Contraception

N211 Theoretical Foundations of Women's Health Care During the Reproductive Years

Patty Cason MS, FNP-BC

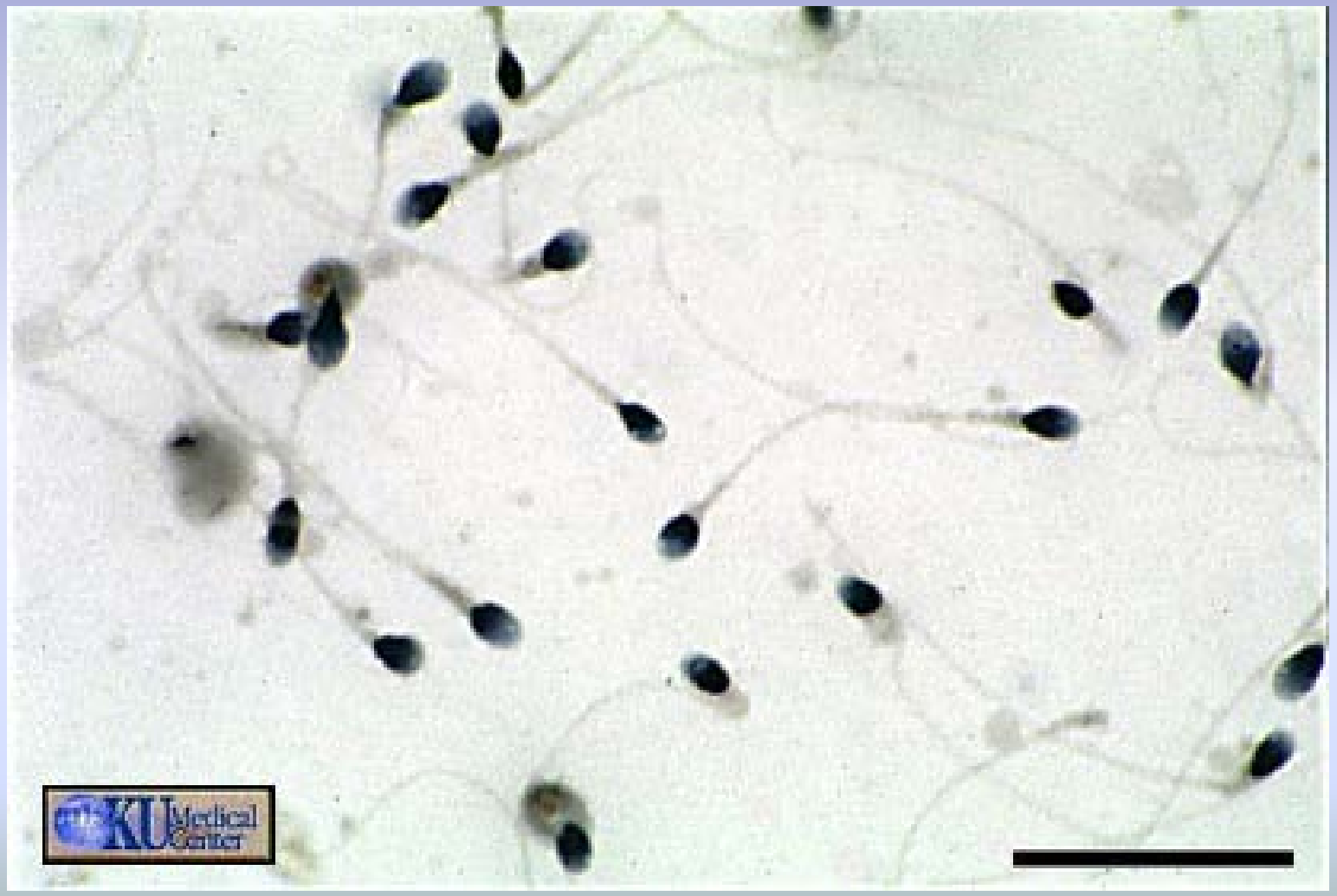
Objectives

Describe contraceptive options currently available in the U.S.

List efficacy, mechanism of action, and appropriate patients.

Identify strategies for successful use of contraceptives.

Sperm



What is the goal?

1. To decrease rates of unintended pregnancy?
2. To help patients prevent unintended pregnancy?
3. To increase LARC use?
4. To increase inter-pregnancy intervals?

To help clients clarify what they want and help them get it?

Shared Decision Making

"A collaborative process that allows patients and their providers to make health care decisions together, taking into account the best scientific evidence available, as well as the patient's values and preferences."

– Informed Medical Decisions Foundation

http://www.informedmedicaldecisions.org/

Efficient
Patient-Centered
Questions

Reproductive Intention/Goals PATH Questions

1. Do you think you would like to have (more) children some day?
2. When do you think that might be?
3. How important is it to you to prevent pregnancy (until then)?

Reproductive Intention/Goals

Clarifies motivation and degree of acceptability regarding pregnancy

…so we discuss **appropriate** interventions

+/- Contraception

+/- Preconception Care

Infertility Services or Adoption

Preconception Care

"Since_____ would you like to discuss ways to be prepared for a healthy pregnancy?"

For example

- …you have said "if it happens, it happens…
- …many women using this method of contraception get pregnant…

Best Question

"Do you have a sense of what is important to you in your birth control method?"

Attitude about

- Effectiveness
- Hormones
- Menstrual cycle and bleeding profile
- Length of use
- Control over removal
- Need to conceal contraception; no supplies? Normal bleeding pattern?
- Return to fertility
- Non-contraceptive benefits
- Side effects
- Object in body

Hormonal Methods

- Two types: contain only progestin or contain progestin and estrogen.
- Combined contraceptive methods in U.S.: combined oral contraceptives (COCs), the patch, and the vaginal ring.
- None of the hormonal methods provide STI protection.

HORMONAL SIDE EFFECTS

Estrogen Side Effects

Weight gain, headache, moodiness, bloating, depression, breast pain, nausea, vomiting, decreased sex drive

Progestin Side Effects

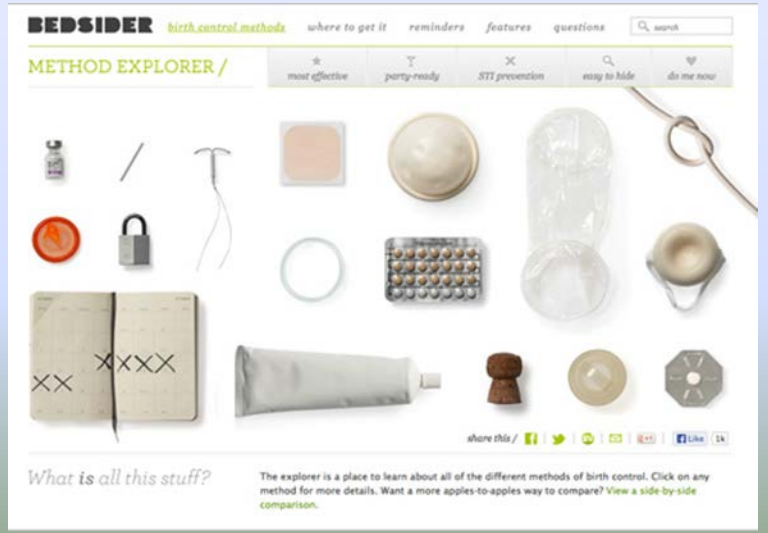
- 1-3% of women discontinue use due to complaints of:
  - weight gain, acne, hair loss, headache, moodiness, depression,
- Even less likely: vaginal dryness, breast pain, abdominal pain, nausea, decreased sex drive

Patient Education Resource

Resource

Http://bedsider.org/

- "User friendly", accurate information on all contraceptive methods
- Will set up reminders for contraception adherence and appointments
- Patient testimonials
- Free provider resources



Contraceptive Efficacy and Effectiveness

- Efficacy: likelihood that unintended pregnancy will occur even when method used consistently and as prescribed.

- Effectiveness: unintended pregnancies occur if method not used properly.

HOW WELL DOES BIRTH CONTROL WORK?

What is your chance of getting pregnant?

Really, really well

The Implant (Nexplanon)

Works, hassle-free, for up to... 3 years

IUD (Skyla)

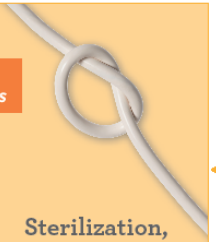
Works, hassle-free, for up to... 3 years

IUD (Mirena)

Works, hassle-free, for up to... 5 years

IUD (ParaGard)

Works, hassle-free, for up to... 12 years

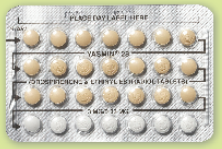


Sterilization, for men and women

Works, hassle-free, for up to... Forever

Less than 1 in 100 women

Okay



The Pill

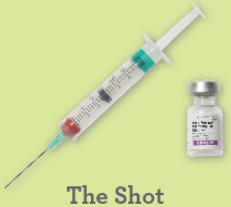
For it to work best, use it... Every. Single. Day.

The Patch

For it to work best, use it... Every week

The Ring

For it to work best, use it... Every month



The Shot (Depo-Provera)

For it to work best, use it... Every 3 months

6-9 in 100 women, depending on method

Not so well

Withdrawal

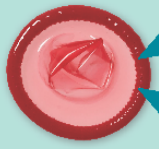
For each of these methods to work, you or your partner have to use it every single time you have sex.

Diaphragm

For each of these methods to work, you or your partner have to use it every single time you have sex.

Fertility Awareness

For each of these methods to work, you or your partner have to use it every single time you have sex.



Condoms, for men and women

For each of these methods to work, you or your partner have to use it every single time you have sex.

12-24 in 100 women, depending on method

FYI, without birth control, over 90 in 100 young women get pregnant in a year.

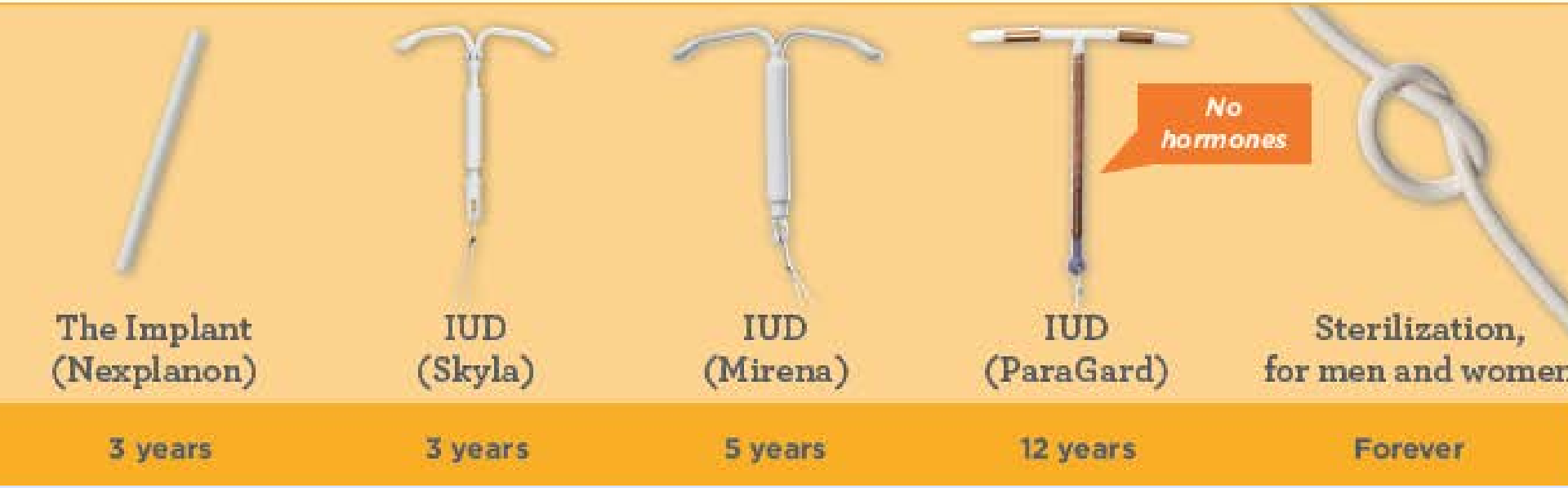
BEDSIDER Bedsider.org

Bixby Center for Global Reproductive Health

Nonhormonal Methods

- Top tier:
  - Permanent (sterilization): male and female.
  - Intrauterine device (IUD): Copper IUD.
- Third Tier:
  - Physiologic methods: abstinence, coitus interruptus, lactational amenorrhea method (LAM), and fertility awareness–based (FAB) methods.
  - Barrier methods: male condom, internal condom, and spermicide

TOP TIER



<1% failure

Effectiveness and Continuation Rates

	Perfect Use	Typical Use	Continuation rate
ENG Implant	0.05	0.05	84%
Male sterilization	0.10	0.15	100%
IUC •LNG 20 IUD •Cu IUD •LNG 13.5 IUD*	 0.2 0.6 0.4	 0.2 0.8	 80% 78%
Female sterilization	0.5	0.5	100%
DMPA	0.2	4.0	56%
OCs, Patch, Ring	0.3	6.0	67%

Hatcher, RA et al; *Contraceptive Technology 21th Edition*,: 2018 *Skyla Bayer data

Why Do These Methods Work So Well?

- No repeated action needed on the part of the users for the method to work
- “Place it and forget it”
- A single act of motivation
- Reduced need to access health care

No Need to…

- Be perfect
- Use contraception “every time”
- Remember to:
  - take a pill every day, patch once a week or a ring once a month
- Return refills every month or three months

Cost

Top tier methods are the most cost-effective contraceptive methods available in the United States

Permanent Contraception

Female: Tubal ligation

- Fallopian tubes are occluded
- Severed and cauterized or sealed, clamped
- With clips, rings, sutures

- Or through hysteroscopy --place coils into fallopian tube ostia which subsequently scars over

Permanent Contraception

Male: Vasectomy

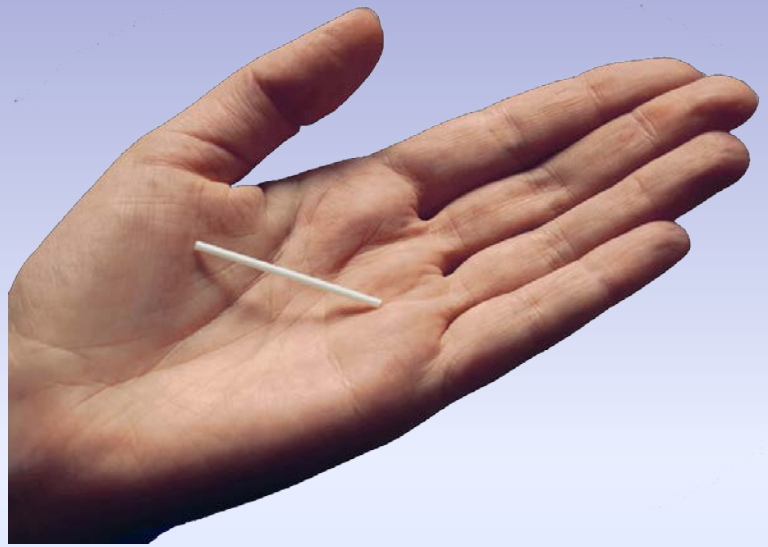
- Block each vas deferens (plural deferentia)
- Severed and occluded
- Sutures, cautery, clamp

Happily Shooting Blanks

LARC _____is good for "**up to**…"

"ParaGard, Mirena, Liletta, Kyleena, Skyla, Nexplanon is good for **up to** 12, 7, 5, 3 years but if you want to get pregnant or want it removed before then for any reason, just come in and we will remove it and your ability to get pregnant will return to whatever is normal for you immediately."

Single-rod Etonogestrel (ENG)Implant Nexplanon®



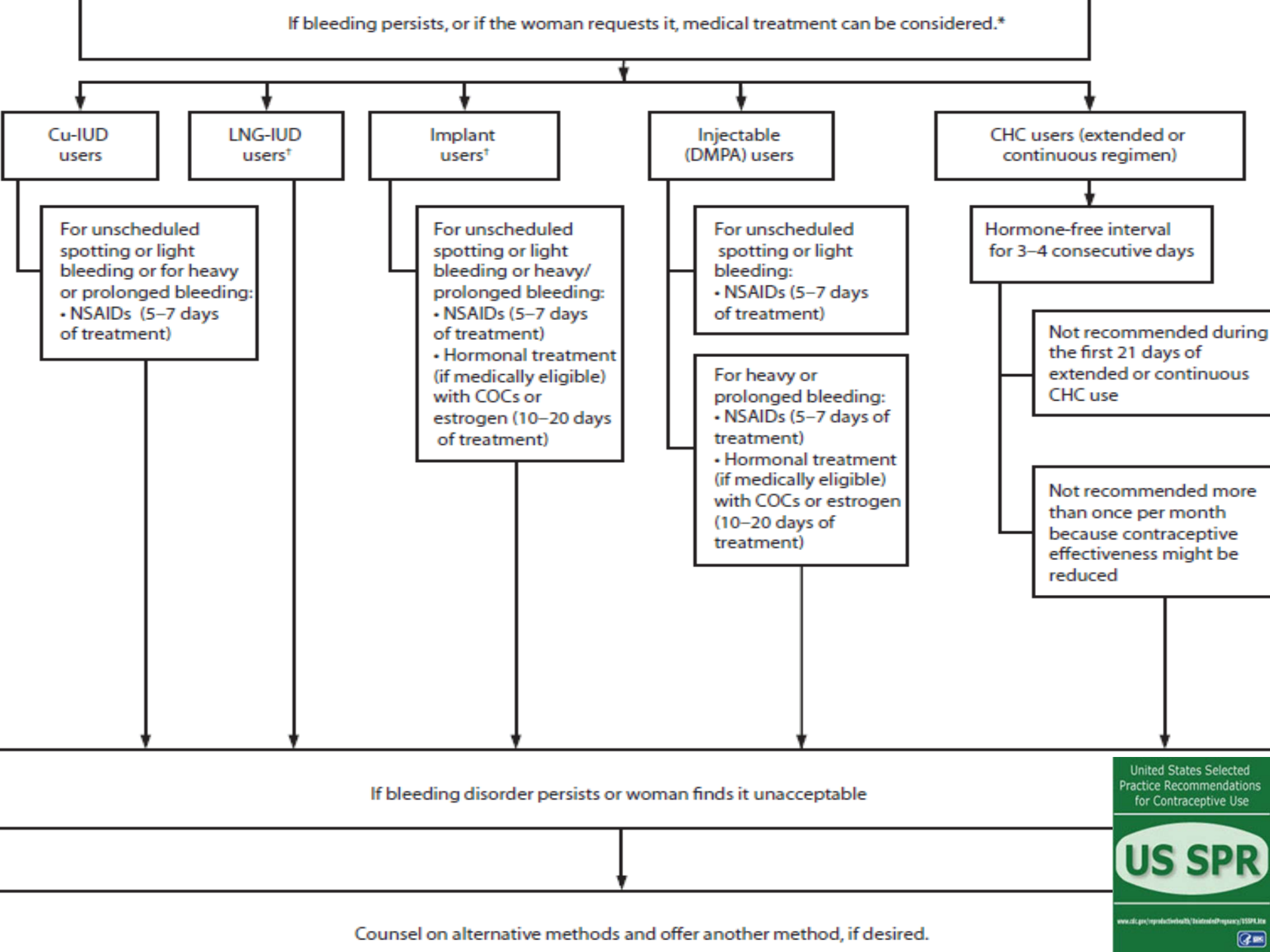
- Most effective method
- Suppression of ovulation
- Thickens cervical mucous
- Progestin only – **NO estrogen**
- Moderate progestin dose does not cause hypo-estrogenic state

Non-Contraceptive Benefits
Implant

- Reliable ovulation suppression
- Decreased dysmenorrhea
- Likely reduction in risk of endometrial cancer and ovarian cancer

Menstrual Changes

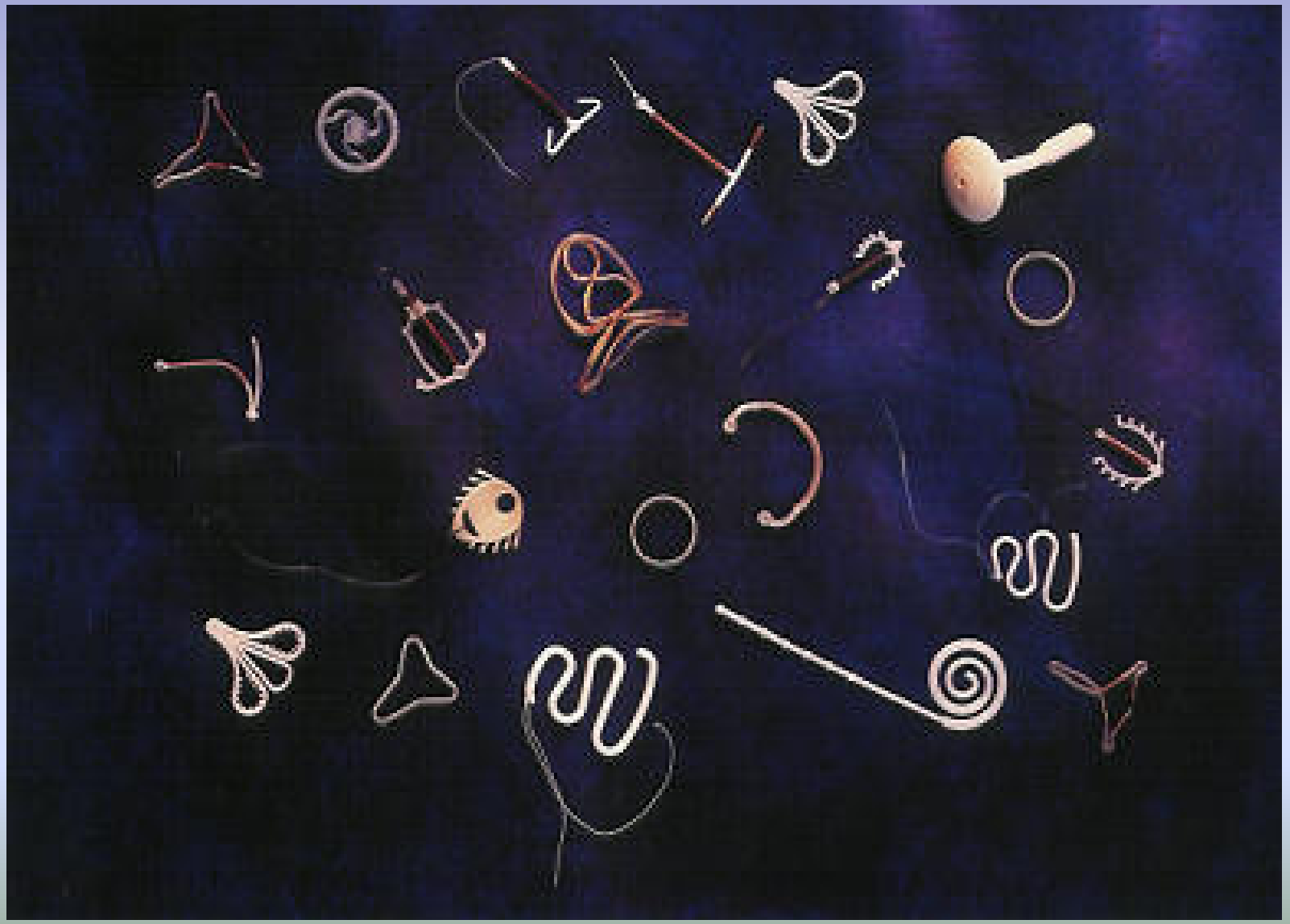
- Most women have minimal, scant bleeding or no bleeding
- Bleeding pattern is unpredictable
- 1 in 4-5 women have frequent or prolonged bleeding
- Pattern tends to get better with time
- 20% discontinuation rate – half of discontinuation is for bleeding


If bleeding persists, or if the woman requests it, medical treatment can be considered.*
Cu-IUD users
LNG-IUD users†
Implant users†
Injectable (DMPA) users
CHC users (extended or continuous regimen)
For unscheduled spotting or light bleeding or for heavy or prolonged bleeding:
• NSAIDs (5–7 days of treatment)
For unscheduled spotting or light bleeding or heavy/ prolonged bleeding:
• NSAIDs (5–7 days of treatment)
• Hormonal treatment (if medically eligible) with COCs or estrogen (10–20 days of treatment)
For unscheduled spotting or light bleeding:
• NSAIDs (5–7 days of treatment)
For heavy or prolonged bleeding:
• NSAIDs (5–7 days of treatment)
• Hormonal treatment (if medically eligible) with COCs or estrogen (10–20 days of treatment)
Hormone-free interval for 3–4 consecutive days
Not recommended during the first 21 days of extended or continuous CHC use
Not recommended more than once per month because contraceptive effectiveness might be reduced
If bleeding disorder persists or woman finds it unacceptable
Counsel on alternative methods and offer another method, if desired.
United States Selected Practice Recommendations for Contraceptive Use
US SPR

Additional Options to Manage Unacceptable Bleeding

- POP
- Longer term use of COC
- Tranexamic acid (Lysteda) taken at the time of the bleeding

Intrauterine Contraception



Terminology

- Intrauterine Device (IUD)
- Intrauterine Contraception (IUC)
  - Generic term for the method or any of the devices
- Terms can be used interchangeably

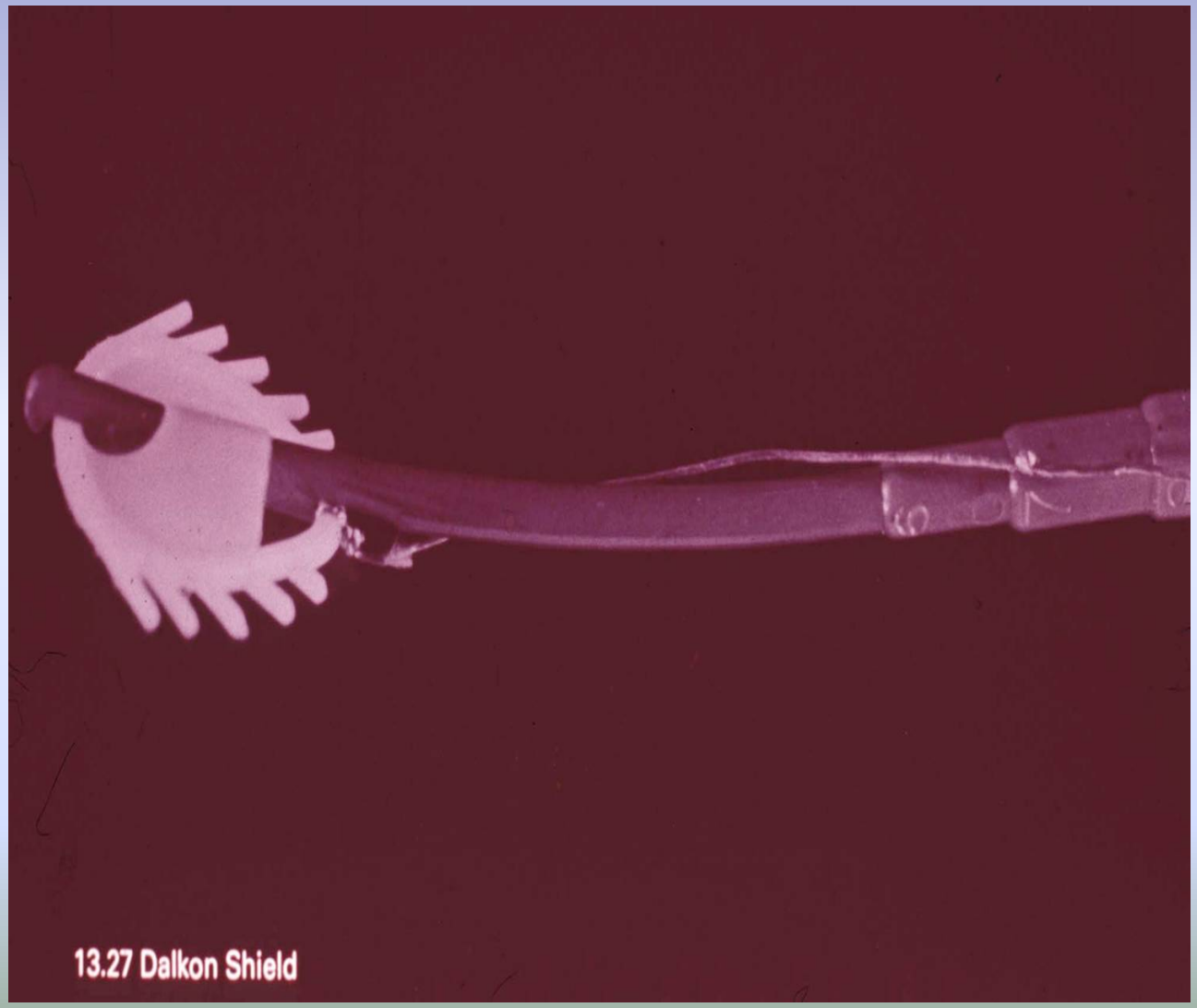
Dispelling Common IUC Myths

- In fact, IUCs
  - ARE NOT abortifacients
  - DO NOT cause ectopic pregnancies
  - DO NOT cause pelvic infection
  - DO NOT decrease the likelihood of future pregnancies

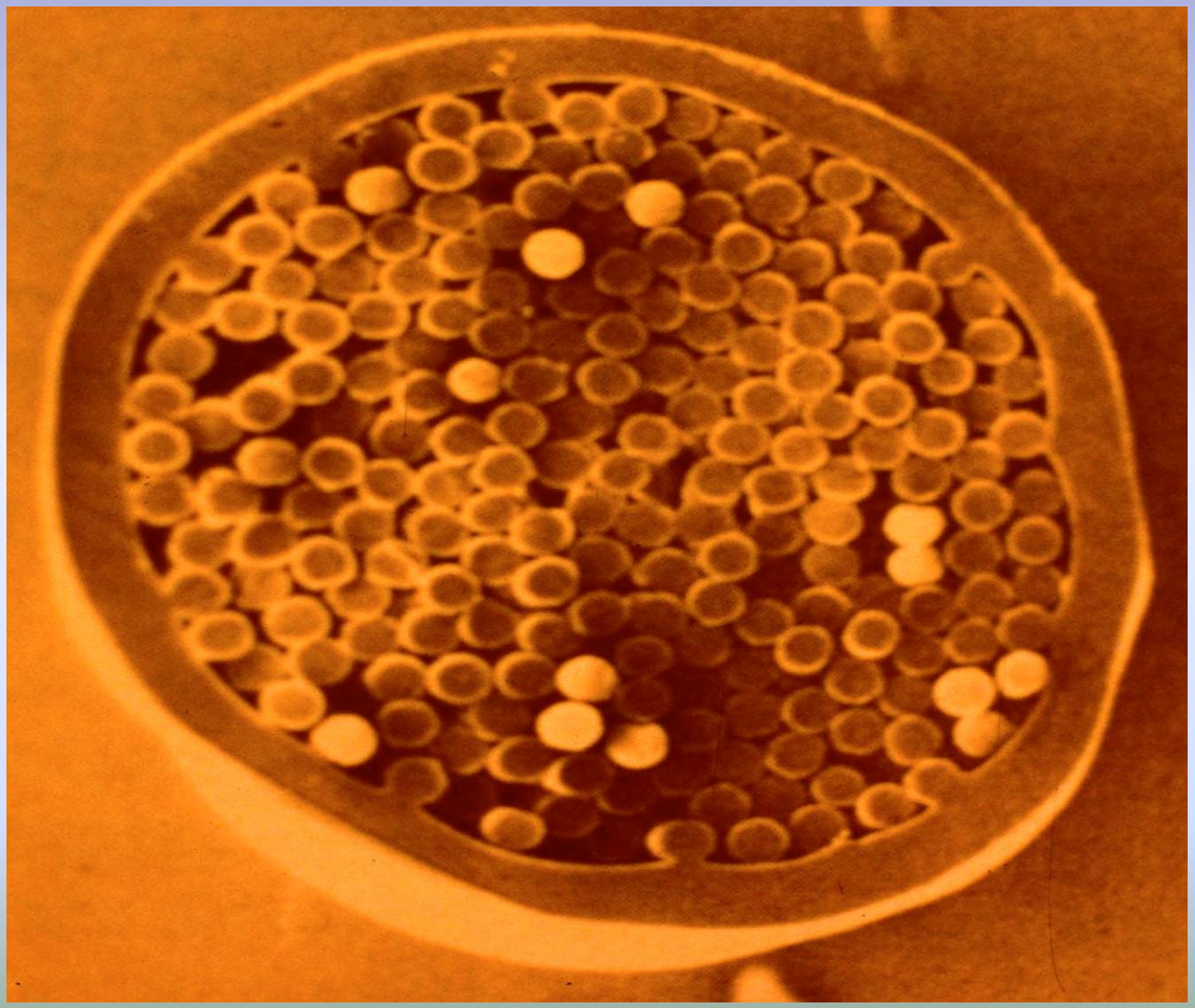
Dispelling Common IUC Myths

- In fact, IUCs
  - CAN be used for nulliparous women
  - CAN be used for women with previous ectopic
  - DO NOT need to be removed for CT, GC or PID treatment
  - DO NOT have to be removed if actinomyces-like organisms noted on Pap

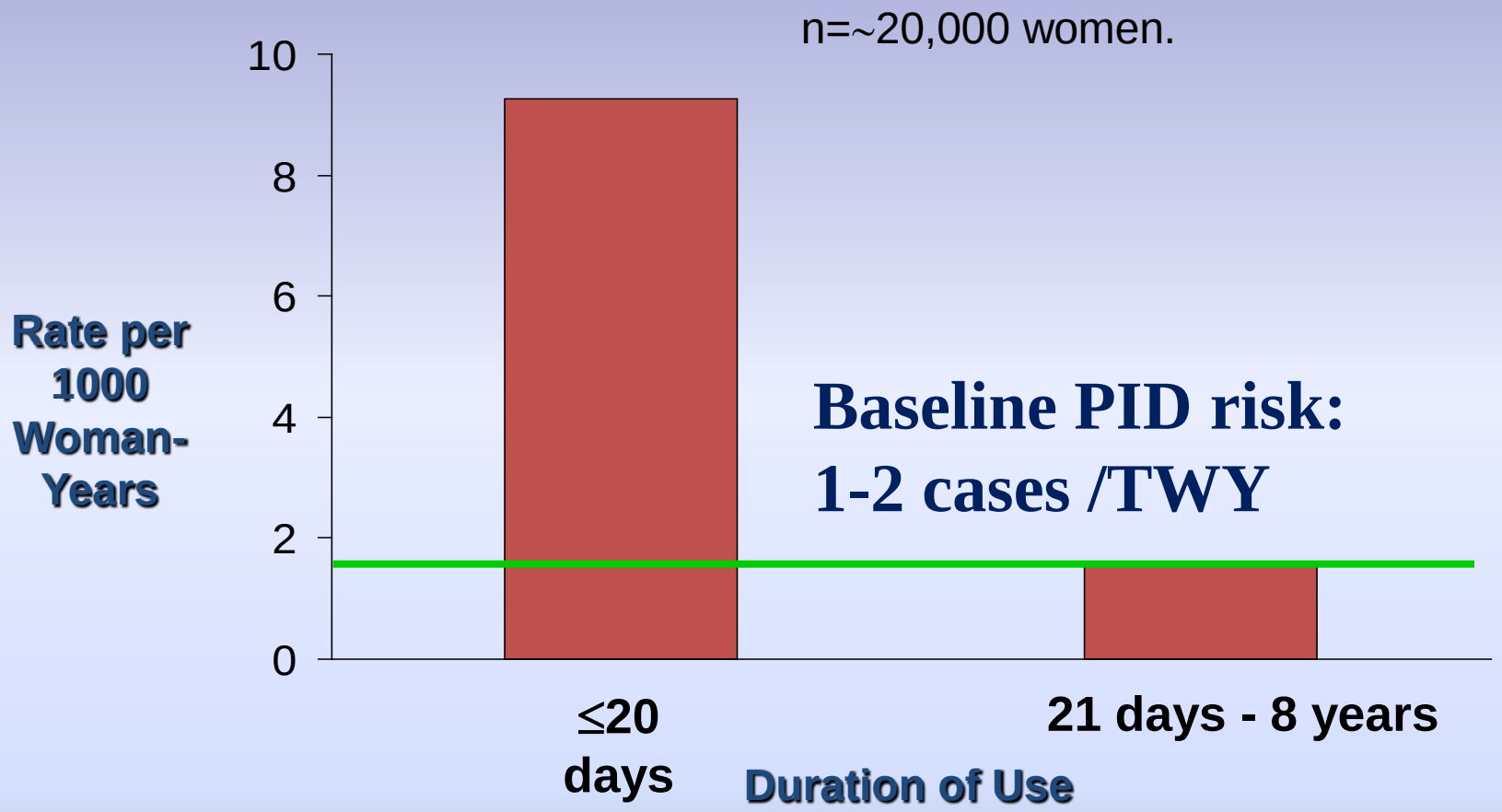
Dalkon Shield



Dalkon Shield- multi-filament string



Rate of PID by Duration of IUC Use



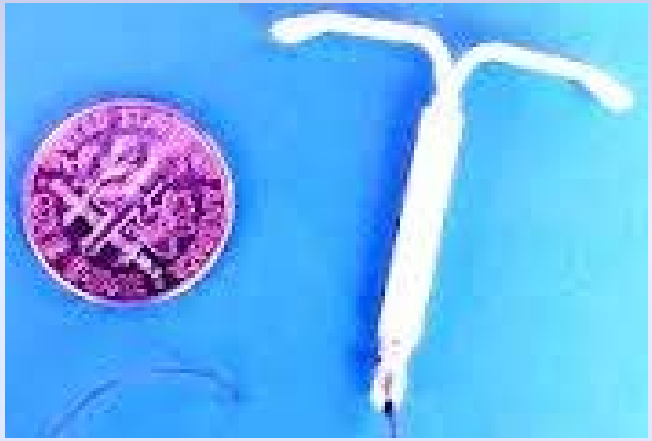
Adapted from Farley T, et al. *Lancet*. 1992;339:785-788.

INTRAUTERINE CONTRACEPTIVES AVAILABLE IN THE UNITED STATES

52 mg of levonorgestrel (LNG)

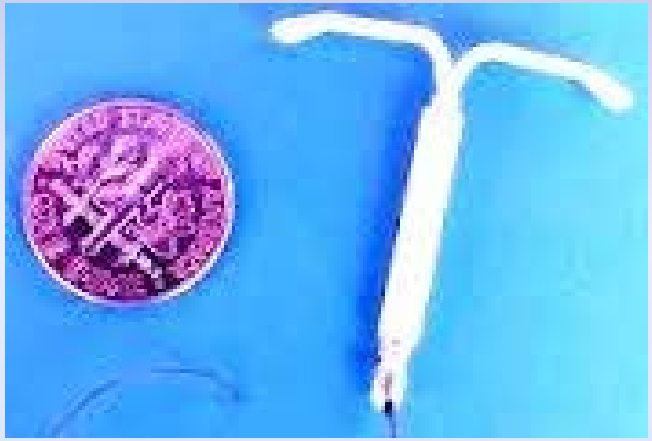
- Mirena® Liletta®
- Initially, LNG is released at a rate of approximately 18-20 mcg/day.
- Approved for up to 5 years use
- Data shows efficacy for up to 7 years

Kyleena®



- 19.5 mg of levonorgestrel (LNG)
- Initially LNG is released at 17.5 mcg/day
- 7.4 mcg/day after 5 years
- FDA approved for up to 5 years

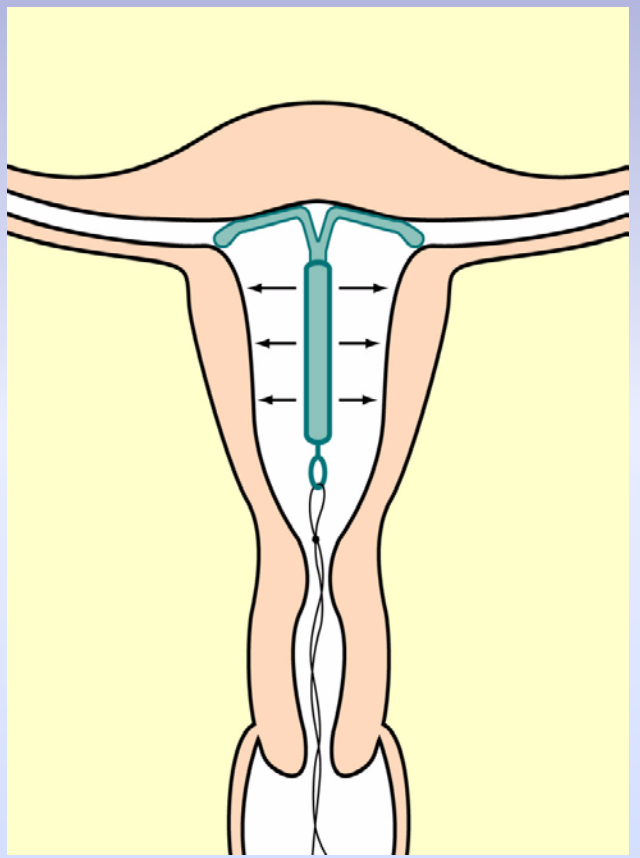
Skyla®



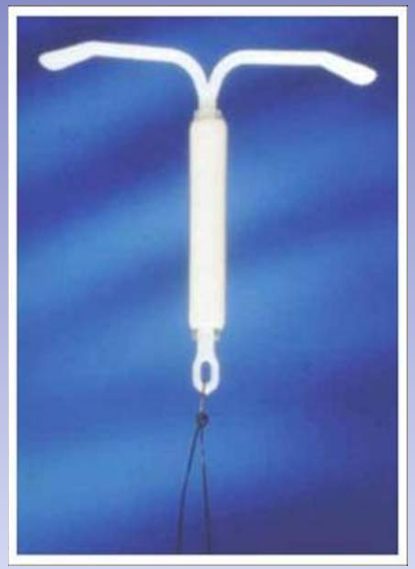
- 13.5 mg of levonorgestrel (LNG)
- Initially LNG is released at 14 mcg/day
- 5 mcg/day after 3 years
- FDA approved for up to 3 years

LNG IUDs: Mechanism of Action

- Cervical mucus thickened
- Sperm motility and function inhibited
- Unlikely secondary mechanism of action
  - Endometrium suppressed
  - Ovulation inhibited occasionally for LNG 20



LNG 52 IUD
Non-contraceptive Benefits



Decreased menstrual bleeding

- Decreased:
  - Dysmenorrhea
  - Iron deficiency anemia
  - Long term risk of endometrial cancer

LNG 52 IUD
Additional Therapeutic Uses

- Symptomatic fibroids
- Endometrial hyperplasia
- Symptomatic endometriosis, adenomyosis

Menstrual Effects: LNG 52 IUD

- If there is initial spotting or frequent bleeding, it usually resolves by 3-6 months
- Amenorrhea 20-50%
- Up to 90% reduction in menstrual bleeding
- Ovulation >50%

Menstrual Effects: LNG 19.5 and 13.5 IUD

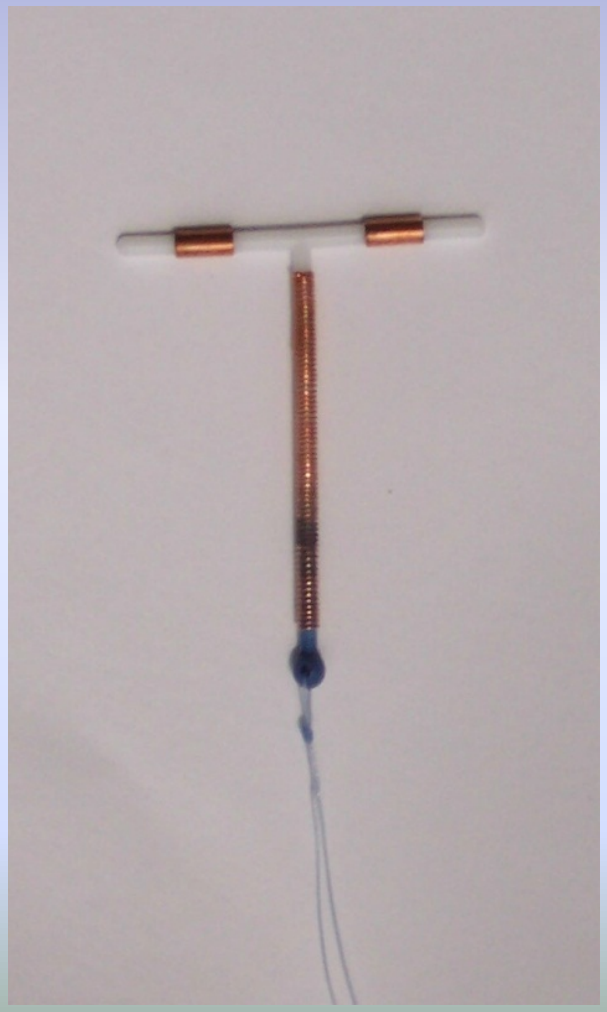
- Less data
- Increased irregular bleeding and spotting first 3-6 months
- Decreased bleeding and spotting after 6 months
  - Bleeding may remain irregular
  - May be cyclic
- Amenorrhea 6%

Skyla Package insert

Terminology
Copper IUD

- Cu IUD
- Copper IUD
- Cu IUC
- Cu-T380A
- ParaGard®
- Can’t call it an IUS

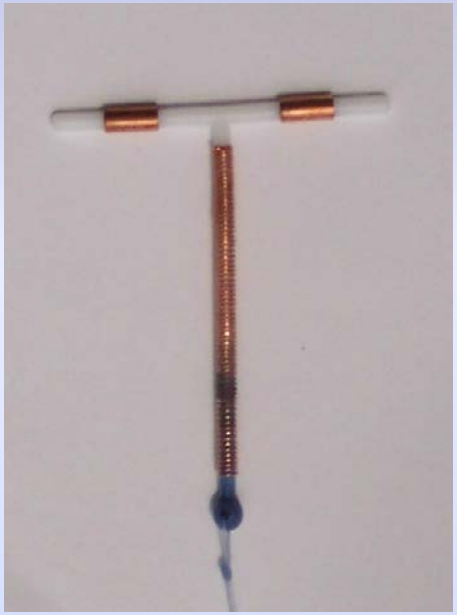
Copper IUD



- Copper T 380A IUD
  Copper ions
- Approved for up to 10 years
- Data shows efficacy for at least 12 years

Cu IUD: Mechanism of Action

- Primary mechanism is prevention of fertilization
  - Spermicidal, reduces motility and viability of sperm
  - Inhibits development of ova
- Possible secondary mechanism inhibition of implantation



Non-Contraceptive Benefits

CuT IUD

- Reduction in risk of endometrial cancer
- Natural cycling
- No hormones
- Sexuality benefit?
- Additional contraceptive benefit: EMERGENCY CONTRACEPTION

The Most Effective Emergency Contraceptive

- Obese women have > failure rates with oral EC –both levonorgestrel and ulipristal
- The efficacy of the copper IUD for EC is not affected by body weight
- 1,963 patients CU T IUD for EC --pregnancy rate was 0.23%
- High continuation rates
- Should be offered routinely for EC

CU IUD as EC
US SPR says…

- Within 5 days of the first act of unprotected sexual intercourse
- If the day of ovulation can be estimated, the Cu-IUD also can be inserted >5 days after sexual intercourse
- As long as insertion does not occur >5 days after ovulation

Menstrual Effects: Cu IUD

- Patients have their usual “cycles” because there is no hormonal effect
- Menses often heavier or longer or dysmenorrhea
- May have irregular spotting and sometimes bleeding in the first few weeks

Menstrual Effects: Cu IUD

NSAIDs prophylactically WITH FOOD

- Pre-emptive use for first 3 cycles
- Start before onset of menses-- anti-prostaglandin effect
  - Naproxen sodium 220mg x2 BID (max 1100mg/day)
  - Ibuprofen 600-800mg TID (max 2400mg/day)

Vasovagal Prevention

- Good hydration (electrolyte/ sports drink)
- Eat before placement

Presyncopal Signs

- Facial pallor (distinct green hue)
- Yawning
- Pupillary dilatation
- Nervousness

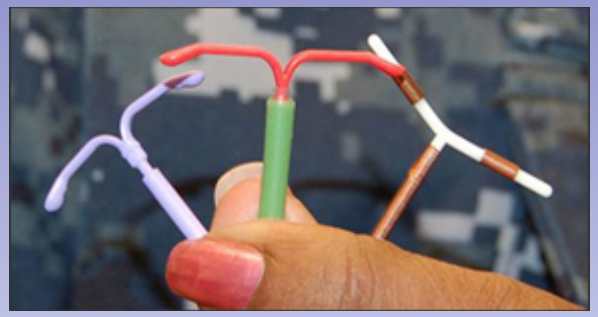
Symptoms- Presyncopal

- Weakness
- Light-headedness
- Diaphoresis
- Visual blurring
- Headache
- Nausea
- Feeling warm or cold
- Sudden need to go to the bathroom

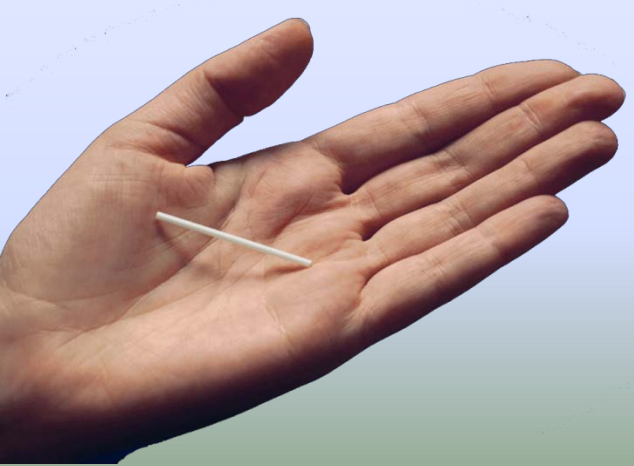
How to Abort a Vasovagal

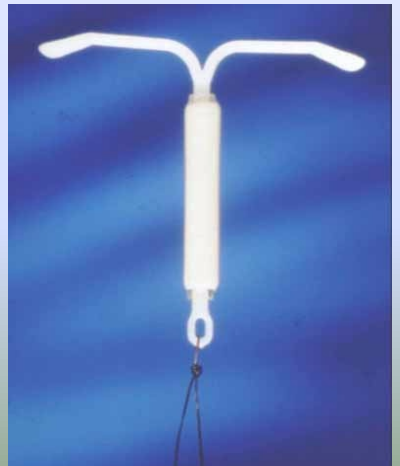
- Isometric contractions of the extremities
- Intense gripping of the arm, hand, leg and foot muscles
- No need to bring the legs together or change position– just tense the muscles
- **This stops the reaction**

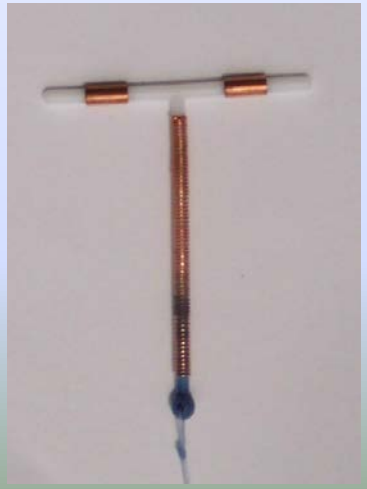
Demo Units



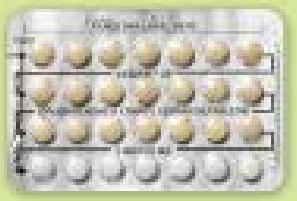
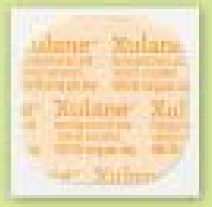
- Keep one in your pocket
- One in each room
- Give them to your patient to hold, feel and play with while discussing the method
- Show how the threads feel
- Show how the plastic would feel if expelled







Second Tier

★★★★ Pretty well				
The Pill	The Patch	The Ring	The Shot	
For it to work best, use it...	Every. Single. Day.	Every week	Every month	Every 3 months

Second Tier
Combined Hormonal Contraceptives

CHC

Clinical Pharmacology CHC

- Primary mechanism of action is to inhibit ovulation.

- Secondary mechanism of action is thickening of cervical mucus

FDA Indications and Usage

- Indicated to prevent pregnancy
- Some COCs also indicated for the treatment of mild to moderate acne
- Some COCs are also indicated for the treatment of PMDD/PMS

Combined Oral Contraceptives Background and History

- Ortho Pharmaceutical introduces the first oral contraceptive to the market

1963

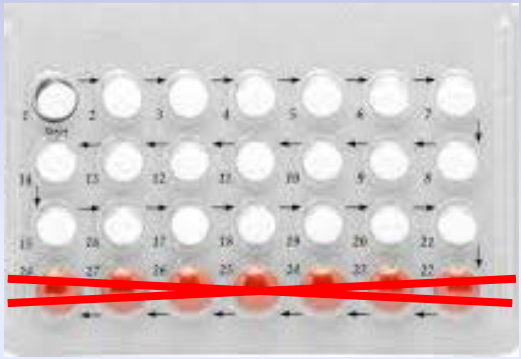
- Studies find that far less hormone is needed to prevent pregnancy

1970's, 80's and 90's-

Combined Oral Contraceptives

- Monophasic

- 21 days



- Or 24 days

- OR--Continuous use means NO PLACEBO

Extended Cycle COC

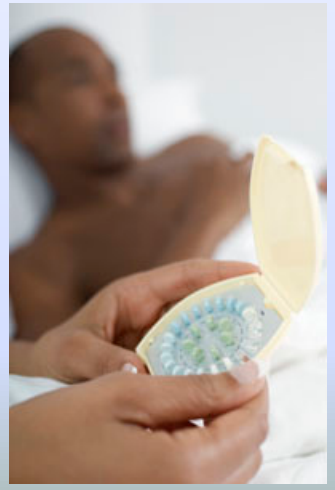
- Less blood loss
- Demonstrated safety
- Delays or eliminates bleeding
- Less chance to allow ovarian activity
- Branded as an extended OC regimen or skip placebo pills

Multiphasic Combined Oral Contraceptives

- Triphasic (also quadriphasic)

- 21–24 days active COCs followed by 4–7 days inactive pills or no pills.

- OK-- but not great for continuous use (NO PLACEBO)



Combined Oral Contraceptives

- Risk of failure increases with missed pills.
- Hormones in pill do not accumulate in body.
- Many of the side effects are bothersome but not dangerous; user can switch to different formulation;
- CHCs regulate bleeding; useful in management of abnormal bleeding patterns.

Contraceptive Patch and Vaginal Ring Steady Delivery of Hormones

- Same combination of hormones as COCs.
- Delivery systems allow weekly or monthly dosing rather than daily pill taking.
- Patch changed weekly on same day of week for 3 weeks; no patch for 1 week.
- Ring left in place in vagina for 21 days; removed for 1 week or continuous use

NuvaRing®

- 120 μg/day etonogestrel
- 15 μg/day ethinyl estradiol

- Flexible transparent ring

- One ring effective for up to 5 weeks

Continuous Use Vaginal Ring

- Goal is no bleeding
- Ring left in place in vagina for 1 month
- First day of each calendar month switch ring!

The Basics: Annovera CVR

- Single ring prevents ovulation for an one year (13 cycles)
  - Segesterone (Nestorone®) + ethinyl estradiol
  - Left in place for 21 days and removed for seven days
    - Should not be removed longer than 2 hours
  - Does not require refrigeration
- Developed by the Population Council; owned by TherapeuticsMD

Annovera CVR
FDA approval on August 10, 2018

Photo credit: Population Council / Hallie Easley

Comparison of CVRs

	NuvaRing	Annovera
Progestin	Etonogestrel 120 mcg/d	Segesterone 150 mcg/d
Estrogen	EE 15 mcg/day	EE 13 mcg/day
Diameter thickness	54 mm 4 mm	56 mm 8.4 mm
Lifespan	1 cycle	13 cycles

Annovera CVR

- Commercially available as early as 3rd quarter 2019
- Not in same FDA contraceptive category as NuvaRing, so *must* be covered under no cost-sharing rules of ACA

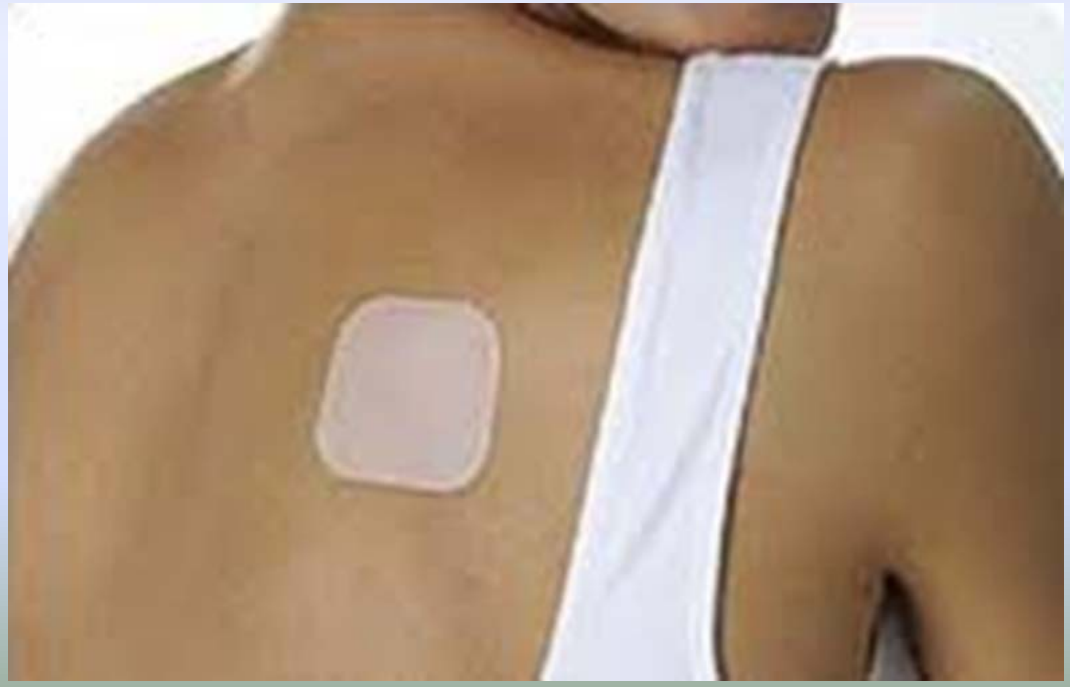
Contraceptive Patch

- A combination transdermal patch
  - 6mg norelgestromin
  - 0.75mg of EE.
- 20 cm square.
- Releases (per 24 hours)
  - 50 mcg of norelgestromin
  - 20mcg of EE

Patch can be worn:

All sites equally effective:

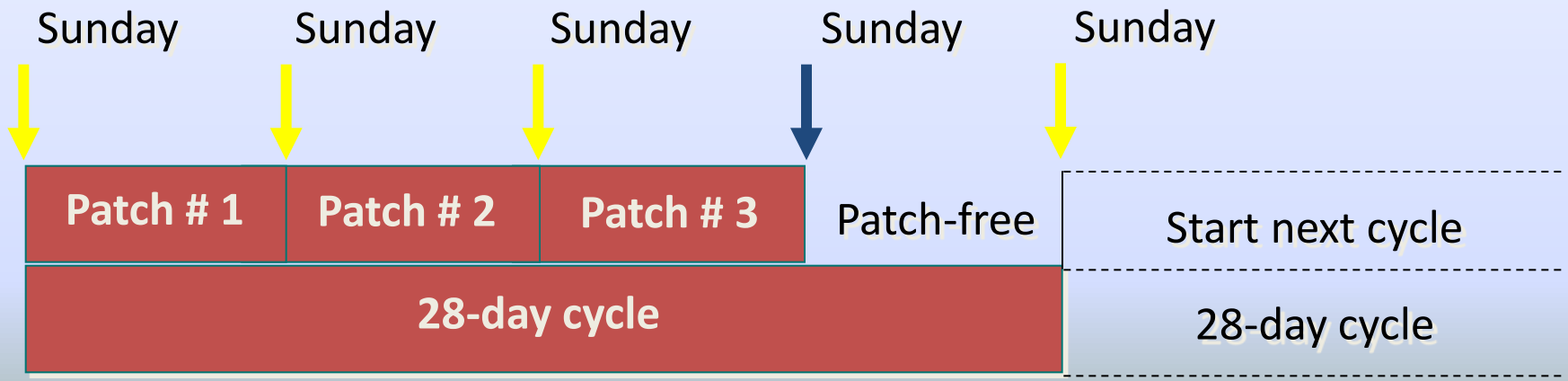
- Upper torso (excluding the breast)
- Upper outer arm
- Buttock
- Abdomen



Patch Administration

- Apply weekly for 3 weeks
- Apply same day of the week
- 1 week patch-free (unless continuous use)

Example: Sunday Start (can be a First Day Start)



Progestin-Only Pills (POP)

- Used continuously; **no hormone-free interval**

- Considered safer for women unable to take estrogen; does not provide same cycle control as methods with estrogen.

But equally effective

Progestin-Only Pills

- POPs or “mini-pills” must be taken at same time every day.

- Does not suppress ovulation as reliably as COCs; relies on the contraceptive effect of thickened cervical mucus.

CHC

NON-CONTRACEPTIVE BENEFITS

COCs Primary Cancer Prevention

- Decrease in endometrial and ovarian cancers
- Significant duration-dependent reductions in ovarian cancer incidence in the general population.
- Current or former use

Non-Contraceptive Benefits CHC

- Control of acne and hirsutism
- Stabilization of BMD
- Benign breast disease
  - breast tenderness
  - fibroadenoma
  - chronic cystic disease

Non-Contraceptive Benefits CHC

Women Over 40

- Regulated/scheduled bleeding
- Avoidance of AUB
- Reduction in PMS symptoms
- Improved vulvovaginal dryness
- Improved vasomotor symptoms
- Improved quality of life
- Treatment of depression in symptomatic, midlife women

Second Tier
DMPA and Progestin Only Pills (POP)

Description & Indications:

- Medroxyprogesterone acetate (MPA)
  - Derivative of Progesterone
  - depot medroxyprogesterone acetate (DMPA)
    - Long acting injectable contraceptive steroid formulation of MPA.
  - Formulated as microcrystals, suspended in an aqueous solution.

FDA Indication

- Prevention of pregnancy
- Adjunctive therapy and palliative tx of inoperable, recurrent and metastatic endometrial or renal carcinoma
- Endometriosis

Pharmacology:

- Slowly increases to reach peak plasma concentrations in 3 weeks and then slowly starts to decrease
- DMPA remains protective against pregnancy for up to 15 weeks

Mechanism of Action:

- Primarily acts on the two areas of the brain:
  - Hypothalamus & pituitary suppress FSH & LH
- Prevents ovulation
- Causes thickening of the cervical mucus
- Thinning of the endometrium

Precautions

- Bleeding pattern
  - Most women have amenorrhea 2+months after first injection
  - Incidence increases with duration of use
- Return to Fertility:
  - May not return to ovulation, menstruation or fertility for > 1 year
  - Regardless of the length of use

DMPA and Weight Gain

- Most DMPA users who gain excessive weight gain ≥ 5% within 6 months.
- We can use this information to predict who is at risk of excessive gain and counsel them appropriately
- Studies show similar trends in both teen and adults, at all BMIs

Bonny AE. Obstet Gynecol 2011.Pantoja M. Contraception 2010.
Le YL, et al. Obstet Gynecol 2009.
Mangan SA, et al. J Pediatr Adolesc Gynecol 2002.
Risser WL.J Adolesc Health 1999.

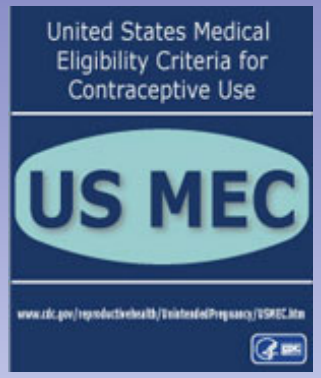
Progestin-only OCs

- Taken continuously--no placebo pills,
- No EE
- Sometimes allows for more physiologic cycling
- Given for lactating women postpartum because not thought to interfere with lactation

Progestin-only OCs

- More breakthrough bleeding
- Bleeding pattern less predictable; more amenorrhea
- Used for women with contraindications to use of EE

Family Planning Guidelines



U.S. Medical Eligibility for Contraceptive Use

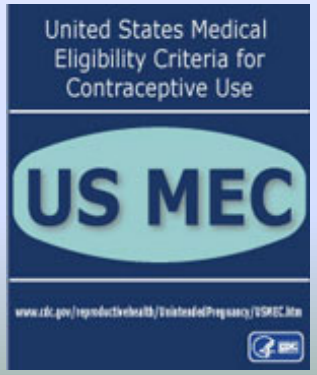
U.S. Selected Practice Recommendations

Providing Quality Family Planning Services: Recommendations of the CDC and U.S. OPA

UTILIZE NATIONAL GUIDELINES

Find the APP

- ✓**Play store** on android
- ✓**App store** on iPhone
  - ✓Go to search field
    - ✓Type in: Contraception CDC



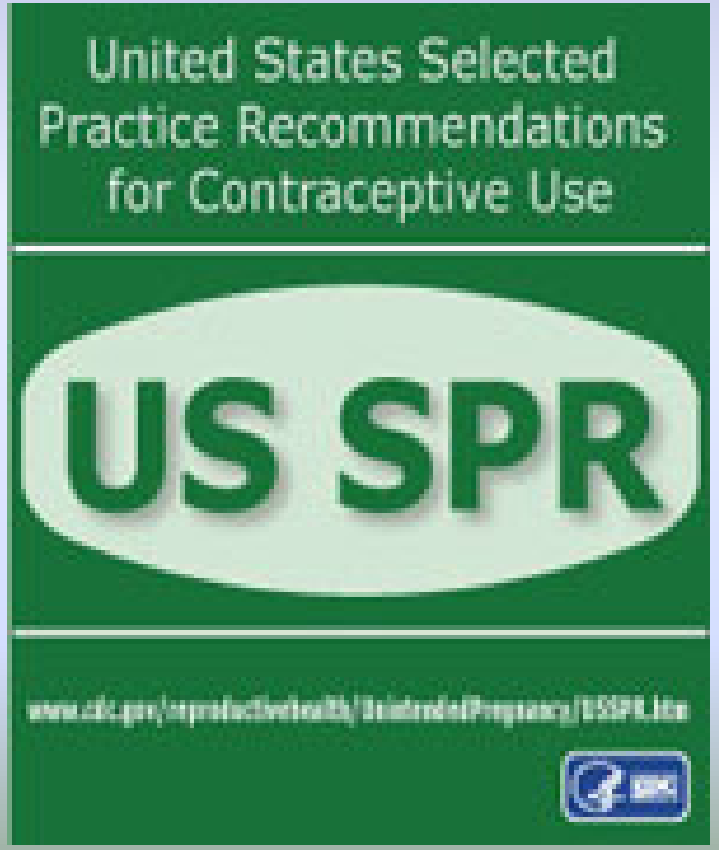
US Medical Eligibility Criteria: Categories

1	No restriction for the use of the contraceptive method for a woman with that condition
2	Advantages of using the method generally outweigh the theoretical or proven risks
3	Theoretical or proven risks of the method usually outweigh the advantages – not usually recommended unless more appropriate methods are not available or acceptable
4	Unacceptable health risk if the contraceptive method is used by a woman with that condition

http://www.cdc.gov/mmwr/pdf/rr/rr5904.pdf

U.S. Selected Practice Recommendations

Provides recommendations on optimal use of contraceptive methods for persons of all ages, including adolescents.



CASE STUDIES

Chandra
LNG 20 IUC placed 2 months ago

- She is in the office complaining of frequent, almost continuous, light bleeding and spotting “ever since she got it”
- How do you describe the possible bleeding patterns to patients before placement of a LNG IUD?
- What are the differences in bleeding patterns between LNG 52 and 13.5?
- Management options now?

Chandra
26 year old G0

- What if rather than an LNG IUD Chandra had this bleeding pattern with an implant?
- How do you describe the possible bleeding patterns to patients before placement of an implant?
- Management options now?

Candace
CuT placed 3 months ago

- Candace comes in complaining that she has had very heavy periods since getting her CuT
- She had spotting for 2-3 weeks after getting her CuT but not recently
- How do you discuss the possible effect of a CuT on bleeding with patients before placement?
- Management options?

Case studies for US MEC
Which Methods Can Jasmine Safely Use?

- 16 year old G1P0TAB1 BMI 28 BP 100/70
- Hx of asymptomatic CT treated 9 months ago
- Last GC/CT neg 6 mos ago
- Exam today WNL
- LMP 10 days ago WNL
- Using condoms most of the time, no other current contraception
- No USIC since LMP
- Same partner for 4 months, he says he hasn't had sex with anyone else

Which Methods Can Susan Safely Use?

- 37 years old G2 P Ectopic 1 BMI 31 BP 130/88
- HTN, DM Dxed 4 years ago
- Hgb AIC 6.2
- on an ACE inhibitor and sulfonyurea
- In a new relationship for 1 month
- Not ready to be a parent “anytime soon”
- USIC 4 days ago

Which Methods Can Marjorie Safely Use? 44 year old G4 P4

- BMI 24
- Hx of DVT on OCP
- Current smoker
- Hx of endometriosis
- PID when she was 22
- Youngest child is 18
- Not interested in having any more children

Which Methods Can Sulema Safely Use? 38 year old G2 P1 Ectopic 1

- BMI 32 BP 132/86 LMP 3 weeks ago WNL
- HTN, DM Dxed 3 years ago
- On an ACE inhibitor and sulfonyurea
- Significant depression
- In a new relationship for 6 weeks
- Unprotected coitus 4 days ago
- Exam today WNL
- What else would you want to know?

Maria
20 year old G2 P0 TAB2

- BMI 32 BP 100/68
- LMP 8 days ago WNL
- Hx of CT treated 2 years ago
- Migraine headaches with aura dx 3 years ago
- Last GC/CT neg 3 mos ago
- Using condoms consistently, also uses pull out method, no unprotected sex since LMP
- New partner for 2 months
- Exam today: mucopurulent d/c from os, exam otherwise WNL

Cynthia
44 year old G4 P4

- BMI 22 LMP 12 days ago WNL
- Hx of DVT on OCP
- Hx of endometriosis
- Current smoker
- Mutually monogamous for 20 years
- Exam today: WNL

Chantal
26 year old G0 TAB 0

- BMI 38 BP 128/86 LMP 26 days ago WNL
- On 5 mg prednisone for lupus x 10 months
- CIN 3 treated with LEEP 4 years ago NED since
- Reports heavy menses
- Currently not sexually active for 3 months
- C/o odorous discharge
- Exam today: BV found on wet mount, exam otherwise WNL

Felicity
25 year old G2 TAB 2

- BMI 33 BP 120/82
- Hx of L oophorectomy 3 years ago for dermoid cyst
- Recently dx with lupus on predisone
- CIN 3 txed with LEEP 4 years ago NED since
- Exam today wnl
- LMP 3 weeks ago
- Currently not sexually active for 3 months

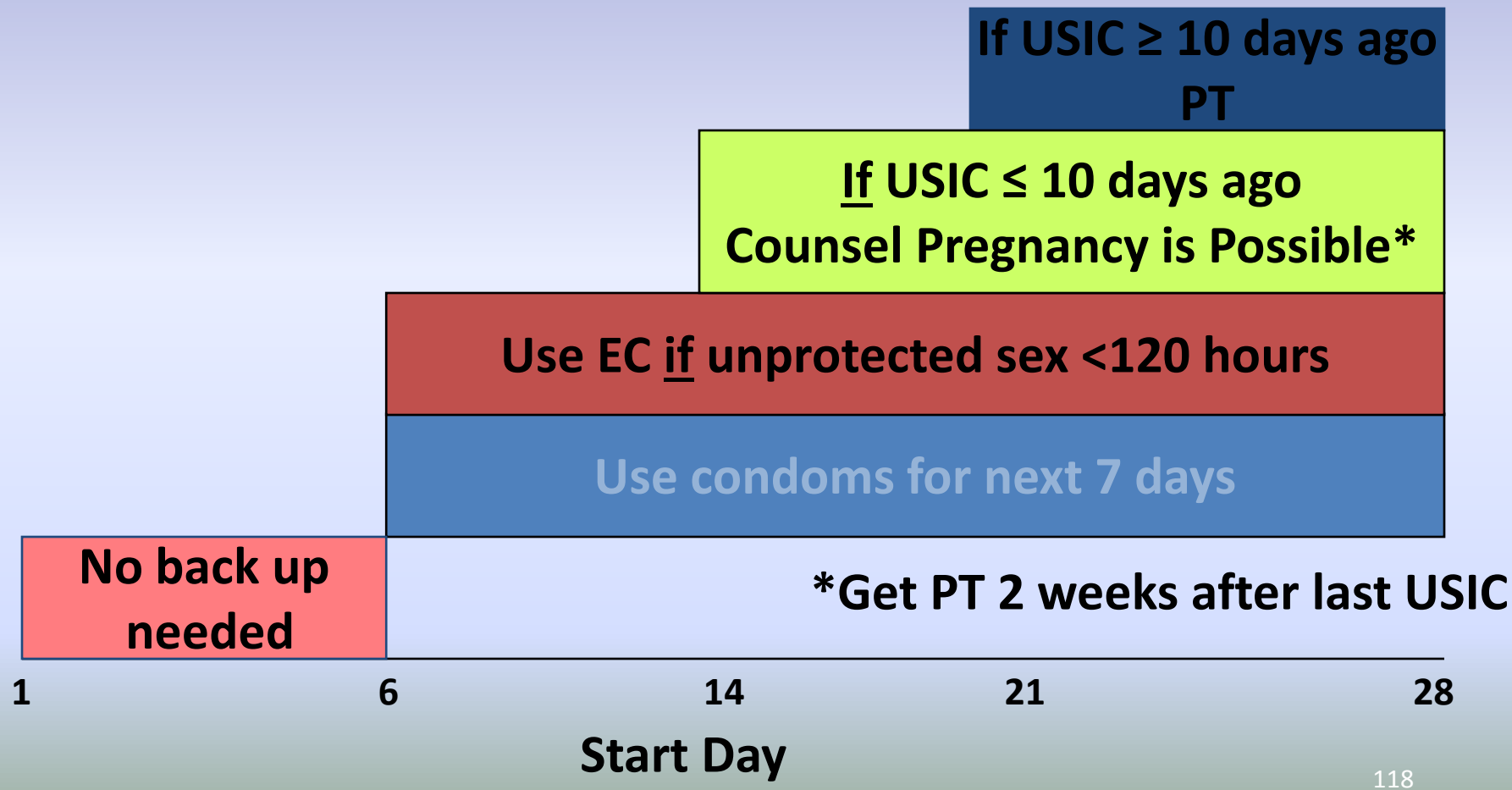
INITIATION OF CONTRACEPTION

Standard Contraception Initiation vs. **Quick Start**

- Day 1 or Sunday start was recommended because later start might
  - not inhibit ovulation
  - expose embryo to hormones
  - cause irregular vaginal bleeding
- The evidence says…
  - Condoms for 7 days will prevent pregnancy
  - EC can be used <120 hours of unprotected sex
  - Exposure of embryo to OC is not teratogenic

Quick Start Client Counseling

Assumes a 28 day cycle



Third Tier

Third Tier


Not as well
Withdrawal
Fertility Awareness
Internal Condom
Condom
For each of these methods to work, you or your partner have to use it every single time you have sex.

Physiologic Methods

- Abstinence
- Coitus interruptus (withdrawal)
- Lactational amenorrhea method (LAM): breastfeeding infant younger than 6 months
- Fertility awareness–based methods (FABM): abstinence or barrier contraception during fertile time

FABMs…

Fertility Awareness Based Methods

FABM: Correct Use of Terms

- Natural family planning (NFP)
  - Abstain from intercourse on fertile days
  - No “mechanical” contraceptives used
- Fertility Awareness Method (FAM)
  - Barrier method(s) used on fertile days
  - Avoids adverse effects of hormonal contraception

FABM: Background

The “fertile window”

- Days in each menstrual cycle when intercourse is most likely to result in a pregnancy
- Lasts for 6 days (5 days preceding ovulation and the day of ovulation), plus “wiggle room”
- In cycles between 26-32 days long (78% of cycles), the fertile window falls within cycle days 8 to 19

Fertility Awareness

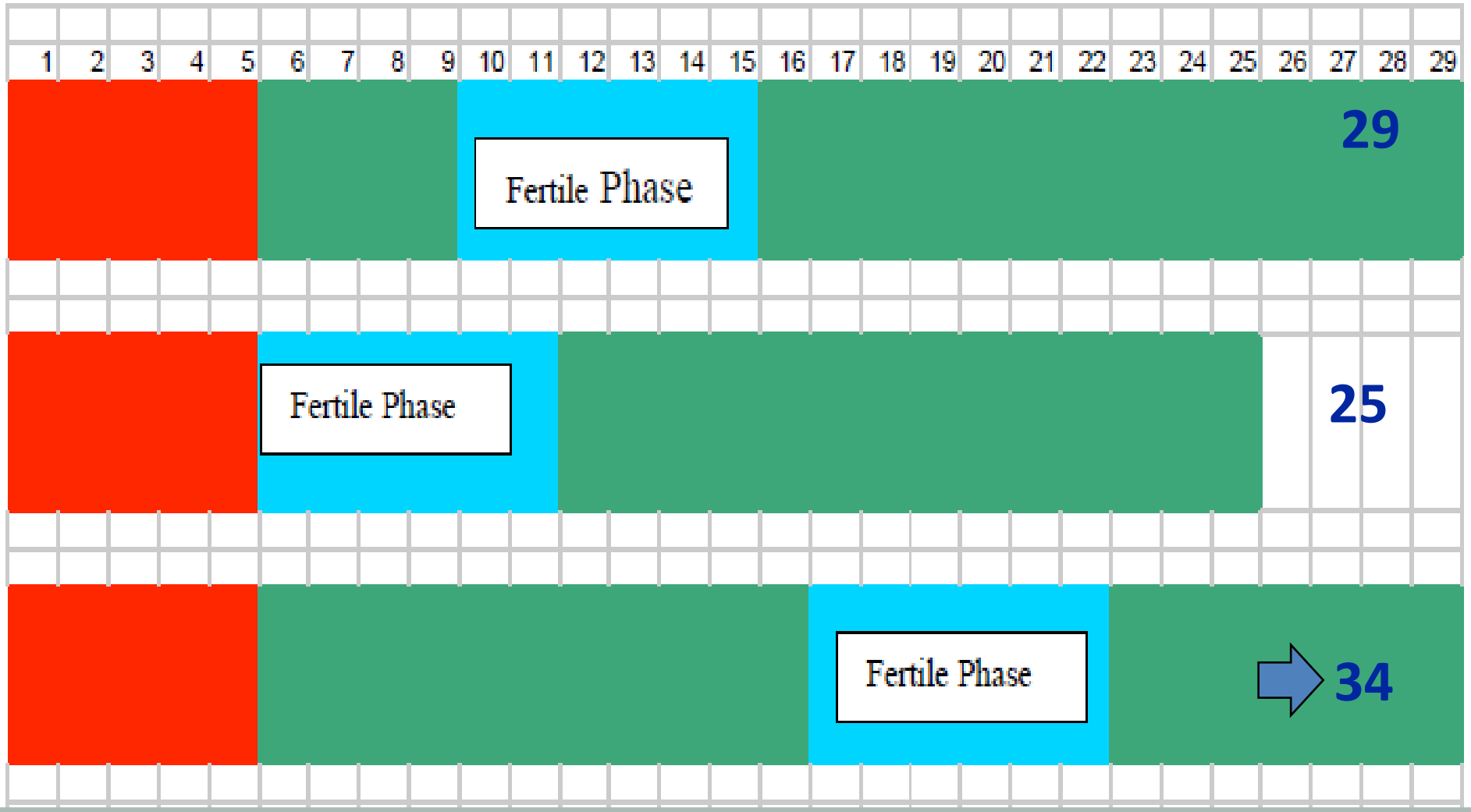
- Rhythm method
- Standard days method
  - Brand name: CycleBeads™
  - LAM
  - Billings ovulation method
  - Symptothermal method

FABM Efficacy

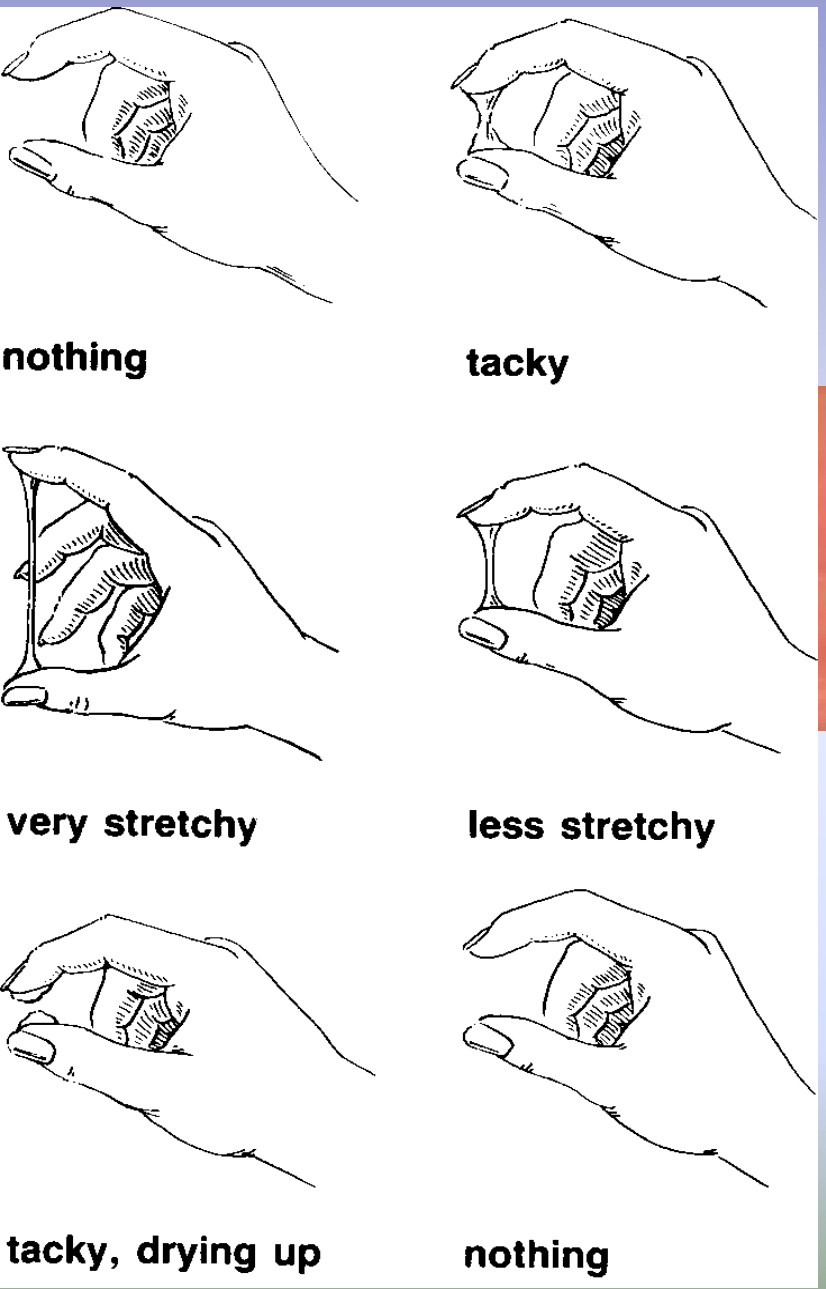
Successful use of FABMs for avoiding pregnancy

1. Accuracy of the method in identifying the fertile window
2. Correct interpretation of signs of the fertile window
3. Couple's ability to follow method rules
   - i.e., to use a barrier method or to avoid intercourse on the days the method identifies as fertile

Variability of the menstrual cycle and the fertile window:



Preovulatory Cervical Mucus



Reflects high estrogen level, no progesterone (yet)

- Clear (transparent)
- Abundant
- Stretchy, slippery

  "Like raw egg white"

Symptothermal Method

- Uses both cervical secretions and basal body temperature (BBT) to identify the fertile time
- Apps: Kindara-Wink, Sympto, Lady Cycle, Mynfp.net
- Efficacy
  - Typical use: 2-33 pregnancies per HWY

Natural Cycles® App

- First (and only) fertility monitoring app with FDA approval to be marketed as a contraceptive
- Can be used to prevent or achieve pregnancy
- Mechanism of action
  - Relies cycle pattern and BBT, *not* cervical mucus
  - Factors in past menstrual and monitoring *history* in predicting future ovulatory events
  - LH measurement (ovulation prediction kit) optional

Contraceptive Mode: Non-Fertile (Green) and Fertile (Red) Days

- The **Natural Cycles** algorithm determines whether there is a risk of conception on a specific day[1,2]

Green day = Not fertile

Red day = Fertile

In order to prevent conception, women must abstain or use protection (e.g. condoms)

1. E. Scherwitzl *et al*, *European Journal of Contraception and Reproductive Health* 2015;20:403–408;
2. E. Scherwitzl *et al*, *European Journal of Contraception and Reproductive Health* 2016;21:234–241

Perfect and Typical use Pearl Index

- Perfect use Pearl Index was calculated to be 1.0 pregnancies per 100 woman-years
- Typical use Pearl Index = 6.9

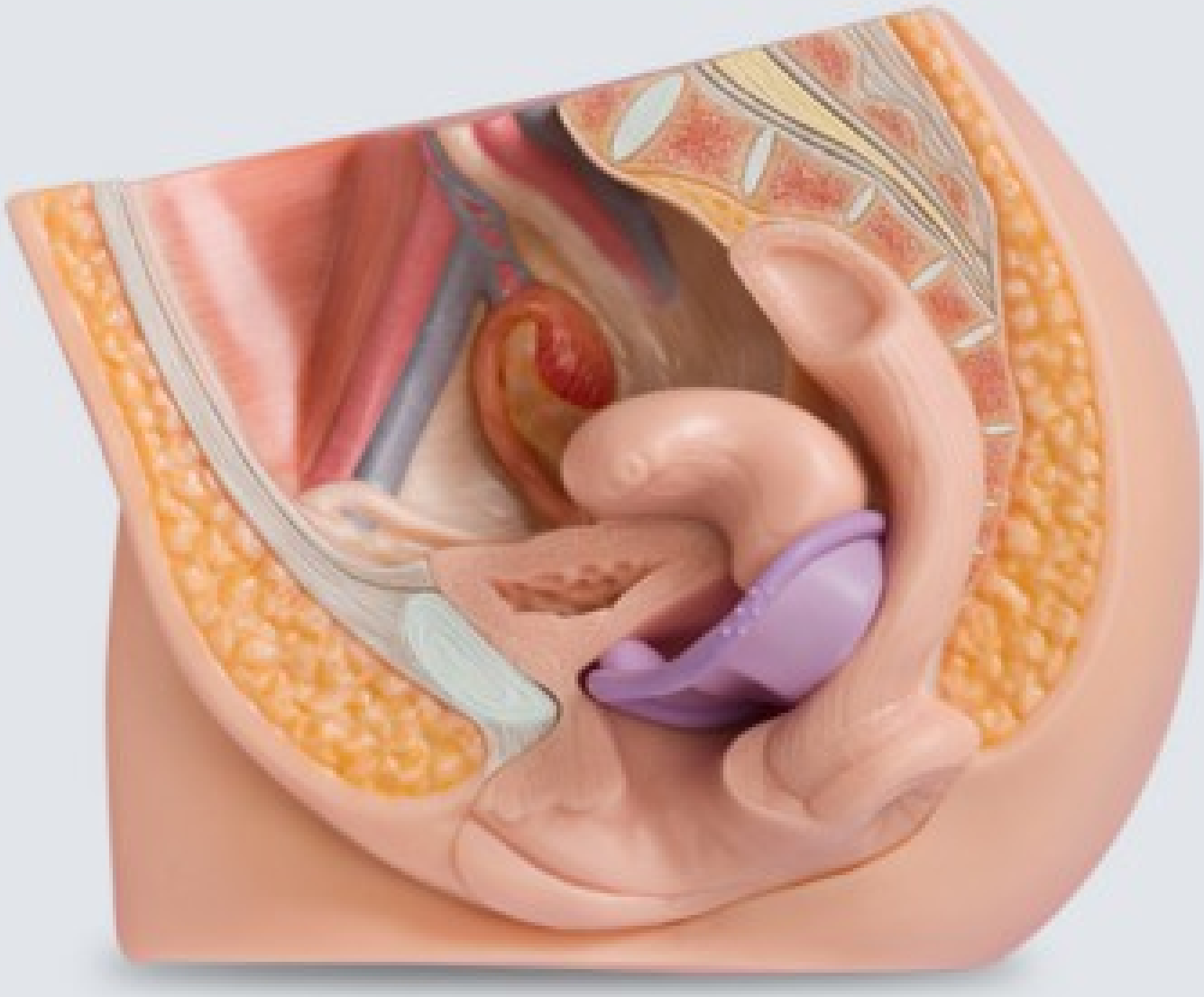
	Pearl Index*	Pregnancies	Woman-years	Cycles
Perfect Use	1.0	17	1,661	21,597
Typical Use	6.9	1,273	18,548	224,563
Method Failure	0.5	102	18,548	224,563

Barrier Methods

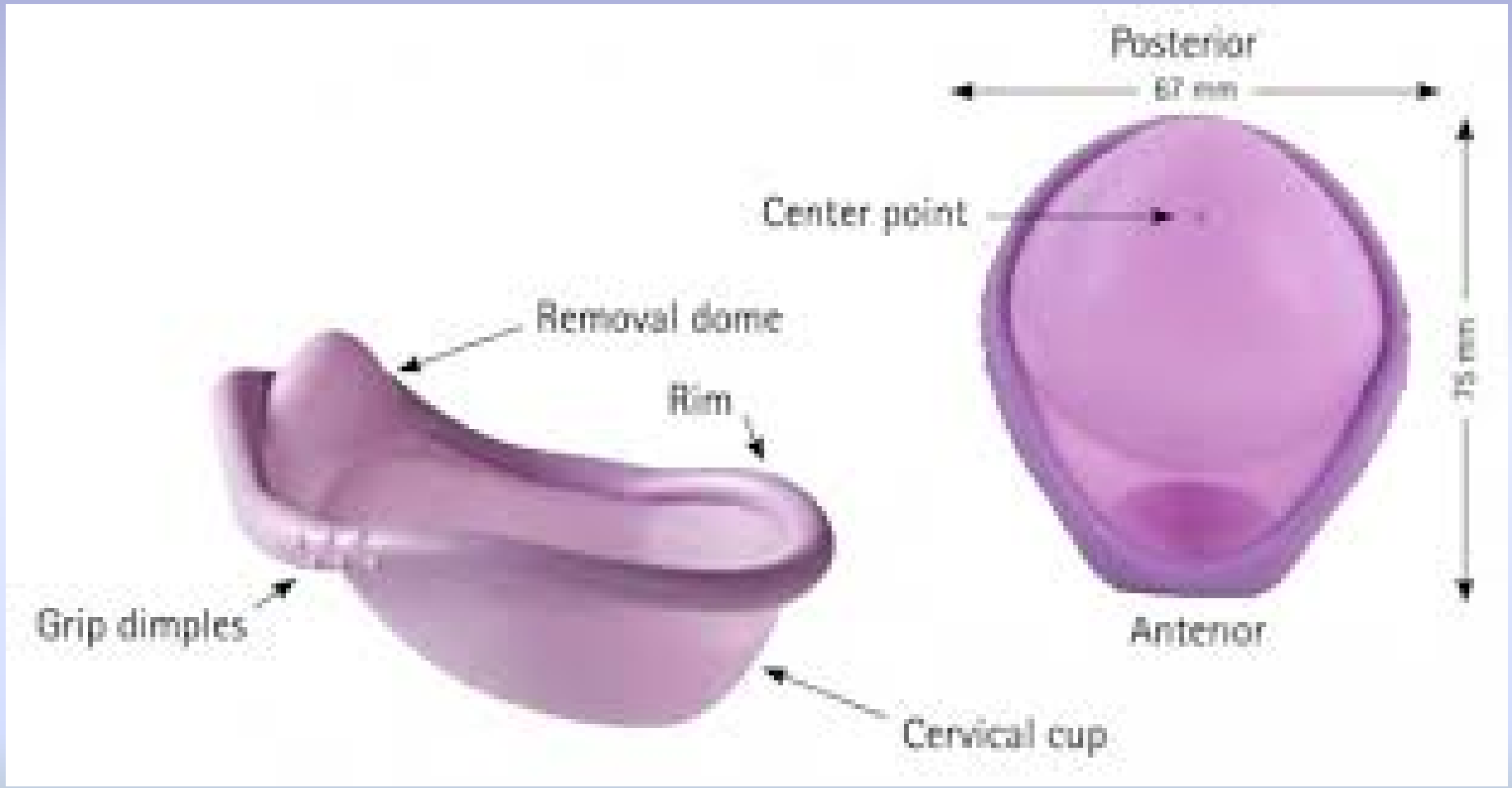
- All barrier methods are coitus dependent.
- Dual protection: pregnancy and STIs.
- Contraindications: allergy
- Male condom:
- Spermicide: chemical barrier used alone or in conjunction with physical barrier.

Diaphragm

- Silicone
- Used with spermicide
- Can be inserted several hours prior to coitus but if > 1 hour must add additional spermicide
- Remove > 6 hours after coitus



Caya Diaphragm

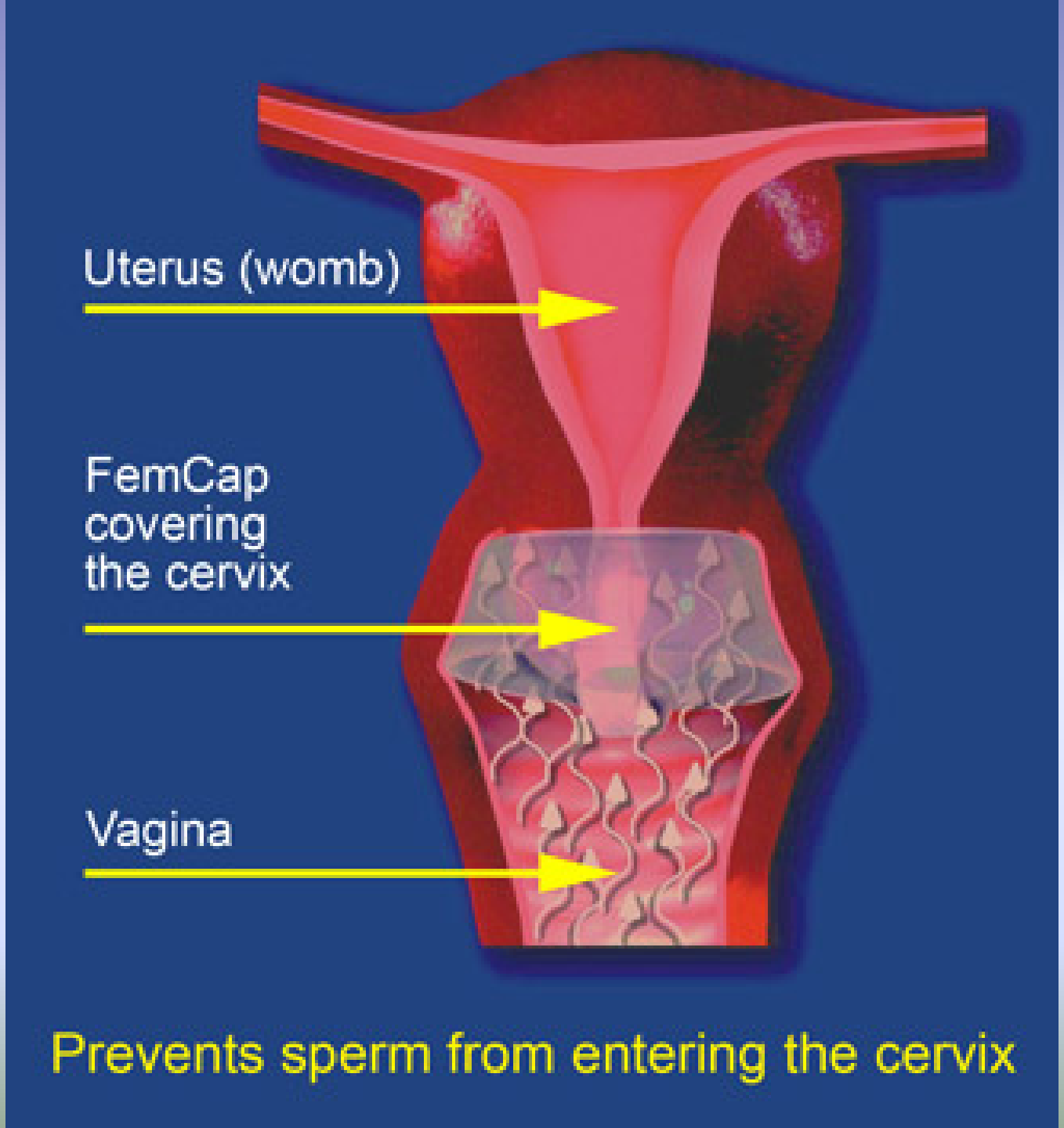


Cervical Cap

- Brand name: FemCap®
- More effective for nulliparous women


Dome
Removal Strap
Brim
Rim

http://www.hpsrx.com/femcap.html



Prevents sperm from entering the cervix

Spermicide

- Available as creams, gels, film, foam, and suppositories containing nonoxynol-9
- Used alone or with a barrier method

Sponge

- Made of plastic foam and contains spermicide
- Soft, round, two inches in diameter
- A nylon loop is attached to the bottom for removal
- Insert deep into the vagina before intercourse
- The Today Sponge is the only brand of available in the US

https://www.youtube.com/watch?v=TC5Z6ViG40w

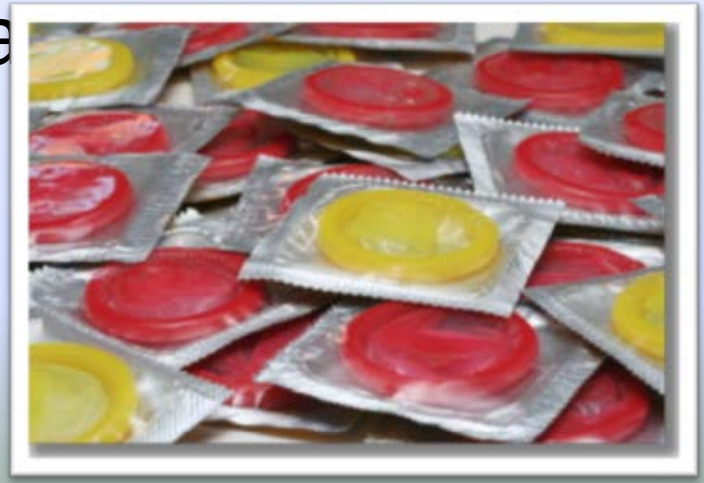
Mechanism of Action

- The sponge covers the cervix and blocks sperm from entering the uterus

- Continuously releases nonoxynol 9 –prevents sperm from moving

Male condom

- Helps to prevent pregnancy and STIs (STDs) including HIV
- Very large range of efficacy depending on
  - Consistency of use
  - Attention to correct usa
  - Anatomy
  - Brand



Male condom-correct usage

- Put condom on before **any** contact of penis and vagina
- Leave a small bit of space at the tip of the condom to leave room for ejaculate
- Roll condom down to lowest part of the base of the penis
- Withdraw penis from vagina immediately after ejaculation
- Hold onto condom at base of penis as it is withdrawn from vagina

Universal Condom
FC2

- Helps to prevent pregnancy, STIs & HIV
- Brand name Reality
- Good protection for use during anal sex (remove the inner ring)

Universal Condom

- Comes with silicone-based lubricant on the inside
- Additional lubrication can be used.
- Does NOT have to be water soluble!
- Does not contain spermicide
- STI protection that doesn’t rely on a partner maintaining an erection

Unprotected sex **subsequent to EC use** is the biggest risk for pregnancy

Weight
Timing
Efficacy

EMERGENCY CONTRACEPTION

Emergency Contraception (EC)

- Levonorgestrel 1.5 mg (Plan B One-Step ®Next Choice One Dose™)
- Up to 72 hours
- Progestin only
- One pill
- No contraindications

Glasier A et al. Contraception 2011

Emergency Contraception (EC)

- Ulipristal Acetate 30mg (Ella®)
- Up to 5 days
- Anti-progestin
- 2 weeks of back-up when starting hormonal contraception after Ella
- Contraindication: Known or suspected pregnancy

Glasier A et al. Contraception 2011

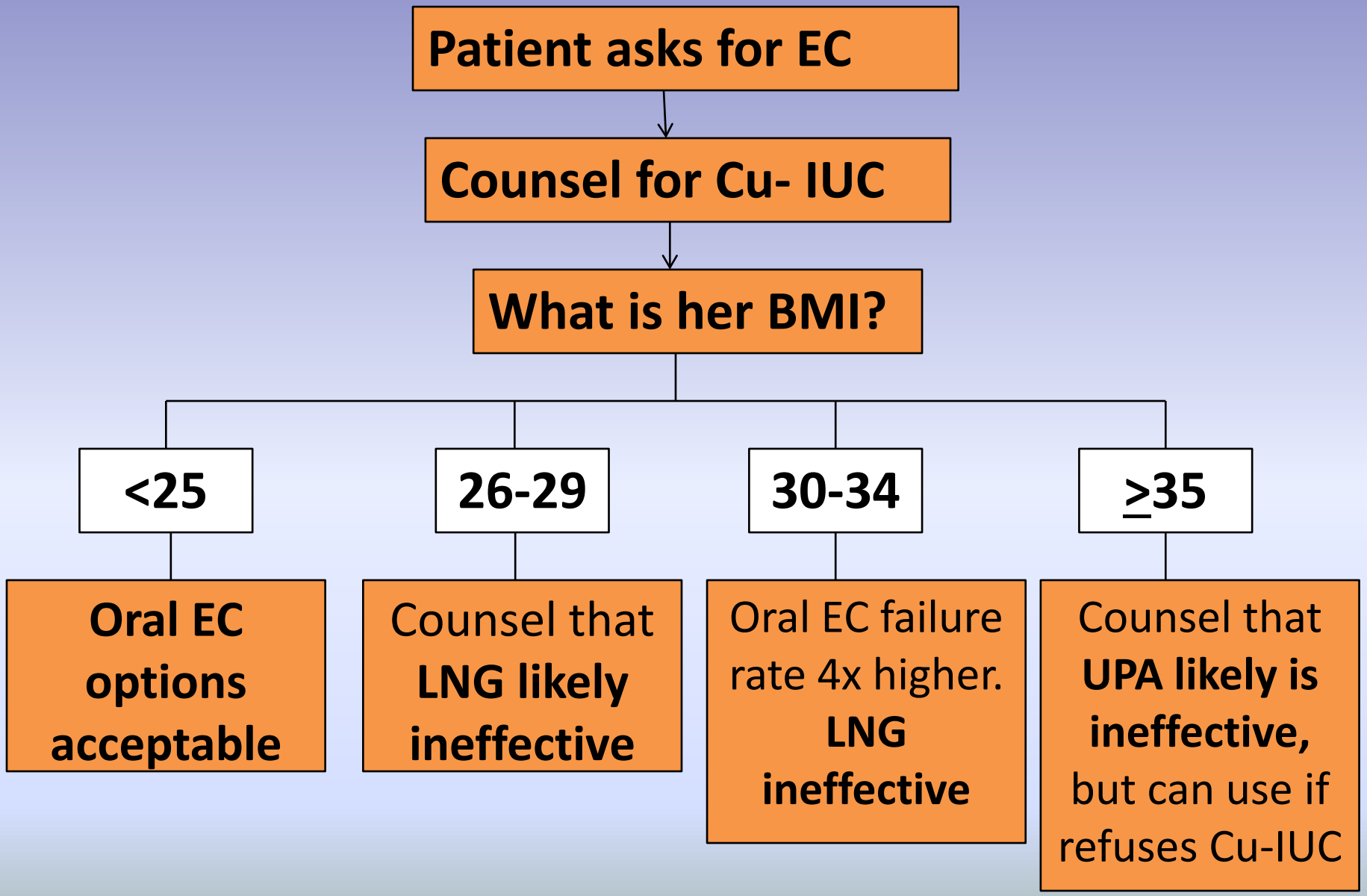
Yuzpe

http://bedsider.org/features/88-the-yuzpe-method-effective-emergency-contraception-dating-back-to-the-70s

- Up to 72 hours
- 2 doses of COCs
- Multiple pills
- Not all OCs work
- Lots of nausea and vomiting

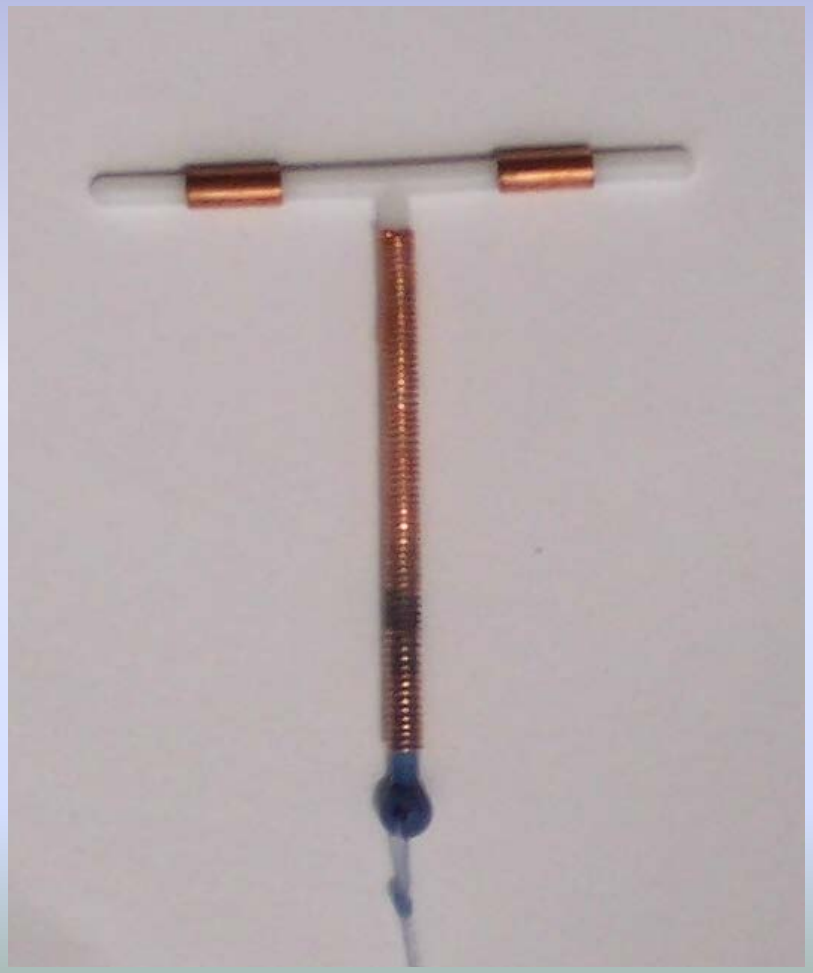
Menstrual Changes/Side Effects of EC

- May alter the next expected menses.
- If menses is delayed beyond 1 week, pregnancy should be ruled out.
- May have nausea or vomiting


Patient asks for EC
Counsel for Cu- IUC
What is her BMI?
<25
26-29
30-34
≥35
Oral EC options acceptable
Counsel that LNG likely ineffective
Oral EC failure rate 4x higher. LNG ineffective
Counsel that UPA likely is ineffective, but can use if refuses Cu-IUC

Cu IUD Has No Decrease in EC Efficacy

Off- label Use



United States Selected Practice Recommendations for Contraceptive Use

US SPR

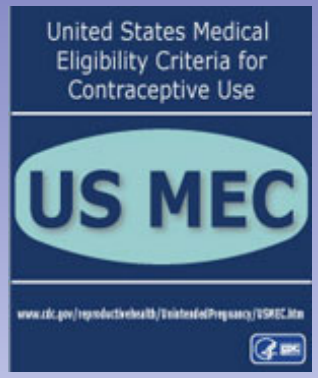
Symptoms of perimenopause

Fertility

Contraception

WOMEN OVER 40

Safest Methods



No difference in classification for older age

- Levonorgestrel IUC*
- Copper IUC
- Implant
- Progestin only pills
- Barrier methods

No increased safety concerns

* Also has non contraceptive benefits

IUC Perimenopause

- Leave in place until *through* transition
- LNG IUC can prevent perimenopausal bleeding
- Consider leaving LNG IUC in for hormone therapy
- OK to extend beyond indicated time

Continuous Use CHCs
↓ Common Symptoms

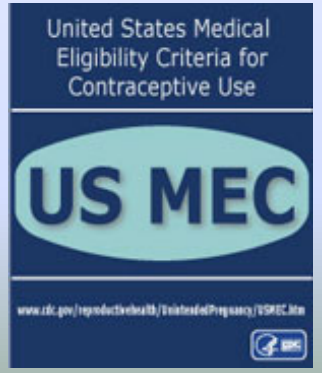
- Avoids hormone withdrawal symptoms, ovarian cysts, discontinuation
- **PMS**;
  - Mood
  - Headaches
  - Pelvic pain/cramping
  - Bloating
- Best effect after 6 months

Continuous Use

- Adenosis, endometriosis
- Leiomyoma
- Bleeding irregularities

CHCs and Bone Mass

COC use appears to preserve bone mass in perimenopausal women



Patient-Centered Contraception Counseling; Shared Decision Making in Action

Ask more questions
&
Talk Less

Counseling Skills

Paraphrasing

- **“So I hear you saying** …(you really like the idea of using a method without hormones) **do I have that right**?”

- **“It sounds like**….(it’s super important to you have a method that you can rely on) **is that what you mean?”**

Alternates

- “Many of my patients say that they worry about weight gain with birth control is that what you mean?”

- “Wow, so you feel pretty strong about avoiding the side effects you had from the pill and the shot is that accurate?”

Establish Rapport, Show Empathy and Understanding

“Small Talk”

- Ask her about work, school or her kids
- Refer back to this information during the visit:
  - “It sounds like you are incredibly busy with all that you have on your plate with work and school”
  - “Working and taking care of a little one must make it challenging to schedule a visit for your depo shot”

Point Out Health-Supporting Behaviors

- Condom use, adherence to a method, exercise, diet improvement.

- Important because:
  - You are both on the same side
  - The patient will trust you
  - The patient is coming from their “best self”

Positive Feedback

- “It’s great that you were so strong in standing up for yourself (asking your partner to use condoms.)”
- “You’ve clearly thought about this a lot…so what do you make of this situation?”
- “Not many people (your age) act so responsibly about using a condom every time.”

Empathy Without Labeling

- Rather than:
  - "You sound angry" (or anxious)
- Use neutral words:
  - "It sounds like_____is concerning to you"
  - "I can see_____is hard to deal with"
- Not: "I know how you feel."

Try NOT to Disagree
"Find the yes"

- **Find something in what the patient is saying to agree with**

…….and then add your scientific or medical information.

- "Yes! …. and…" Instead of "No" or "But"

Find the “Yes”

Rather than:

“No, that’s just an example of good old “Dr. Google” that’s not true at all!”

Find the “Yes”

Try:

“It’s great you took the initiative to look this up on your own! I can see you’re really interested in taking care of yourself” “I have a great resource for you that I think you will love…” (Bedsider)

Responding to Complaints or Objections

- “Actively listen” to the patient’s complaint
- Get to the heart of the issue
- She doesn’t have to “fight for the right” to have her IUD or implant removed

Addressing Patient's Concerns

"That's too bad your friend had that experience. I haven't heard of that before, and I can tell you it definitely doesn't happen frequently."

Christine Dehlendorf
2016

Listen

- Listen so you understand *what outcome she wants*:

Does she want to:

- Be reassured that she is not in danger?
- Have the problem *fixed?*
- Complain, be heard, be given compassion?
- Get advice?

Provide Quality Patient Education

Limit the Amount of Information

- Humans do not integrate much of the information provided
- More information = less retention
- Focus on her specific needs and knowledge gaps
- Whenever possible give information that is in response to her questions

Information Sandwich

- Sandwich the *one piece of* information you want to give between questions
- Or ask a question after each nugget of information
- Best is to give information in response to a question she has asked

Information Sandwich

Q: “How would it be for you if you didn’t get your period while you are using the implant?”

A: “That would not be good!”

Q: “What is it about not getting your period that is concerning to you?”

A: “My mom said it’s not healthy not to get my period”

Information Sandwich

The YES:

“Your mother is completely right, when you are not on contraceptive hormones it is important to get you period every month, it’s great that you know that...

Information Sandwich

The Science:

"Interestingly, if a woman *is* using contraceptive hormones it keeps her uterus very healthy and thin. It actually prevents cancer of the uterus"

Information Sandwich

Question:

“Knowing that, how would it be for you not getting periods while using this method?”

Questions for the Information Sandwich

- How would that be for you?
- Has that ever happened before?
- How did you manage it?
- Do you have a sense of how you would manage it?

Language for Patient Education

Misinformation…Misconceptions

1. About relative effectiveness of methods
   - All contraception is equally effective..
   - Use visual aids (tiered effectiveness chart)
2. Underestimatates fertility
   - Pregnancy confirms fertility
   - No need for effective contraception
3. Pregnancy is safer than contraception

"If a woman switches from the pill to an IUD her chance of unintended pregnancy is reduced from 90 in 1000 to <2 in 1000"

Natural Frequencies

"If 100 women have unprotected sex for a year, 85 of them will get pregnant as opposed to none or maybe one out of 100 using a hormonal IUD"

Not:

"<1 % failure"

Teach Back

“I’ve just gone over a ton of information and I’m not always as clear as I would like to be…

or

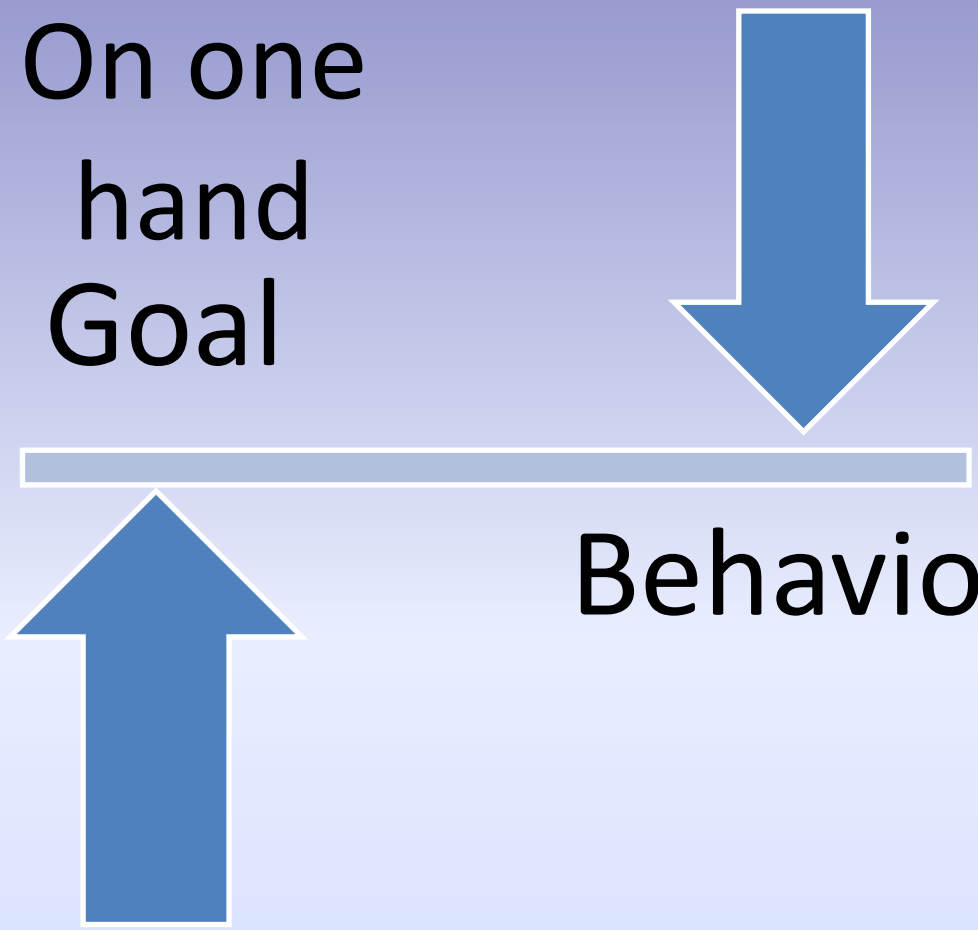
“Just to be sure I didn’t forget to tell you something…

…can you tell me how you are going to take generic Aleve before your period starts to lessen your bleeding with the copper IUD?”

Obstacles

On one hand

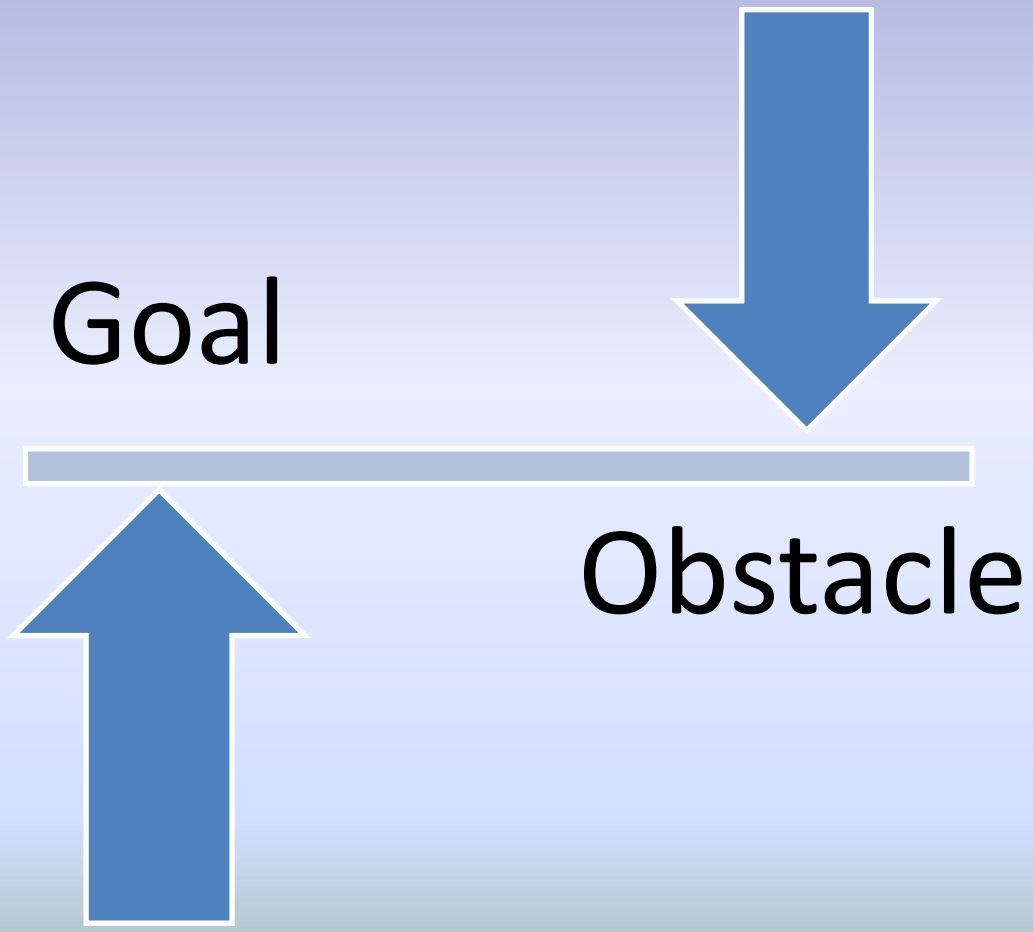
Goal



Behavior

On the other hand

Find the Obstacle



Obstacles

Ambivalence or…?

- Wants to please or hold onto a mate
- Reassurance that she is fertile

Obstacles

- All contraceptive methods have potential side effects
- Fear of negative health effects
- Perception of risk is not fully rational and is based on past life experience---ask

Obstacles

- Logistical constraints
  - Cost
  - Wait times, work schedule, transportation, childcare
- Adherence to second and third tier methods
  - Forgets to adhere
  - Too busy to adhere

Reproductive Coercion

Behavior intended to maintain power and control in a relationship related to reproductive health by someone who is, was, or wishes to be involved in an intimate or dating relationship with an adult or adolescent.

Reproductive Coercion

Explicit attempts to:

- Impregnate a partner against her will
- control outcomes of a pregnancy
- coerce a partner to have unprotected sex
- interfere with contraceptive methods.

On the One Hand

- "So it sounds like **on one hand** you are saying that it's very important to you to wait until you are ready, and yet **on the other hand**, a part of you would like to have a baby now? Do I have that right?"
- "**On the one hand** you would really like to finish school before you become a parent yet **on the other hand** it's hard to be consistent with your (pill use, or depo use, or condom use)…"

pause for a reply

Ask more questions
&
Talk Less