# Contraception for Teens

**Dr. Julie Hakim, MD, FRCSC**
Assistant Professor, Pediatric Gynecology

Texas Children's Hospital

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THE CUTTING EDGE OF PEDIATRICS

# NO DISCLOSURES

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THE CUTTING EDGE OF PEDIATRICS

# Adolescent Pregnancy in U.S.

**3 in 10** adolescent girls will become pregnant by age 20

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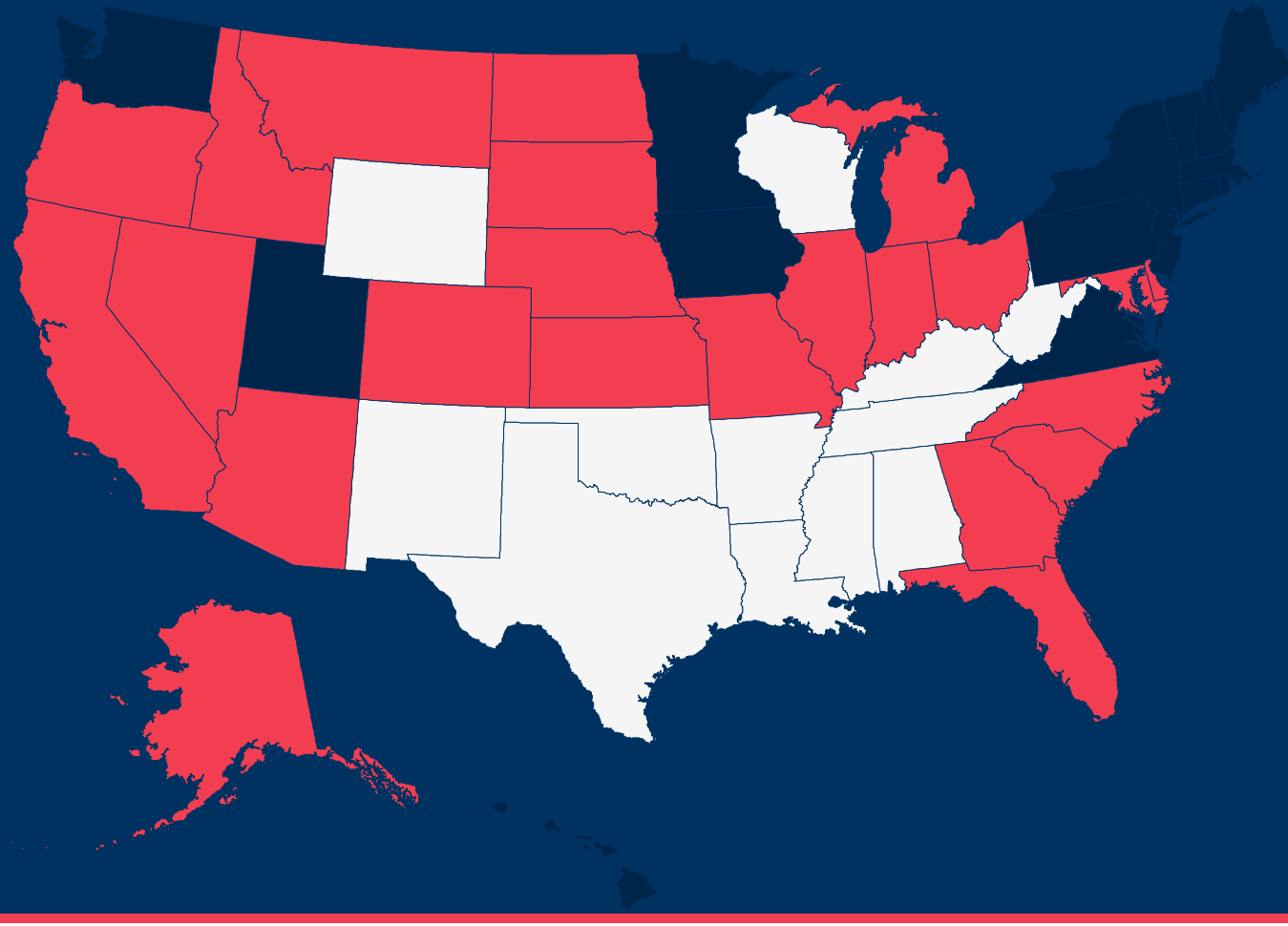
The National Campaign to Prevent Teen and Unplanned Pregnancy, February 2011. http://www.thenationalcampaign.org/resources/pdf/FastFacts_3in10.pdf

THE CUTTING EDGE OF PEDIATRICS

# Teenage Birth Rates for 15-19 Year Olds by State, 2014

U.S Teen Birth rate was **24.2** in 2014

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CDC

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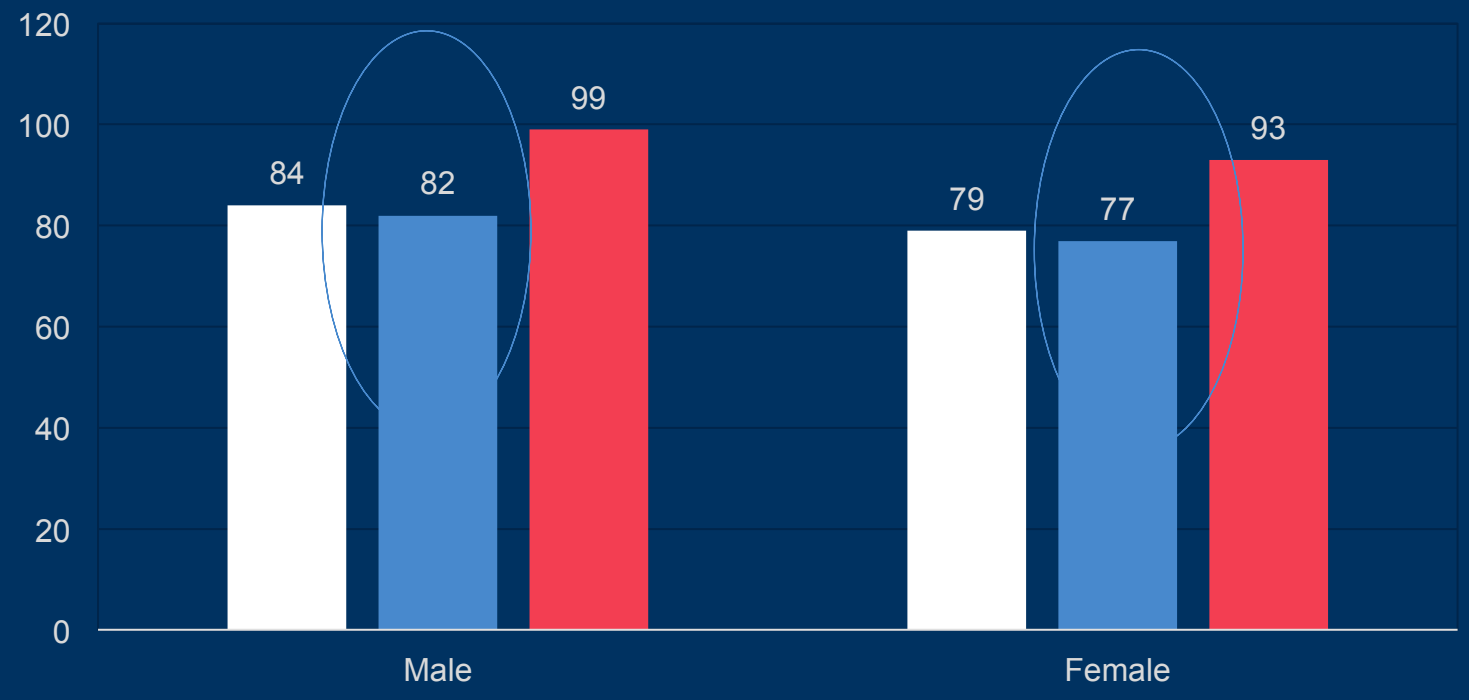
# Use of Contraception at First Sex Among Males and Females Aged 15-19, by Age at First Sex:

## United States, 1988-2013




Percentage of male and female teenagers aged 17 and under who used contraception at first sex was significantly lower than that of teenagers aged 18-19 ($p < 0.05$)

**SOURCE:**
CDC/NCHS, National Survey of Family Growth, 1988 – 2013,

# Why Aren't Adolescents Using Contraception?

- Adolescence:
  - Early adolescence: present oriented, impulsive
  - Middle adolescence: omnipotent, invincible
- Spontaneous
- Pressure
- Ambivalence about pregnancy "I can handle it"
- Inadequate information "I can't get pregnant anyways.."
- Inadequate confidential care

# How Teens Get Their Information

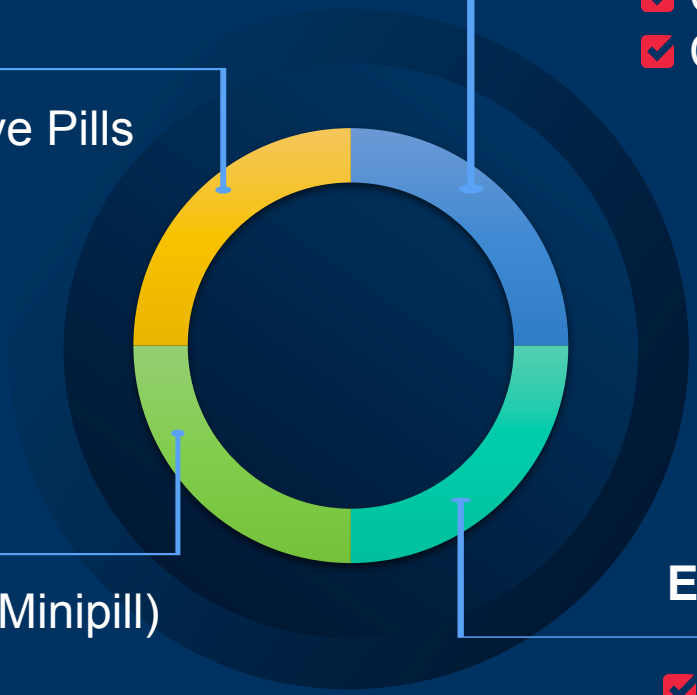
- Friends or relatives
- Whatever is accessible
- Media – FB, Instagram, Snapchat
- Fear of side effects
- Physician recommendation

## Estrogen + Progesterone

- Combined Oral Contraceptive Pills
- Contraceptive Patch
- Vaginal Ring

## Non Hormonal & Barrier

- Copper IUD
- Condom



## Progesterone only

- Progesterone only pill (Minipill)
- Depo Provera (DMPA)
- Implant (Nexplanon)
- IUD (Mirena, Skyla)

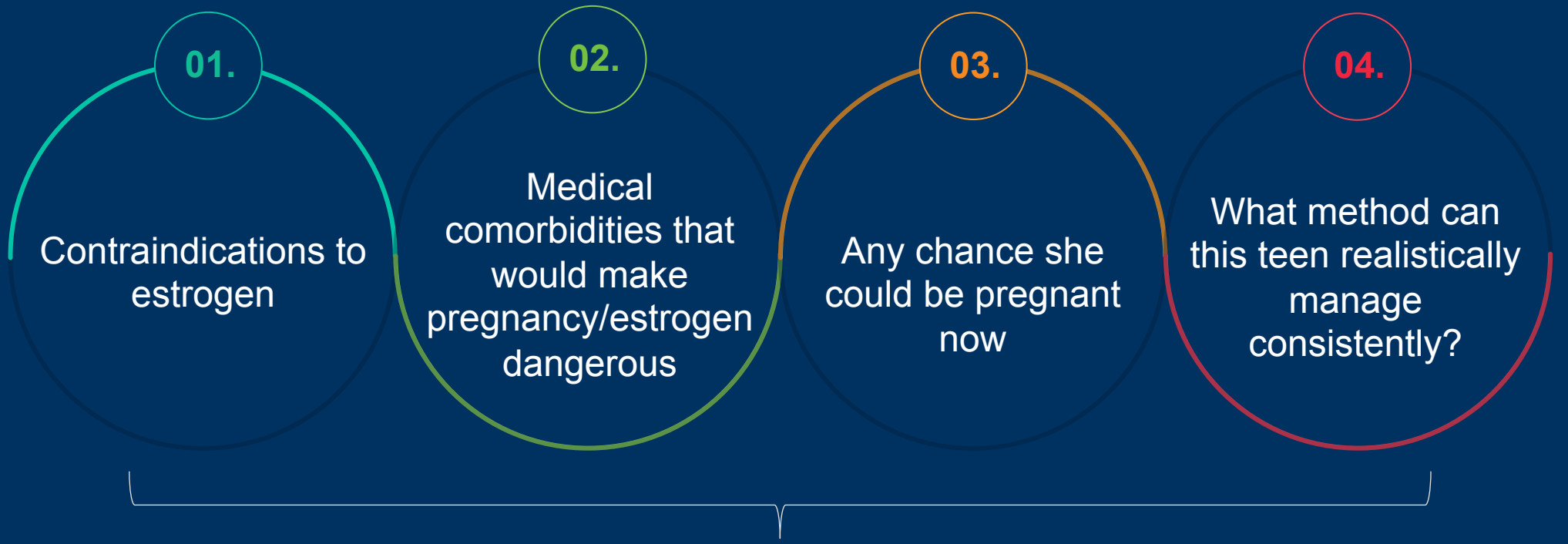
## Emergency

- Progesterone only pills
- Estrogen and Progesterone pills
- Copper IUD

# The Contraception Initiation Visit:
## All you need to do

- ☑ Reassure adolescents of confidentiality
- ☑ History
  - ☑ PMH: rule out contraindications to estrogen-containing methods
  - ☑ Sexual history
  - ☑ History of previous contraceptive use
  - ☑ Current medications
- ☑ Physical (very basic!)
  - ☑ Weight, BP
  - ☑ Gyn exam NOT required

# 4 Important Considerations:




**Will they consider a LARC and can I place it today?**

# 01. Absolute Contraindications to Estrogen

- Pregnancy
- Hypertension
- Migraines with aura
- Cardiac disease (ischemic, valvular)
- Breast cancer
- H/o VTE
- Liver disease
- Smoker > age 35 years
- Unexplained vaginal bleeding

02.

Medical comorbidities that would make pregnancy/estrogen dangerous

# 02. CDC Medical Eligibility Contraception

1. No restriction
2. Advantages of method outweigh the risks
3. Risks outweigh the advantages of using the method
4. Unacceptable health risk if the contraceptive method is used

03.

Any chance she could be pregnant now

# 03.

## How to Be Reasonably Certain That a Woman is Not Pregnant

A health-care provider can be reasonably certain that a woman is not pregnant if she has no symptoms or signs of pregnancy and meets any one of the following criteria:

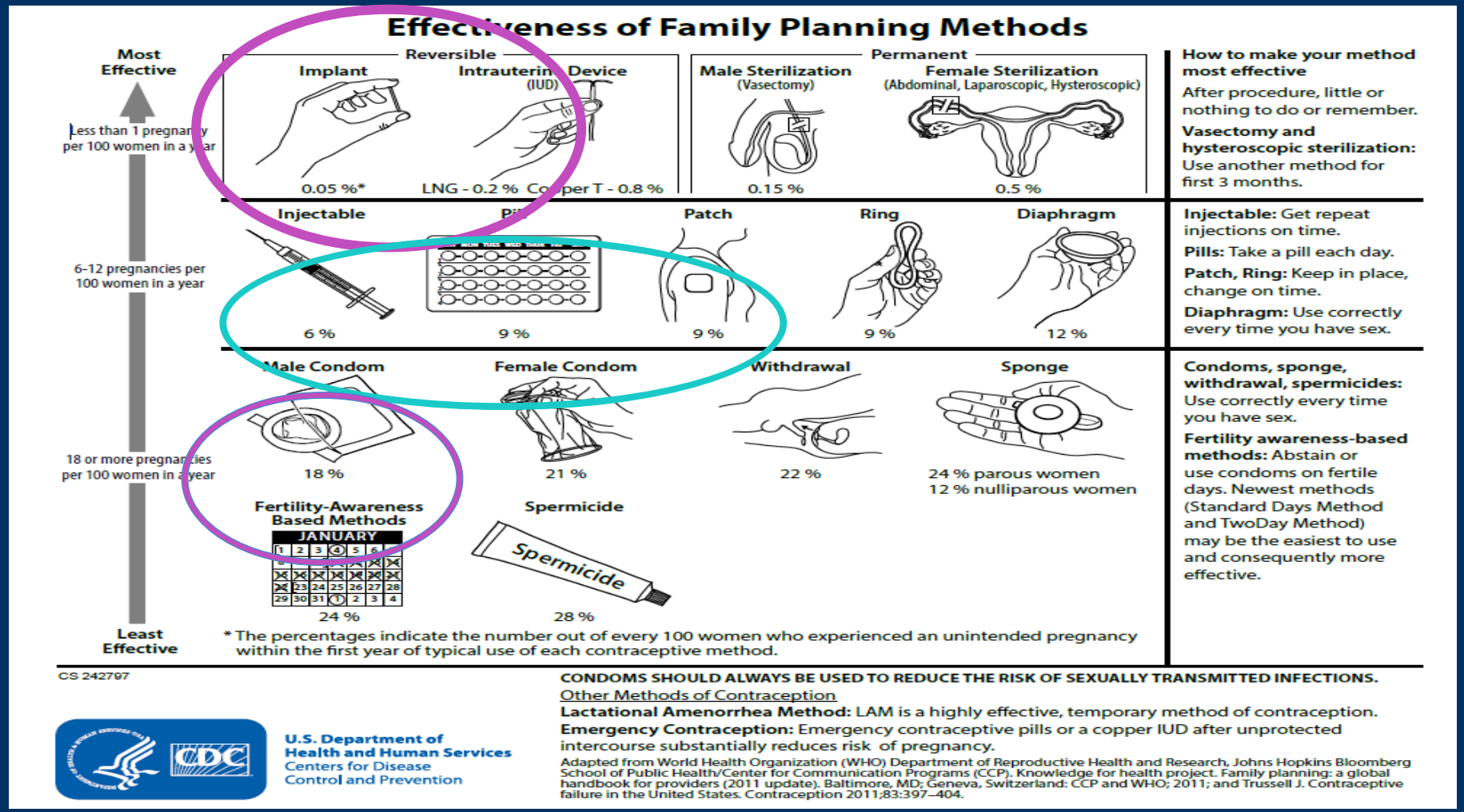
- is ≤7 days after the start of normal menses
- has not had sexual intercourse since the start of last normal menses
- has been correctly and consistently using a reliable method of contraception
- is ≤7 days after spontaneous or induced abortion
- is within 4 weeks postpartum
- is fully or nearly fully breastfeeding (exclusively breastfeeding or the vast majority [≥85%] of feeds are breastfeeds), amenorrheic, and <6 months postpartum

- ☑ Any intercourse in last 14 days? If yes, but UPT negative, can be reasonably certain not pregnant
- ☑ Urine Pregnancy Test at TCH: can detect HCG of 20 IU/mL (within 10-14 days post conception)

04.

What method can this teen realistically manage consistently?

# 04. Contraception Effectiveness with Perfect Use




Tier 1

Tier 2

Tier 3

Source : http://www.cdc.gov/reproductivehealth/UnintendedPregnancy/Contraception.htm

# The Pitch – Non-Contraceptive Benefits

| | Combined Estrogen-Progesterone Options | Progesterone only Options |
|---|---|---|
| Regular menses | ✔ | |
| Amenorrhea | | ✔ |
| Reduction blood loss, IDA | ✔ | ✔ |
| Decreased risk PID | ✔ | ✔ |
| Decreased dysmenorrhea | ✔ | ✔ |
| Decreased incidence endometrial and ovarian cancer | ✔ | ✔ |
| Decreased functional cysts and benign breast disease | ✔ | ✔ |
| Treatment endometriosis | ✔ | ✔ |
| Decreased risk sickle cell crises | | ✔ |

# Tier 1: Most Effective

After 12 months:

- 11% using the contraceptive patch
- 16% receiving DMPA injections
- 30% using the vaginal ring and Ocs
- 86% using LARCs

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***"Forgettable contraception":***
not dependent on compliance/adherence

***"Expanding access to LARC for young women has been declared a national priority" (IOM)***

***"Should be considered as first-line choices for both nulliparous and parous adolescents"***

Long-Acting Reversible Contraception

# Contraceptive Implant (Nexplanon)

- Contains 68 mg etonogestrel (progesterone only)
- Single rod implanted subdermally
- Effective for 3 years
- MOA: thickens cervical mucus, inhibits ovulation
- No effects on bones or lipids
- Irregular bleeding common side effect and reason for discontinuation
  - Infrequent bleeding 33.3%
  - Amenorrhea 21.4%
  - Prolonged bleeding 16.9%
  - Frequent bleeding 6.1%
- Anticipatory guidance

# Mirena – Progestin Containing IUD

- IUD containing levonorgestrel (progesterone only)
- Especially helpful for heavy menstrual bleeding and dysmenorrhea
- Effective for 5 years
- Side effects: irregular bleeding, dysmenorrhea, breast tenderness, depression?
- Risks: perforation, expulsion (higher in nulliparous, adolescents), does not protect against STIs

**Absolute Contraindications to IUDs**

- Current STI
- PID or cervicitis within 3 months
- Uterine abnormality
- Pregnancy
- Undiagnosed vaginal bleeding
- Genital Tract malignancy

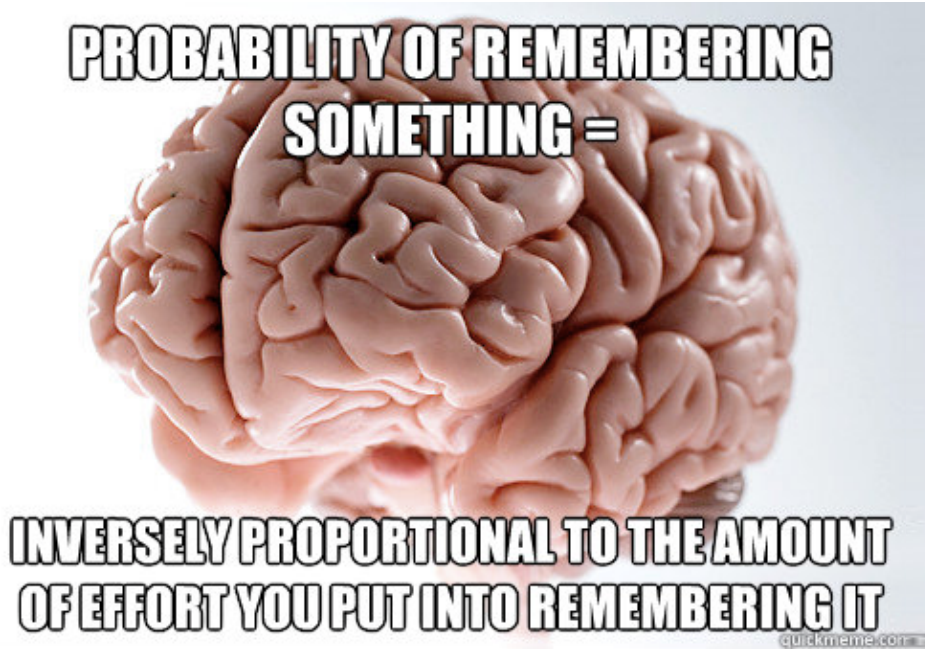
# Mirena and Friends:
## Skyla, Liletta, Kyleena

| | Mirena | Skyla | Liletta | Kyleena | Paragard |
|---|---|---|---|---|---|
| Size (mm) | 32 x 32 | 28 x 30 | 32 x 32 | 28 x 30 | 32 x 36 |
| Progesterone (ug/day) | 20 | 14 | 19 | 17.5 | n/a |
| Effectiveness (years) | 5 | 3 | 3 | 5 | 10 |
| Amenorrhea after 1 year | 20% | 6% | | 12% | |

# Tier 2 Moderately Effective

- Injectable (DMPA) → Progesterone Only
- Pill
- Patch
- Ring

Combination Estrogen & Progesterone



# Depot Medroxyprogesterone Acetate (DMPA)

150 mg IM every 11-13 weeks (Progesterone only)

- Progesterone actions
  - Suppresses LH and prevents ovulation
  - Thickens cervical mucus
  - Atrophies endometrium
  - Decreases cilia motility in fallopian tubes

| Pros | Cons |
|---|---|
| Decreases seizure threshold | Cannot be stopped |
| Reduces sickle cell crises | Irregular bleeding |
| | Appetite |
| | Bone Health |

- Reliable contraception for 3 months, but effects may last up to 9 months
- Side effects: irregular bleeding, amenorrhea (2/3 at 6 months), increased appetite (5 lb weight gain), reversible bone loss (need 1200mg calcium, 600IU vitamin D per day)
- Does not protect against STIs
- Management of irregular bleeding:
  - Injections q monthly x 3
  - Provera or Aygestin x 10 days
  - R/O other causes

# Combined Oral Contraceptive Pills

- Monophasic or triphasic (monophasic preferred)
- 28 active pills, 7 day placebo
  - 20 mcg to 50 mcg ethinyl estradiol
  - Lower dose → less side effects, but more break-through bleeding, and less room for non-compliance (adolescents do not do well with this)
- Non-contraceptive benefits: improves acne, reduces hair growth
  - Do not protect against STIs

# Ortho Evra Patch

- Norelgestromin 6mg/ ethinyl estradiol 0.75mg in a transdermal delivery system
- 1 patch weekly for 3 weeks, then patch-free for 1 week (rotate sites, not on breasts)
- Tape allergy, less effective if >90kg
- No moisturizers right before placement
- Should not detach with sweat, water
- No STI protection

# NuvaRing

- Etonogestrel 120 mcg/d + ethinyl estradiol 15 mcg/d
- Plastic ring inserted intravaginally for 3 weeks with 1 week off
- In vaginal vault (not cervix) – if teen is comfortable with tampons, can use Ring
- Can remove for up to 3 hours, wash with water/soap, replace
- Leukorrhea (good or bad)
- No STI protection

# POPs

- Progestin-only pills (Micronor)
- Small dose of progestin – works primarily by increasing viscosity of cervical mucus
- Does not reliably inhibit ovulation
- Need to be taken carefully and consistently – if more than 3 hours late with pill, will not be effective
- Not ideal for teens

# So What Pill Do I Prescribe?

- Become familiar with a few different pills for different reasons
- Acne or PCOS: ortho cyclen (norgestimate)
- Hirsutism, PMS: Yaz, Yasmin (drosperinone)
- Heavy menstrual bleeding: Lo/Ovral (50ug EE, then taper)
- Low-dose (Alesse)
- Menstrual headaches: Extended cycle Seasonique (no placebo, 10ug EE day 85-91)

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- Start any day if UPT negative, no CI, backup 7d
- Bring back 6-8 weeks, can give 6 months supply
- **ACHES precautions**

# Emergency Contraception

- Up to 120 hours after unprotected sex
- Two methods of delivery
  - Copper IUD
  - Emergency Contraceptive Pills (ECs)

- Ulipristal acetate
  - Anti-progesterone, single pill
  - More effective between 3-5 days
  - Prescription only

- Levonorgestrel
  - Plan B – available OTC
  - Single pill
  - Progestin-only
  - 75-85% effective if within 72 h

# Clinical Scenario 1

16-year-old female, healthy, nulliparous, currently using condoms, but wants more reliable method. Which of the following options are available to her?

a. IUD

b. Implant

c. DMPA

d. Combined hormonal methods (pill, patch, ring)

e. Any of these

# Clinical Scenario 2

16yo nulliparous female with heavy cycles and dysmenorrhea presents with her mother since she is missing school  at the start of most periods.  She is sexually active with her boyfriend using condoms.  What options are available to her?

a. IUD (levonorgestrel)

b. Implants

c. DMPA

d. Combined hormonal methods (pill, patch, ring)

e. Any of these

# Clinical Scenario 3

## Emergency Contraception

17 y.o. female had unprotected intercourse 4 days ago and is worried about pregnancy.

Q : What are her emergency contraception options?

a. Copper IUD

b. Ulipristal acetate

c. Levonorgestrel Plan B

d. Combination estrogen/progestin pills

# Thank You