, including blood clots, heart attack, and stroke
- Certain medications may decrease effectiveness
- Other side effects include:
 - Temporary irregular bleeding
 - Breast tenderness
 - Nausea
 - Headaches



Extended Cycle Oral Contraceptive Pills

- OCPs eliminate thickened endometrial lining
- 84 active pills
 - Ethinyl Estradiol 0.03 mg/levonorgestrel 0.15 mg
- 7 placebo pills or 7 low dose estrogen pills
- Users
 - Endometriosis
 - Medical conditions aggravated by menses
 - Desire fewer periods



Altered Hormone-free Interval Oral Contraceptive Pills

- 24 day active pills and four days of placebo
 - Ethinyl Estradiol 0.02 mg/norethindrone acetate 1 mg with ferrous fumarate 75 mg
 - Ethinyl Estradiol 0.02 mg/drospirenone 3 mg
- Advantages
 - Less pronounced hormonal fluctuation
 - Greater pregnancy protection
 - Less break through bleeding
 - 3 day periods after 6 months





Oral Contraceptives for Non-Contraceptive Indications

Acne
Dysmenorrhea
Premenstrual Syndrome



"If you decide to take the Pill, why not take the only one that's clinically proven to help your skin look better too?"



Transdermal Patch

- **What is it**
 - A thin, beige, plastic patch
 - Ethinyl estradiol 0.75 mg/etonogestrel 6mg
- **Mechanism of Action**
 - Blocks the Luteinizing Hormone (LH) surge and thus inhibits ovulation
 - Thickens cervical mucus to prevent sperm penetration into the woman's upper genital tract
 - Inhibits capacitation of the sperm
 - Slows tubal motility



Transdermal Patch

- **Route of Administration and Frequency**
 - New patch is placed once a week
 - One a week for 3 weeks on and one week off
- **Efficacy:**
 - Perfect use: 0.3% failure rate
 - Typical use: 8% failure rate
 - 3-5% detachment rate
 - In adolescents, may be as high as 35%



Transdermal Patch

- **Cost:** \$30-35 for a month's supply
- **Counseling/Prescribing Issues**
 - Dual patch and condom protection is optimal
 - Must replace patch every 7 days on dry skin
 - Change patch site each week to avoid irritation
 - Concrete counseling regarding patch placement
 - Breast discomfort in first few months
 - Women over 90 kg higher failure rate
 - Extra prescription for replacement patch





Transdermal Patch

Advantages

- Highly effective
- Minimal maintenance
- Excellent compliance rates with adolescents
- More regular periods
- Protects against ovarian and endometrial cancer
- Prevents ovarian and breast cysts
- Decreases hirsutism
- Lowers risk of ectopic pregnancy



Transdermal Patch

Disadvantages

- 60% more estrogen than the pill
- Does not effectively prevent against STIs and HIV
- Site irritation, rash or hyperpigmentation
- Possible weight gain
- May detach at higher rates
- More expensive than OCPs
- Privacy concerns



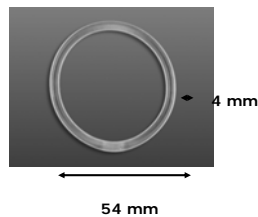
Vaginal Ring

• What is it

- A soft flexible ring
- 2 inches in diameter
- 0.015 mg ethinyl estradiol/
0.120 mg etongestrel

• Mechanism of Action

- Hormones absorbed continuously into the blood stream
- Same mechanism as other combined estrogen and progestin methods



Vaginal Ring (NuvaRing®)

Route of Administration and Frequency

- Inserted by pressing the sides of the ring together
- Vaginal musculature and orientation keep the ring in place
- Remains in place for three weeks of continuous use, followed by a ring-free week
- Insert within 5 days of onset menses





Vaginal Ring (NuvaRing ®)

- **Efficacy**
 - Perfect use: 0.3% failure rate
 - Typical use: 8% failure rate
- **Cost:** Between \$30 and \$35 a month
- **Counseling Issues**
 - Dual use with condom
 - Requires comfort with touching one's vagina
 - May still be menstruating at time of insertion
 - Trial in office may help
 - May be removed for up to 3 hours



Vaginal Ring

- **Advantages**
 - Highly effective
 - Low incidence of side effects
 - Minimal maintenance
 - May have the same benefits as combined estrogen and progestin contraceptive pills
 - Private
 - May prevent bacterial vaginosis
 - Male partner will not feel it



Vaginal Ring

Disadvantages

- Must be comfortable touching genitalia
- Possible increased normal vaginal secretions
- May forget removal schedule
- Does not protect against STIs
- Same risks as with combination OCPs



Hormonal Contraception

Instruct patients with estrogen containing contraception to call immediately if they experience:

- **Abdominal pain** (severe)
- **Chest pain** or shortness of breath
- **Headaches** (severe)
- **Eye problems**, such as blurred vision
- **Severe leg or arm pain** or numbness





Progestin-Only Contraception



Depot-Medroxy Progesterone Acetate Injection

- **What is it**
 - Injectable progesterone-only birth control method
 - Effective for 12 weeks
- **Mechanism of Action**
 - Inhibits ovulation by suppressing FSH and LH levels
 - Eliminates the LH surge
 - Thickens cervical mucus and thins endometrium



Depot-Medroxy Progesterone Acetate Injection

Route of Administration and Frequency

- Injected in the deltoid or gluteus muscle
 - Every 12 weeks
 - Initiate within 5-10 days of menses
- **Efficacy**
 - Perfect use: 0.3% failure rate
 - Typical use: 3.0% failure rate
 - **Cost:**
 - Each injection costs between \$30 and \$75
 - Total annual cost between \$235 and \$585



Depot-Medroxy Progesterone Acetate Injection

- **Counseling Issues:**
 - Dual condom and Depo-Provera protection is optimal
 - Weight bearing exercise regularly
 - 1300 mg daily Calcium intake with 400 IU Vitamin D
 - Irregular bleeding or amenorrhea
 - Weight gain
 - Delayed return to fertility





Depot-Medroxy Progesterone Acetate Injection

• Advantages

- Highly effective
- Excellent compliance rate in adolescents
- Does not require daily adherence
- May decrease ovarian and uterine cancers
- Effective after 24 hours if started during menses
- Minimal drug interactions
- Private



Depot-Medroxy Progesterone Acetate Injection

Disadvantages

- Menstrual irregularities
 - Irregular bleeding
 - Amenorrhea
- Bone mineral loss may occur with long term use
- Does not protect against STIs or HIV
- Weight gain
- Delay in return to fertility
- Requires an appointment every 12 weeks



Progestin-only Oral Contraceptive Pills

• What is it

- Oral contraceptive pill containing only progestin
- 35 mg of norethindrone or 0.075 mg of norgestrel

• Mechanism of Action

- Thickens cervical mucus (primary mechanism)
- Causes endometrial involution
- Inhibits ovulation



Progestin-only Oral Contraceptive Pills

Route of Administration and Frequency

- Oral administration
- Consistent time of day essential
- If more than 3 hours late, back up method for 48 hours





Progestin-only Oral Contraceptive Pills

- **Efficacy**
 - Perfect use: 0.3%
 - Typical use: 8%
- **Cost:** Between \$25-35/pack
- **Counseling Issues**
 - Dual use with condom
 - Ovulation may still occur
 - Ingestion at a consistent time of day
 - Unpredictable bleeding patterns



Progestin-only Oral Contraceptive Pills

- **Advantages**
 - Alternative for those with estrogen contraindications
 - Reduces blood loss
 - No nausea
 - Rapidly reversible



Progestin-only Oral Contraceptive Pills

Disadvantages

- **Requires consistent use**
- **Irregular bleeding**



Emergency Contraception Pills

- **What is it**
 - A safe and effective back-up birth control method
 - Use after unprotected intercourse or contraceptive failure
 - Plan B is the only designated product
- **Mechanism of Action**
 - Delays or inhibits ovulation (primary mechanism)
 - May also inhibit fertilization or prevent implantation





Emergency Contraception Pills

- **Route of Administration and Frequency**
 - Taken orally up to 5 days after unprotected sex
 - Most effective the sooner it is taken
- **Efficacy**
 - Progestin-only pills within 72 hours decrease pregnancy risk by 89%
 - Combination pills reduce risk by 75%
- **Cost:** Range from \$8 – \$35



Emergency Contraception Pills

Counseling Issues:

- Not intended to be a regular form of birth control
- No protection against STIs
- As of July 2005, no state law requires parental consent for the prescription of EC to minors
- Available over the counter for 18 and older
- **EC is not an abortifacient** - will not affect an existing pregnancy.
- Two doses of Plan B at one time improves compliance
- Provision in advance increases likelihood of usage



Progestin Containing Intrauterine Device (IUD)

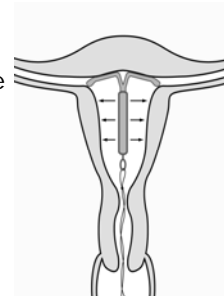
- **What is it**
 - T-shaped polyethylene body with steroid reservoir
 - 20 mcg of Levonorgestrel
- **Mechanism of Action**
 - Cervical mucus thickened
 - Sperm motility and function inhibited
 - Endometrium suppressed
 - Weak foreign body reaction induced
 - Ovulation inhibited (in some cycles)



Progestin Containing Intrauterine Device (IUD)

Route of Administration and Frequency

- Inserted into the uterus
- 5 years
- **Efficacy:** 0.3% failure rate





Progestin Containing Intrauterine Device (IUD)

- **Cost:**
 - Device \$300-350 plus insertion cost
- **Counseling Issues:**
 - Condom usage essential to prevent STIs
 - Excellent for those seeking long term protection
 - Recommended for those with at least one child, no history of PID or ectopic pregnancy
 - Infections related to IUD are in first month



Progestin Containing Intrauterine Device (IUD)

- **Advantages**
 - Highly effective
 - Private
 - Rapidly reversible
 - Reduces menstrual blood loss
 - Delivers low level of hormones
 - Decreases dysmenorrhea



Progestin Containing Intrauterine Device (IUD)

Disadvantages

- Requires clinician visit for insertion/removal
- Does not completely suppress functional ovarian cysts
- Expulsion occurs in up to 5% of IUDs inserted



Progestin Implant

- **What is it**
 - Single thin, flexible plastic rod
 - 4 cm in length, 2 mm diameter
 - 68 mg Etonogestrel
- **Mechanism of Action**
 - Cervical mucus thickened
 - Ovulation inhibited
 - Endometrium suppressed





Progestin Implant

Route of Administration and Frequency

- Inserted by trained clinician subdermally
- Inserted in first 5 days of menses
- 3 years
- **Efficacy:** 0.05%



Progestin Implant

- **Cost**
 - Device and insertion cost
- **Counseling Issues:**
 - Condom usage essential to prevent STIs
 - Excellent for those seeking long term protection
 - Change in menstrual cycle will occur
 - May gain weight



Progestin Implant

• Advantages

- Highly effective
- Rapidly reversible
- Nothing to remember



Progestin Implant


Disadvantages

- Requires clinician visit for insertion/removal
- High initial cost
- Break through bleeding
- Headaches
- Less effective with meds that induce liver enzymes







**UNINTENDED
PREGNANCY**



Questions
(last 5 minutes of session)

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Thank you

We remind all participants to visit CE Pavilion to complete your session evaluations and record your Continuing Education contact hours.

NAPNAP hopes you have an enjoyable conference experience, and enjoy your stay in Nashville, TN.

Mark your calendars!
Next year's conference will take place in:
San Diego, CA on March 19 - 22, 2009.

