Contraception in Medically Complicated Women

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Disclosure Statement

July 8, 2014
I have nothing to disclose.
Proportion of Women Using Contraceptive Method

Proportion of women with unmet need for family planning is as high as 50% by country

www.unpopulation.org

Contraceptive Prevalence & Maternal Deaths

Effect of Unmet Need for Contraception


6.4 Million U.S. Pregnancies Annually

49% Intended

Unintended, despite method used

Unintended, no method used
Objectives

Inspire you to prioritize patient-centered contraceptive counseling and provision in your practice

Make you comfortable using CDC Medical Eligibility Criteria (MEC) and the Selected Practice Recommendations

Review challenging contraceptive cases

1: STI and IUD  2: Counseling  3: VTE  4: Obesity, DM  5: Implant VB

Are you familiar with the US Medical Eligibility Criteria for Contraception?

a. Yes
b. No
Are you familiar with the US Selected Practice Recommendations for Contraception?

a. Yes
b. No

Can my patient use this method?

US Medical Eligibility Criteria (MEC)

<table>
<thead>
<tr>
<th></th>
<th>Can use the method</th>
<th>No restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Can use the method</td>
<td>Advantages generally outweigh theoretical or proven risks.</td>
</tr>
<tr>
<td>2</td>
<td>Should not use method unless no other method is appropriate</td>
<td>Theoretical or proven risks generally outweigh advantages</td>
</tr>
<tr>
<td>3</td>
<td>Should not use method</td>
<td>Unacceptable health risk</td>
</tr>
<tr>
<td>4</td>
<td>Unacceptable health risk</td>
<td></td>
</tr>
</tbody>
</table>
### Birth Control Methods

<table>
<thead>
<tr>
<th>Medical Condition</th>
<th>Contraception</th>
<th>Contraception with regard to abortion risk</th>
<th>Progesterone-only pill</th>
<th>Insertion</th>
<th>Implant</th>
<th>IUD or RID</th>
<th>Copper IUD</th>
</tr>
</thead>
<tbody>
<tr>
<td>DVT/PE</td>
<td>I</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Acute DVT/PE</td>
<td>I</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Previous DVT/PE</td>
<td>I</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Familial history</td>
<td>I</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Minor surgery</td>
<td>I</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

*Note: The table above provides a summary of U.S. Medical Eligibility Criteria for Contraceptive Use.*
Where do you find the US MEC?

Google search results for "US MEC".
For each method...

- When to start – “anytime if reasonably sure that she is not pregnant”
- How long to use backup
- Special considerations – explain recommendations by MEC
- Missed or late doses

“Reasonably Sure Not Pregnant”

BOX 1. 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), amenorrhoeic, and ≤6 months postpartum

With exception of IUD – can start and do pregnancy test in 2-4 weeks

23 yo G0 is interested in using intrauterine contraception. When she was in college, she had Chlamydia. She has had 3 male partners in the past year.
Every 3-10 Years:
Intrauterine Devices
(IUD, IUC, IUD, IUS)

- **Copper T 380A IUD**
  - 0.8% failure (1 yr)

- **Levonorgestrel Intrauterine System (LNG-IUS)**
  - Levonorgestrel 20 mcg/day
  - 0.1% failure (1 yr)

  - **New LNG IUS** – 14 mcg/day
    - 3 years

- **Lower Dose LNG IUD**
  - Lower dose of progestin (14 mcg v. 20 mcg)
  - Smaller size - 28 mm x 30 mm (v. 32mm x 32mm)
    - 3.8 mm diameter (1 mm less)
  - Equivalent efficacy, expulsion risk
  - Possibly more bleeding/spotting days
  - 6-12% amenorrhea (v. 20-50% higher dose)
  - May appeal to more women given its smaller size and shorter duration of use

Lockhat *Fertil Steril*, 2005

Nelson, Obstet Gyneco, 2013
IUD Review

• Current IUDs do NOT cause PID!!!
  – Transient increased risk at time of insertion
    – 9.7/1000 w/in 20 days
    – 1.4/1000 after 20 days
  – STI at time of insertion increases risk

• Beyond time of insertion
  • Overall decreased risk with LNG IUS
  • No increased risk with Copper IUD

• Okay to treat for PID with IUD in place


Routine GC/CT screening NOT necessary!

• Retrospective cohort, n=57,728 IUDs
• Evidence-based STI screening, treat if + test

Overall PID risk = 0.54%

All women: Risk of PID
Non-screening = Screening
OR= 1.05 (0.78, 1.43)

Screened Women: Risk of PID
Same day = Pre-insertion
OR=.997 (.64, 1.54)

Women appropriately selected for non-screening
Accurate screening time
day of insertion

Same results < 26 yo

IUD: CDC Guidelines

<table>
<thead>
<tr>
<th>Condition</th>
<th>IUD</th>
<th>LNG IUD</th>
<th>Copper IUD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Past PID: Infections</td>
<td>C</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>PID</td>
<td>C</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sexually transmitted infections</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Genital herpes</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Gonorrhea</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Chlamydia</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Trichomonas</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Yeast</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Bacterial vaginosis</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Selected Practice Recommendations

- Give anytime reasonable not pregnant – for IUD this is most important
- Cu IUD – no backup
- LNG IUD - If within 7 days of period – no backup
- If > 7 days – backup x 7 days
- Address bleeding tx
- No need for string check
- Evidence-based STI and PID
Case #1

23 yo G0 is interested in using intrauterine contraception. When she was in college, she had Chlamydia. She has had 3 male partners in the past year.

Case #2

A 32 yo G3P1T2 presents asking for birth control. She has used the pill before, liked it, and wants it again. She was using the pill the two times she became pregnant and had abortions.
Contraceptive Counseling

• Preference-sensitive decision
• Patient-centered care
• Respect diverse priorities, concerns, experiences
  – Control
  – Safety concerns
  – Concern about or desire for side effects
  – Personal and friends’/family members’ experiences
  – Convenience
  – Efficacy

Contraceptive Counseling

• Develop awareness of your biases
• Engage in shared decision-making
• Questions to pose patients
  – Which method did you come today wanting to use?
  – Are you interested in one of the most effective? Convenient? What does convenient mean to you?
  – When – if ever – do you want a (another) child?
  – What method(s) have you used in the past?
  – What are you doing to protect yourself from STIs?
  – What side effects are you willing to accept or desire?
6.6% Contraceptive Method Use, U.S.*

10 million = 900,000 pregnancies each year

*Among the 38 million women currently using birth control

Mosher Vital Health Statistics, 2010
Alan Guttmacher Institute, Facts In Brief, 2010.

How effective is the combined oral contraceptive for prevention of pregnancy?

9% failure rate in 1 year

How many pills, on average, do women forget to take each month (not including placebo)?

Typical use ≠ Perfect use
Oral Contraceptives 2010: Missed Pills

Mean Pills Missed

Cycle

Hou, Ob Gynecol, 2010

Contraception Methods

Least Effective

Most Effective

Episodic

Daily

Weekly

Monthly

3 mos

3-5 yrs

10 yrs

Permanent

Barrier NFP

EC

OCPs

Patch

Ring

DMPA (IM or SQ)

Progestin Implant

LNG-IUD

Copper IUD

BTL Hysteroscopic Vasectomy

Combined Hormonal

Progestin Only

IUD

Sterilization
Natural Family Planning

<table>
<thead>
<tr>
<th>Contraceptive Method</th>
<th>Failure Rate</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Perfect Use</td>
<td>Typical Use</td>
</tr>
<tr>
<td>No Method</td>
<td>85%</td>
<td>85%</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>4%</td>
<td>22%</td>
</tr>
<tr>
<td>Periodic Abstinence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Days Method**</td>
<td>5%</td>
<td>12%</td>
</tr>
<tr>
<td>Ovulation Method</td>
<td>3%</td>
<td>22%</td>
</tr>
<tr>
<td>Symptothermal</td>
<td>&lt;1%</td>
<td>13-20%</td>
</tr>
<tr>
<td>Two-Day Method*</td>
<td>4%</td>
<td>14%</td>
</tr>
</tbody>
</table>

* Including Cycle Beads

Trussell J. Contraceptive Efficacy. In Contraceptive Technology.

Barrier Methods

<table>
<thead>
<tr>
<th>Contraceptive Method</th>
<th>Failure Rate</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Perfect Use</td>
<td>Typical Use</td>
</tr>
<tr>
<td>Condoms</td>
<td>2 %</td>
<td>18 %</td>
</tr>
<tr>
<td>Cervical Cap (parous/nullip)</td>
<td>26%/9%</td>
<td>32%/16%</td>
</tr>
<tr>
<td>Sponge (parous/nulliparous)</td>
<td>20%/9%</td>
<td>24%/12%</td>
</tr>
<tr>
<td>Female Condoms</td>
<td>5 %</td>
<td>21 %</td>
</tr>
<tr>
<td>Diaphragm</td>
<td>6 %</td>
<td>12 %</td>
</tr>
</tbody>
</table>

Trussell J. Contraceptive Efficacy. In Contraceptive Technology.
Hormonal Methods

<table>
<thead>
<tr>
<th>Contraceptive Method</th>
<th>Failure Rate</th>
<th>Perfect Use</th>
<th>Typical Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progestin Pills</td>
<td>0.3 %</td>
<td>9 %</td>
<td></td>
</tr>
<tr>
<td>Combined Pill/Patch/Ring</td>
<td>0.3 %</td>
<td>9 %</td>
<td></td>
</tr>
<tr>
<td>Combined 1-month injection</td>
<td>0.3 %</td>
<td>9 %</td>
<td></td>
</tr>
<tr>
<td>3-Month Injection</td>
<td>0.2 %</td>
<td>6 %</td>
<td></td>
</tr>
<tr>
<td>Implants</td>
<td>0.05 %</td>
<td>0.05 %</td>
<td></td>
</tr>
<tr>
<td>LNG IUD</td>
<td>0.2 %</td>
<td>0.2 %</td>
<td></td>
</tr>
<tr>
<td>Copper IUD/LNG IUS</td>
<td>0.8 %</td>
<td>&lt;1 %</td>
<td></td>
</tr>
</tbody>
</table>

Trussell J. Contraceptive Efficacy. In Contraceptive Technology.

Patient Education Materials

Many women do not understand efficacy and/or have other priorities.

Comparing Typical Effectiveness of Contraceptive Methods

- Most effective
  - Implants
  - IUD
  - Spermicides

- Least effective
  - Barrier methods
  - Oral contraceptives

How to make your method more effective:
- Oral contraceptives:
  - Use one pill or patch every day
  - Take two pills every 1-2 months

- Spermicides:
  - Use every time you have sex

- IUD:
  - Requires partner’s cooperation

- Implants:
  - Requires partner’s cooperation

Source: WHO 2007
**Daily: Combined Oral Contraceptives**

- Estrogen + progestin
- Traditional prescription flawed
  - Daily x 3 weeks / 1 week off
- Extended cycle may ↑efficacy
- Movement toward OTC

**Extended Cycle: Shortened hormone-free week**

- 23, 24 or 26 days hormones + 2-5 d placebo
  - Decreased ovarian activity at end of placebo
  - Shorter withdrawal bleeds
  - Similar breakthrough bleeding

**24-day hormone pill - lower pregnancy rate**

6.7% v. 4.7% over 3 years – HR 0.7 (CI 0.6-0.8)

- 3 FDA-approved products in US

*Spona Contraception, 1996; Bachman Contraception, 2004; Endrikat Contraception, 2001; Dinger ObGyn, 2011.*
Extended Cycle: Fewer Hormone-free Weeks

- **12 weeks hormone/1 week off**
  - 84 days LNG 150 µg/EE 30 µg; 7 days placebo
  - Decreased breakthrough bleeding over time

- **Continuous for one year**
  - Increased spotting in first six months
  - Median 1.5 days spotting in last trimester

- FDA-approved: ethinyl estradiol and levonorgestrel
  - 90 mcg levonorgestrel + 20 mcg EE

Anderson Contraception, 2003

Combined Hormonal Contraception

- Give anytime reasonable not pregnant
- If within 5 days of period – no backup
- If > 5 days – backup x 7 days
- Check blood pressure
- Give up to 1-year supply
- If 2+ days missed – backup x 7 days
- If in last week – omit HFI
Case #2

A 32 yo G3P1T2 presents asking for birth control. She has only used the pill before and liked it. She became pregnant on the pill each time she became pregnant.

Case #3

19 yo G0, newly sexually active, wants to start the contraceptive vaginal ring. But she is concerned about what she has read in the news about the ring causing blood clots.
Why Is Potentially Lethal Contraceptive NuvaRing Still on the Market?

by Vanity Fair

Danger in the Ring

Vanity Fair writer at-large Marie Brenner investigates the birth-control device NuvaRing, which...

Figure 1: Likelihood of Developing a VTE

<table>
<thead>
<tr>
<th>Condition</th>
<th>Range of VTE Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-CHC User, Non-Pregnant</td>
<td>0 to 5</td>
</tr>
<tr>
<td>CHC User</td>
<td>3 to 12</td>
</tr>
<tr>
<td>Pregnancy**</td>
<td>5 to 20</td>
</tr>
<tr>
<td>Postpartum (12 weeks only)</td>
<td>Ranges from 40 to 80</td>
</tr>
</tbody>
</table>

Number of Women with a Blood Clot out of 10,000 Woman-Years (WY)
DVT Risk with the Contraceptive Vaginal Ring (CVR)

• Lidegaard O, et.al BMJ 2012.
• 9,429,128 woman years of observation
• Confirmed VTE events per 10,000 woman years
  – Non-users of hormonal contraception 2.1
  – Combined Oral Contraceptives 6.2 (RR 3.2)
  – Transdermal patches 9.7 (RR 7.9)
  – Vaginal ring 7.8 (RR 6.5)

Ring +1.6 additional cases / 10,000 women-years. Adjusted Rate Ratio 1.9 (1.3-2.7) v. COC

DVT Risk with the Contraceptive Vaginal Ring (CVR)

• 66,489 woman years of observation
• Confirmed VTE events per 10,000 woman years
  – LNG COC 7.8
  – All COC 9.2
  – Vaginal ring 8.3 (HR 1.0, 0.3-3.3)

Ring - no increased risk compared with any pill. HR 0.8 (0.5-1.5)
DVT Risk with the Contraceptive Vaginal Ring (CVR)

- Sidney, et al., Contraception, 2013
- Retrospective cohort of 573,680 women
- Confirmed VTE events per 10,000 woman years
  - All COC – new users: 8.2 (7-9.6)
  - Vaginal ring: 11.3 (4.26-32)

Ring - in adjusted analyses no increased risk compared with the pill. HR 1.1 (0.6-2.2)

Case #3

19 yo G0, newly sexually active, wants to start the contraceptive vaginal ring.

- Conflicting level 2 evidence – may cause slight increase risk relative to COC
- Attributable risk very, very small
- Level I evidence that women use it correctly compared with pill
- May cause fewer unintended pregnancies and therefore fewer VTE overall
VTE & Oral Progestin Type

- Desogestrel and drospirenone COCs may increase risk of VTE
- BUT... Absolute risk remains low

<table>
<thead>
<tr>
<th>Non-pregnant, no COCs: 2-4 per 10,000 ♀- yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levonorgestrel COCs: 5.0 per 10,000 ♀- yrs</td>
</tr>
<tr>
<td>Desogestrel COCs: 6.5 per 10,000 ♀- yrs</td>
</tr>
<tr>
<td>Drospirenone COCs: 7.8 per 10,000 ♀- yrs</td>
</tr>
</tbody>
</table>

Choosing a COC

- Careful with very low-dose estrogen – ↑ bleeding
- Monophasic fine
- Levonorgestrel may cause fewer VTE
- No clear benefit of drospirenone
  - PMDD: fewer sx 6 months – equivalent at 2 yr
  - Acne: Equivalent to other pills

<table>
<thead>
<tr>
<th>30 or 35 mcg EE + levonorgestrel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shortened or erased placebo week if possible</td>
</tr>
<tr>
<td>Monophasic</td>
</tr>
</tbody>
</table>
All progestin-only methods are safe even if:
1) Current VTE
2) No anti-coagulation
3) Provoked or unprovoked VTE

Case #4

38 yo G2P1T1 woman is seeking contraception. She had pre-eclampsia during her last pregnancy but otherwise reports she is healthy.
Physical exam: Wt= 226 lbs, Ht= 5’5” (BMI=37.6) BP=138/89
Obesity and Contraception

<table>
<thead>
<tr>
<th>Condition</th>
<th>Subcondition</th>
<th>Contraceptives:</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Obesity</td>
<td>–20–24 kg/m² body mass index ≥18 years and ≥ 45 kg/m² BMI</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

**Efficacy**
- Pharmacokinetics
- Oral vs. non-oral
- Risk of pregnancy

**Adverse events**
- Risk of VTE
- Risk of CV events
- Metabolic effects
  - Weight gain? Lipid profiles?

1 Institute of Medicine. Weight gain in pregnancy: Reexamining the guidelines

Obesity & Contraceptive Efficacy:

- OCPs: no clear difference¹,²
- Longer time to steady state³
- Ring: no difference¹,²
- ETG implant: lower serum level, but still inhibitory¹,⁴
- Patch: increased failure⁵ if >90kg
  - BUT BMI more relevant measure
  - No effect with BMI¹,²
- IUC: no difference
- DMPS: no difference¹
  - may need longer needles

¹ Lopez LM 2010 Cochrane
² McNicholas 2013 Obstet Gynecol
Obesity and Contraceptive Risks

• VTE risk
  – OCPs & obesity are independent RF for VTE
    • Obesity doubles risk of VTE
  – No data show synergistic, increased risk
  – Risk is lower than pregnancy (29/10,000 ♀-yrs)

*Note: no safety information on women BMI>40*

Contraception & Weight Gain

• OCP, Patch, Ring: none or age-expected change¹,²,³,⁶
• LNG-IUS: age-expected wt gain⁴
• ETG implant: minimal if any effect⁵
• DMPA:
  • Ave 5-6 kg over 3-5yrs³,⁶
  • Baseline BMI:
    • NI and overwt had inc. risk⁷
    • No assoc for adolescents⁸
  • Adolescents:
    • More pronounced wt gain⁵
    • Early wt gain @ 6mo (>5%) predicts future wt gain⁹

1. O’Connell 2001 Contraception
2. Gallo 2004 Obstet Gynecol
3. Berenson 2009 AJOG
5. Darney 2009 Fertil Steril
6. Beksinka 2010 Contraception
7. Pantoja 2010 Contraception
8. Bonny 2010 Contraception
Metabolic Syndrome

• Constellation of findings which increase risk of CHD, stroke, & type 2 DM

Three or more:
– Hypertension —
  ≥ 130/85
– Insulin resistance —
  FBS ≥ 100
– Central obesity —
  Waist circumference ≥ 35"
– High triglycerides —
  ≥ 150 mg/dL
– Low HDL —
  ≤ 50 mg/dL

Metabolic Syndrome & Contraception

<table>
<thead>
<tr>
<th>Lipids</th>
<th>CHC: ↑ TGL, HDL, ↓ LDL¹</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PCOS: improved LDL/HDL ratio²</td>
</tr>
<tr>
<td></td>
<td>DMPA: transient worsening of lipids post-injection³</td>
</tr>
<tr>
<td></td>
<td>ETG Implant: ↑ Chol, LDL, HDL4,5</td>
</tr>
</tbody>
</table>

| BP | OCPs: 5% of OCP users develop reversible Htn (7mm Hg)6 |

<table>
<thead>
<tr>
<th>Insulin Resistance</th>
<th>Women without DM:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OCP: No impact⁷</td>
</tr>
<tr>
<td></td>
<td>Ring: improved IR in PCOS⁸</td>
</tr>
<tr>
<td></td>
<td>DMPA: no effect⁹ vs. small increase in FBS (3 mg/dL over 2 yrs)¹⁰</td>
</tr>
<tr>
<td></td>
<td>LNG IUD: no effect</td>
</tr>
<tr>
<td></td>
<td>ETG implant: no effect⁵</td>
</tr>
<tr>
<td></td>
<td>Obese women: DMPA increased IR v. non-obese women</td>
</tr>
</tbody>
</table>

| Women with DM: | DMPA: No RCTs. Increase in FBG 103-112. |
|               | OCP: No increase in insulin requirement or end organ damage.¹¹ |

1. Winkler 2009 Contraception
3. WHO 1993 Contraception
4. Merki-Feld 2008 Clin Endocrinol
5. Inal 2008 Eur J Contracept Reprod Health Care
7. Grimes 2009 Cochrane Database
8. Battaglia 2009 Fertil Steril
11. Skouby 1984 Fertil Steril
Bariatric Surgery & Contraception

- Advisable to wait 1-2 years after surgery before planning pregnancy¹
- Fecundity & pregnancy rates often increase after surgery²,³
  - Especially in adolescents (13% vs. 6%)
- Recommend non-oral methods for surgeries that impair GI absorption⁴
  - Decreased absorption of OCPs

---

¹ ACOG Practice Bulletin 105, 2009
² Merhi 2007 Fertil Steril
³ Roeherig 2007 Obes Surg
⁴ Mehri 2007 Gynecol Obstet Invest
**Emergency Contraception**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Oral absorption</th>
</tr>
</thead>
<tbody>
<tr>
<td>History of breast cancer</td>
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<td>Multiple procedures</td>
<td>Copper-IUD: 1</td>
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**Table:**

<table>
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<th>Condition</th>
<th>Oral absorption</th>
</tr>
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**Chart:**

- Oral absorption
- CDC MEC
- Emergency Contraception
- Contraception methods
  - Oral: 3
  - Copper-IUD: 1
- CDC: 3
- Multiple procedures: Copper-IUD: 1
Emergency Contraception: Oral

LNG 120 mg x 1, up to 5 days

Ulipristal Acetate
- Selective progesterone receptor modulator
- **Mechanism:**
  - Delay follicular rupture
- Will not harm existing pregnancy
- **Dosing:**
  30mg, FDA-approved up to 5 days

1. Brache 2010 Hum Reprod

Emergency Contraception: Ulipristal Acetate

Effectiveness:
- "Non-inferior" to LNG: 1.4% vs. 2.2%

Meta-analysis of 3445 ♀
- 120 hrs: OR = .55 (.32-.93)
- 24 hrs: OR = .35 (.11-.93)

**More effective for obese women**
- Obese vs Normal/underweight:
  - LNG: OR 4.41 [2.05-9.44], p=.0002
  - No efficacy >80 kg
  - UA: OR: 2.62 [0.89-7.00], NS

Side effects: Headache (20%), nausea (12%)

1. Glasier 2010 Lancet
2. Creinin 2006 Obstet Gynecol
3. Moreau 2012 Contraception
Alternatives to LNG EC & Ulipristal Acetate?

- Copper IUD - <0.1% failure
  - VERY effective as EC up to 5+ days
  - SPR can place beyond 5 days if not more than 5 days after ovulation
  - More effective than LNG EC

- Mifepristone (10, 25 or 50 mg)
  - More effective than LNG

- Yuzpe regimen
  - More side effects and less effective

Case #4

38 yo G2P1T1 obese woman desires birth control.

- Assess for other risk factors
- If none all methods safer than pregnancy
- If smoker or other RF – may avoid CHC
- DMPA – concern for insulin resistance and weight gain
- For EC – recommend UPA
Case #5

28 yo G4P1 had a subdermal etonogestrel (ETG) implant placed 7 months ago. She has had bleeding every day for the last 6 weeks.

New ETG Subdermal Implant

• Replaced prior in November, 2011
• Identical but with radiopaque rod
• Easier-to-use inserter
• Must complete FDA-approved training
Women who Discontinue due to Bleeding Irregularities

<table>
<thead>
<tr>
<th></th>
<th>CHC</th>
<th>DMPA</th>
<th>LNG-IUD</th>
<th>Cu-IUD</th>
<th>Implant</th>
</tr>
</thead>
<tbody>
<tr>
<td>3%</td>
<td>1</td>
<td>7-12%</td>
<td>2.5%</td>
<td>5%</td>
<td>10%</td>
</tr>
</tbody>
</table>

1/3 of women who discontinue Implant do so for bleeding

1. Datey 1995 Contraception
2. Cropsey 2010 J Womens Health
3. Coli 1999 Contraception
4. Suohmen 2004 Contraception
5. Rivera 1999 Contraception

ETG Implant & Bleeding

17 bleeding-spotting days/90d

Infrequent: 34%
Amenorrhea 22%
Prolonged bleeding 18%
Frequent bleeding 6%

Darney 2009 Fertil Steril
Mansour 2010 Contraception
Mansour 2008 Eur J Contr Repro Health Care
Implant & Bleeding: Counseling!!!

- Pre-insertion expectations
  - Bleeding usually light
  - “irregularly irregular”
  - Unpredictable for entire 3 years

- May improve dysmenorrhea
  - 77% with dysmenorrhea had resolution of sx

Implant: Bleeding Treatment

<table>
<thead>
<tr>
<th>Therapy</th>
<th>Evidence?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. COC x 21d/7d (3 mo) or Estrogen alone (0.5 mg estradiol x 21 d) (3 mo)</td>
<td>Minimal</td>
</tr>
<tr>
<td>2. Cyclic progestin (MPA 10bid) x 21d/7d (3mo)</td>
<td>Anecdotal</td>
</tr>
<tr>
<td>3. POP daily up to 3 mo</td>
<td>Anecdotal</td>
</tr>
<tr>
<td>4. NSAIDs, COX-2 inhibitors x 5-10d</td>
<td>Minimal</td>
</tr>
<tr>
<td>Tranexamic acid 500 bid x 5d</td>
<td>Anecdotal</td>
</tr>
</tbody>
</table>

CDC SPR: Rule out causes of bleeding.
NSAIDS 5-7 days
Estrogen or CHC 10-20 days

Adapted from Mansour et al 2010, and 2011 Contraception
Case #5

28 yo G4P1 had a subdermal etonogestrel (ETG) implant placed 7 months ago. She has had bleeding every day for the last 6 weeks.

Summary

• Unintended pregnancy remains a common problem in the US.
• Remember that in most circumstances unintended pregnancy poses greater risk than contraception.
• CDC and ACOG provide useful resources for caring for patients with complex medical conditions.
References

- Many easily accessible resources exist to help solve contraception quandaries. . . .

UCSF Family Planning Consult Service
(415) 443-6318

Thanks to Carolyn Sufrin, Mike Policar and Merrie Warden for sharing slides.