LONG ACTING CONTRACEPTION 2020

Alison O. Marshall, RN, MSN, FNP-C
Boston College Connell School of Nursing
Sylvie Ratelle STD/HIV Prevention Center of New England

DISCLOSURE

ALISON O. MARSHALL, RN, MSN, FNP-C HAS NO FINANCIAL RELATIONSHIPS WITH COMMERCIAL INTERESTS TO DISCLOSE

Objectives
- Identify the most common side effects associated with long acting reversible contraception (LARC).
- Differentiate between "red flag" side effects and more benign side effects, including in women with migraine, women with fertility differences and women with cardiovascular disease.
- Effectively manage common and frequent side effects of LARC.

HISTORY OF CONTRACEPTION

- 1950's – First oral contraception contained high progestin
- 1960 – First combined oral contraception (COC)
- 1970 – Researchers discovered high dose responsible for venous thromboembolism (VTE)
- 1970's – Phasic preparations to mimic the menstrual cycle introduced
- 1980's – Long acting preparations introduced
- 2002 – transdermal & vaginal hormones approved
- 2003 – Extended cycle OC with Levonorgestrel and Ethinyl Estradiol (EE)
- 2006 – Implanon rod implant

PERCENT OF WOMEN EXPERIENCING AN UNINTENDED PREGNANCY THE 1ST YEAR

Method	Typical Use	Perfect Use
No method	85	85
Diaphragm	12	6
Combined OC	9	0.3
Ortho Evra Patch (ethinyl estradiol and norelgestromin transdermal)	9	0.3
Nuvaring (etonogestrel/ethinyl estradiol vaginal ring)	9	0.3
Depo-Provera (medroxyprogesterone acetate, contraceptive injection)	6	0.2
Copper IUD	0.8	0.6
Mirena IUS (levonorgestrel-releasing intrauterine system)	0.2	0.2
Implanon (etonogestrel implant)	0.05	0.05

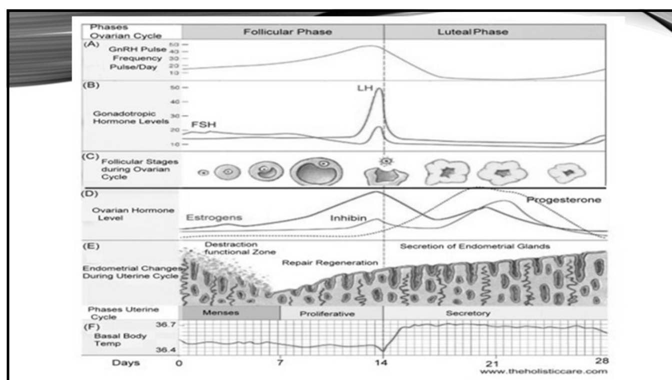
WOMEN'S CONTRACEPTIVE DECISION-MAKING

- Factors that influence contraceptive decision-making include:
  - Contraceptive choices/properties
  - External factors-peers, media, cultural/ spiritual beliefs
  - Relationship/partner dynamics
  - Woman's personal characteristics
  - Provider relationship/counseling techniques/bias

CONTRACEPTIVE STRATEGIES & BARRIERS

Patient success strategies:
- Consider patient's choice & discuss appropriateness
- Provider counseling-impacts adherence & user satisfaction
  - How it works
  - Protection against STD/HIV
  - How to use/switching methods
  - Side effects & how to handle
  - Warning signs or "ACHES"
- Quick start methods

Barriers:
- Waiting periods to initiate methods
- Physical exams prior to method start
- Access
- Cost
- Provider bias' or lack of education
- Political barriers



HORMONAL PROPERTIES

Ovulation
- Low plasma level of estrogen suppress FSH-RF from hypothalamus→ ↓production FSH & LH. ⦸ midcycle surge of LH & FSH; ovulation suppressed in 95-98%
- High doses estrogen ↑corpus luteum degeneration, inhibiting progesterone → no implantation & placental placement

Implantation
- Normal secretory phase altered
- Endometrial changes-areas of edema & dense cellularity
- progestins→ atrophic endometrial glands=hostile environment

Ovum transport
- Progestins ↓rate of ovum transport by altering tubal secretion & peristalsis

Cervical mucus
- Progestins promote thick, scanty cervical mucus→inability of sperm to penetrate
- Progestins alter spermatozoa enzymes that allow ovum penetration

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PHARMACOLOGICAL ACTIONS: PROGESTIN & ESTROGEN

Progestin
- Ovarian and pituitary inhibition
- Thickening of the cervical mucus
- Endometrial atrophy causes a hostile environment for implantation
- Cycle control
- Suppression of LH surge

Estrogen
- Ovarian and pituitary inhibition
- Thinning of increased cervical mucus
- Endometrial proliferation
- Cycle control
- No follicular maturation activity due to suppression of FSH

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PROGESTERONE PRESCRIBING HIGHLIGHTS

- Precautions and Contraindications
  - Thromboembolic disease
  - Breast cancer
  - Impaired liver function
  - Depression
  - Disorders that worsen with fluid retention
  - Progesterone is Pregnancy Category D**
  - Norethindrone acetate is Pregnancy Category X**

**No definitive studies regarding birth defects

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PROGESTERONE SIDE EFFECTS

- Irregular bleeding
- Amenorrhea
- Acne
- Injectable and implanted progesterone
  - Weight gain
  - Irregular menstrual bleeding
  - Osteoporosis

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PROGESTERONE CLINICAL USE

- Postmenopausal Hormone Replacement
  - Combined with estrogen when uterus is intact
- Progestin-only contraception
  - progestin-only pills (norethindrone)
  - medroxyprogesterone acetate (Depo-Provera)
- Progestin implanted IUDs – 4 available
- Monitoring
  - Depression
  - Seizure patients may have increased risk of seizures
  - Diabetics should monitor blood glucose

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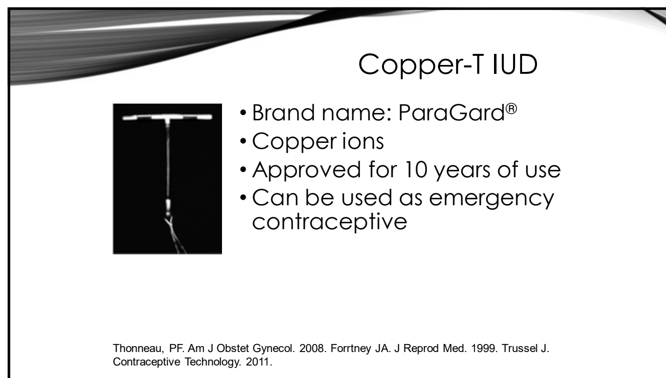
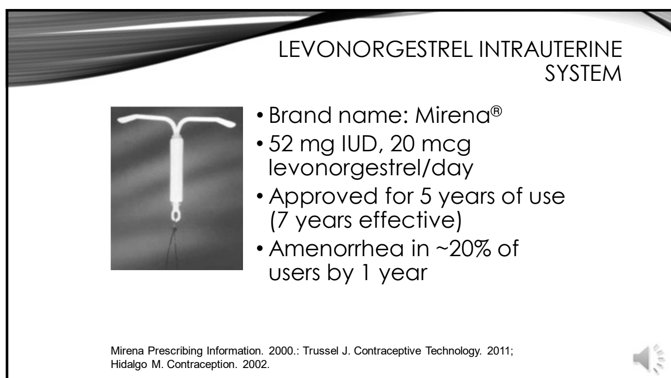
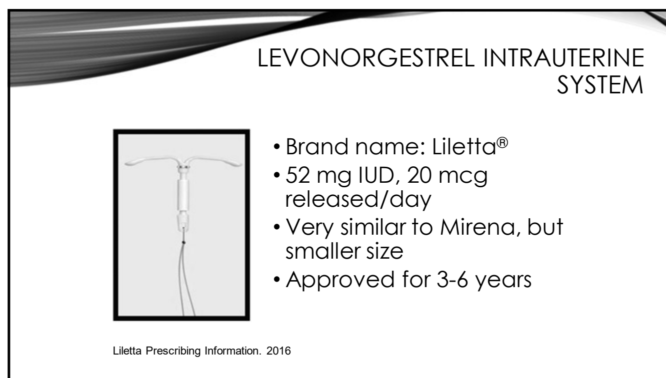
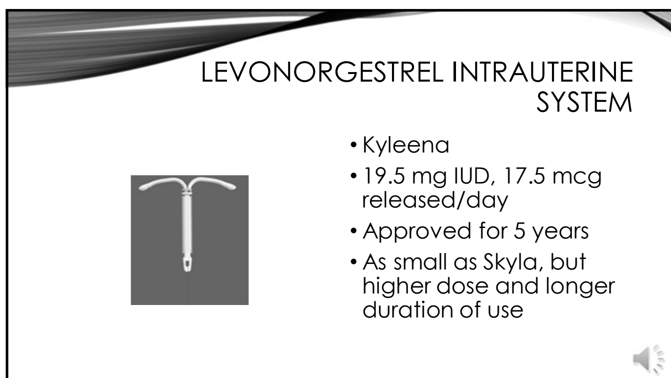
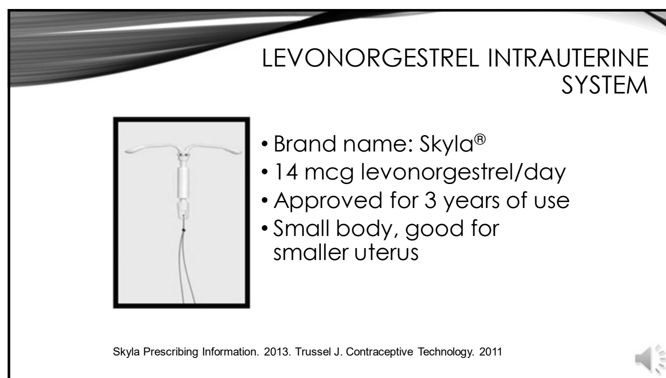
LONG ACTING METHOD CHOICES

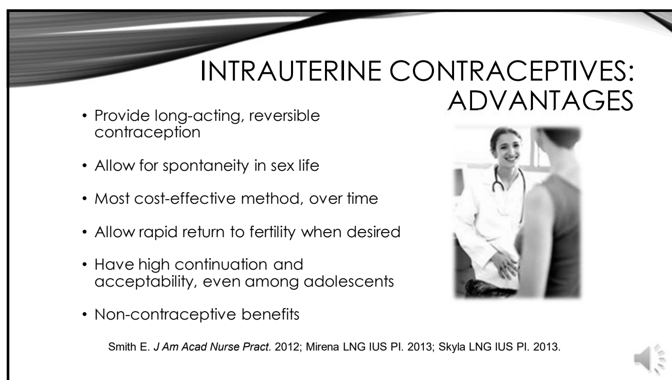












INTRAUTERINE CONTRACEPTIVES: DISADVANTAGES

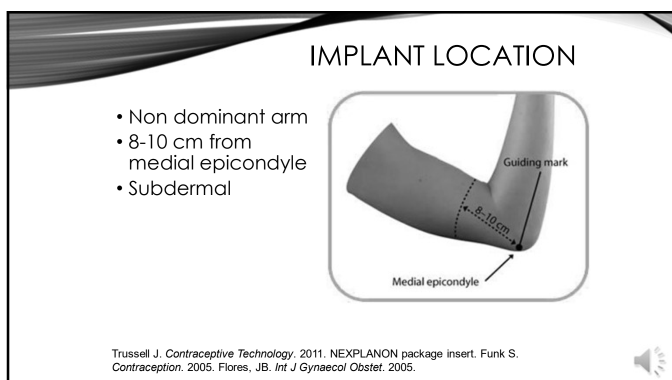
- Device expulsion
  - 3-5% of all users
- Uterine perforation
  - 1/1000 insertions
- Ectopic pregnancy
  - 0.1% of all pregnancies
- Placement and removal require medical professional
- Placement may be easier in multiparous women

Smith E. *J Am Acad Nurse Pract.* 2012; Mirena LNG IUS PI. 2013; Skyla LNG IUS PI. 2013; Hidalgo M. *Contraception.* 2002.

Dispelling Myths about Intrauterine Contraception

- ***Can*** be used:
  - in women with multiple partners
  - in women with history of STDs or PID
  - in nulliparous women
  - in teens
  - immediately postpartum
  - immediately post-abortion
  - in women with past ectopic pregnancy
- ARE not abortifacients

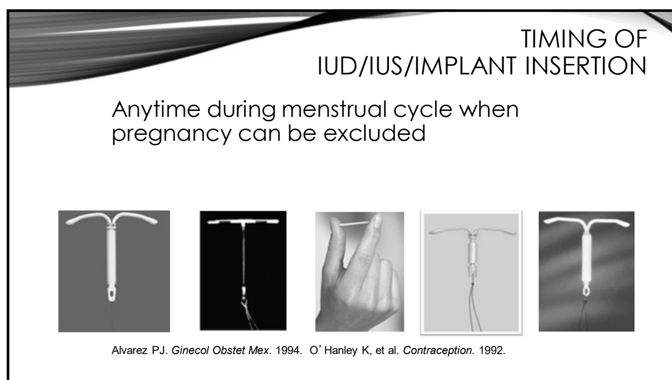
MacIsaac L. *Obstet Gynecol Clin N Am*. 2007. Toma A. *Pediatr Adolesc Gynecol*. 2006. Otero-Flores JB. *Contraception*. 2003. Suhonen S. *Contraception*. 2004. WHO. 2004.

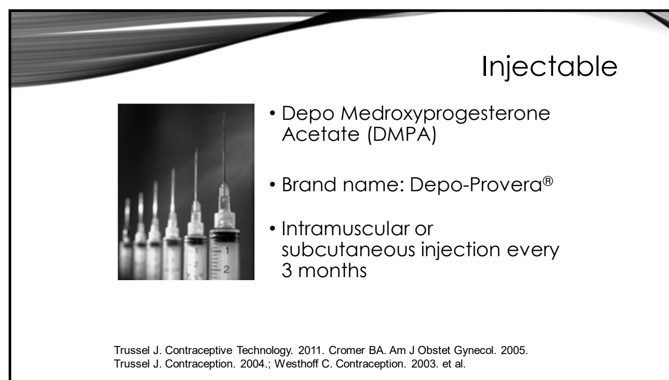


IMPLANTS

Advantages	Disadvantages
• High efficacy • Long-term • Rapid reversibility • Rapid procedures • Can use when lactating • Several non-contraceptive benefits	**• Bleeding irregularities(34%) • Weight gain (2%) • Emotional liability (2%) • Headache (2%) • Acne (1%) • Depression (1%)**

Trussell J. *Contraceptive Technology.* 2011. NEXPLANON [package insert]. Whitehouse, NJ: N.V. Organon, Oss; 2012





IUD FOLLOW-UP

- Not absolutely required
- "Checking strings"- 6- Week follow-up visit
  - High risk patients
  - Further contraceptive counseling, preventative care
  - Dissatisfied patients

IUD FOLLOW-UP

- Copper IUD
  - Associated with prolonged or heavier periods for the first 1-6 months.
  - Most women's cycles will regulate within 1 year.
- LNG-IUD
  - 42% of women experience unscheduled bleeding in first 1-3 months.
  - Decreases to 1/5 within first year of use.
  - By 2 years, 50-70% of women are amenorrheic.

IUD FOLLOW-UP

- Unscheduled bleeding
  - NSAIDS
    - Ibuprofen 800 mg TID x 5-7 days
    - Mefenamic acid 500 mg BID x 5-7 days
  - No evidence to support using OCPs
- If discomfort or unscheduled bleeding persist, start w/u for:
  - IUD displacement
  - Cervicitis
  - Pregnancy
  - Uterine polyps or fibroids

IMPLANT FOLLOW-UP

- No required follow-up, but may be indicated in certain populations
- Check site prn, no routine complications
- Much more unscheduled bleeding!
  - In first three months, only 22% of women experience NO unscheduled bleeding
  - 25% remove because of this
  - Pre-insertion counseling important

IMPLANT FOLLOW-UP

- For temporary treatment of unscheduled bleeding
  - Estrogen
    - 1-3 cycles of combination OCP
    - Conjugated equine estrogen 1.25 mg daily x 10-20 days
    - Estradiol 2 mg daily x 10-20 days
- NSAIDS
  - Ibuprofen 800 mg TID x 10 days
  - Metanamic acid 500 mg BID x 5 days

DMPA FOLLOW-UP

- Not required, but may be indicated
- Assess weight gain
  - Controversial, but more than hormone containing IUDs
    - Many factors influence weight
  - Likely due to dosing mechanism
- Unscheduled bleeding
  - 25% discontinue during first year
  - However, 50% amenorrheic after 9-12 months, increases further with long-term use
  - Pre-delivery counseling important

DMPA FOLLOW-UP

- Treatment modalities for unscheduled bleeding
  - Estrogen
    - 1-3 cycles of combination OCP (low dose < 20mcg OCPs unstudied)
    - Conjugated equine estrogen 1.25 mg daily x 10-20 days
    - Estridiol 2 mg daily x 10-20 days
- NSAIDS
  - Ibuprofen 800 mg TID x 5-7 days
  - Mefenamic acid 500 mg BID x 5-7 days

DMPA FOLLOW-UP

- Don't create unnecessary time barriers to this method!
  - Schedule every 13 weeks but-
    - Can give earlier if necessary
    - Can give up to 15 weeks without pregnancy test
    - Not teratogenic
    - If > 2 weeks late, can have the injection if not pregnant, but should encourage backup x 7 days, EC as needed.

PEARLS

- Partner with patient in regards to method
- Pre-use counseling SUPER important
- Methods exist to manage unexpected bleeding
- LARC methods are both SAFE and EFFECTIVE

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