Contraceptive Update 2022:
The CDC MEC Contraception Guidelines and More

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Mimi Secor, DNP, FNP-BC, FAANP, FAAN

- FNP for 42 years specializing in Women’s Health
- National Speaker, Educator, Author, Fitness Advocate
- DNP-2015, Rocky Mountain University, Provo, Utah

- 2018: FELLOW in American Academy of Nursing
- 2013 Lifetime Achievement Award, (Mass Coalition of NPs)

- Coauthor of 2 GYN textbooks, both updated 2018
  - The GYN Exam, Advanced Health Assessment: Skills & Procedures

- #1 International Best-Selling Author of “Debut a New You: Transforming Your Life at Any Age”
- Passionate for helping NPs/PAs become Healthy and Fit
Disclosure

Mimi Secor, DNP, FNP-BC, FAANP, FAAN

Speaker:

- Abbott: Nutrition division
Objectives (100% Pharm) Contraception Update

- Describe trends and contraceptive challenges facing clinicians and patients. 
  15 minutes

- Explain the new CDC medical eligibility criteria for prescribing various contraceptive methods and medical conditions. 
  30 minutes

- Discuss new contraceptive research regarding efficacy, risks, benefits as this pertains to prescribing. 
  15 minutes
1955: Mr. and Mrs. Harrison and their 13 sons. Well into the 20th century, polygamy was still a common practice.
TIME

THE 50TH ANNIVERSARY OF

THE PILL

So small. So powerful. And so misunderstood

BY NANCY GIBBS

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6.3 Million U.S. pregnancies: Intended vs. Unintended

Intended Pregnancies
- Birth: 43%
- Miscarriage: 9%

Unintended Pregnancies
- Birth: 19%
- Abortion: 23%
- Miscarriage: 6%

Higher in poor

Henshaw, Family Planning Perspectives, 1998; 30:1
Family Planning Challenges

- High unplanned pregnancy rate continues
- Few easy, effective methods
- Low pt compliance & lack of knowledge
- Societal conflict about family planning
- Clinical challenge: little time, tight budgets
- Risk taking behaviors!
If you’ve been swept off your feet
You’ve got 3 days to get them back on
the ground

Emergency contraception
Use within 3 days of opening

Emergency contraception isn’t just for the morning after – it can be started up to
3 days (72 hours) after unprotected sex. Emergency contraception is free and
confidential – ask your doctor or family planning advisor for further information.
Emergency Contraception
Lack of Public Awareness Still...

- Progestin only - 0.75 mg (Plan B)
  - 2 pills po STAT: or 1 pill 12 hrs apart
    Taken within 72 hours of unprotected sex
- 95% effective if taken within 24 hours
  - 89% effective if taken within 72 hours
- SAFE, few side effects
- Over-The-Counter in most states > 17 yrs
- Less effective if BMI > 26 !!!!! (165 Lbs = 75 Kg)

Emergency Contraception: Progestin Only- Obesity, Wt > #176

- Obesity impedes efficacy of EC
- European labelling contains this warning
- Lower serum levels than normal wt
- Doubling dose raised levels to normal wt levels
- Important to educate patients

AND

- Offer other EC options: (within 5 days)
  IUC (Paragard) and Oral Ulipristal (ella)
Emergency Contraception: Ulipristal (ella)

- 30 mg orally, 1 dose
- Progesterone agonist/antagonist (SPRM)
- Up to 5 days after unprotected intercourse (UPI)
- Delays ovulation, NOT an abortifacient
- Preferred for Overweight/OBESE !!!
- Prescription required
- Avoid if already pregnant
- Side effects = placebo
- Headache 18%, Nausea 12%, Abd pain 15%
- If BMI > 35, less effective (Glasier et al, 2011)
Resuming Contraception After “ella”

- **Wait 5 days to resume CHCs**:  
  - Competitive binding to progestin receptors  
  - Advice backup x 1 week after restarting CHC

- **Can be started immediately**:  
  Implant, DMPA, LNG IUC (Paragard)

*CHC= combination hormonal contraceptives
Contraceptive Options

- **Combination Hormonal Contraceptives (CHC)**
  - Orals
  - Transdermal Ethinyl Estradiol (EE) Patch, (Ortho Evra)
  - Vaginal EE Ring, (NuvaRing)

- **Progestin Only Contraceptives (POC)**
  - Etonogestrel Implant, (Nexplanon) 3 year rod (upper arm)
  - Depot Medroxyprogesterone, DMPA “Depo Provera”
    - IM 150 mg, SC 104 mg (self administered potentially)
  - LNG-IUD, Levonorgestrel (Mirena, Skyla, Kyleena x 5 yrs)
  - Progestin only “Mini-pill” (POPs): Norgestrel (Ovrette), Norethindrone (Micronor, Nor-QD, Errin, Camilla)

- **Other:**
  - Sterilization, male/female (Essure)
  - CU-IUD (Paragard); Other: Condoms, Caps, Natural (NFP)
Typical Effectiveness of Contraception

Long acting reversible contraceptives (LARCs)

Tier 1
- Implants
- IUD
- Female sterilization
- Vasectomy

Tier 2
- Injectables
- LAM
- Pills
- Patch
- Vaginal ring

Tier 3
- Male condoms
- Diaphragm
- Female condoms
- Fertility awareness methods

Tier 4
- Withdrawal
- Spermicides

Adapted from: WHO. Family Planning: A Global Handbook

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U.S. Medical Eligibility Criteria for Contraceptive Use, 2010

Adapted from the World Health Organization Medical Eligibility Criteria for Contraceptive Use, 4th edition
### 2016 CDC US Medical Eligibility Criteria: Categories

<table>
<thead>
<tr>
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<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>No restriction for the use of the contraceptive method for a woman with that medical condition</td>
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<td>2</td>
<td>Advantages of using the method generally outweigh the theoretical or proven risks</td>
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<tr>
<td>3</td>
<td>Theoretical or proven risks of the method usually outweigh the advantages – or that there are no other methods that are available or acceptable to the women with that medical condition</td>
</tr>
<tr>
<td>4</td>
<td>Unacceptable health risk if the contraceptive method is used by a woman with that medical condition</td>
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[http://www.cdc.gov](http://www.cdc.gov)
Handheld App:

“CDC Contraception 2016”
MEC
SPR

Medical Eligibility Criteria for Contraceptive Use
CDC MEC SPR 2016: NEW App
Contraception Guidelines

US MEC = Medical Eligibility Criteria
- By condition
- By method

US SPR = Selected Practice Recommendations
- Initiation
- Exams and tests
- Routine f/u
- Missed doses
- Bleeding abnormalities
Antimicrobial therapy

d. Rifampin or rifabutin therapy

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<tr>
<th>Method</th>
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<td>CHCs</td>
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**Additional Methods**

**Emergency Contraception**
f. Minor surgery without immobilization

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<td>CHCs</td>
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d. Other vascular disease or diabetes of >20 years' duration

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### Migraine

#### With aura

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Ischemic heart disease, current or history

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disease (e.g. older age, smoking, diabetes, hypertension, low HDL, high LDL, or high triglycerides)

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### Obesity

a. BMI ≥30 kg/m²

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CDC MEC Update: 2016
HIV and Contraceptives

Revised Recommendations for the Use of Hormonal Contraception Among Women at High Risk for HIV Infection or HIV+

ALL OK BELOW:

- Combination Hormonal Contraceptives (CHC): Cat 1
- Progestin Only Pills (POPs): Cat 1
- Progestin Only Injectables (DMPA): Cat 1*
  *BUT-Unclear risk re: acquisition of HIV?
- IUC: No increase in shedding (both types) Cat 2

CDC MEC 2016
Relax!

Why yes, I'm a bit stressed.
Why do you ask?
Intrauterine Systems: IUC
Effectiveness = Sterilization

Copper T380 IUS (Paragard)
- Approved for 10 years
- Off-label for 12 years
- Easier to insert if nulliparous

Levonorgestrel IUC
- **Mirena x 6 years (Moms)**
- **Kyleena**: smaller x 6 yr (Kids)
  - Reduced menstrual bleeding
  - May reduce fibroids

Xu. Contraception Sep 2010: 82; 301-309, n -20
IUC: Smaller (Kyleena)
LNG containing, Similar to (Mirena)

- Levonorgestrel-releasing
- Mirena x 6 years (Moms)
- Kyleena x 6 years (Kids)
- Good for Nulliparous

- www.kyleena.us.com
- Tel 1-888-842-2937
- Bayer HealthCare
  Manufactured in Finland
2015 IUC: Liletta

- Effective for 6 years!
- Levonorgestrel-releasing IUC
- By Actavis/Medicines 360
- Offered at reduced cost to public health clinics
- Enrolled in the 340B drug pricing program
Dispelling Common Myths About IUCs

In fact, IUCs:

- **Can** be used by nulliparous women
- **Can** be used if had an **ectopic** pregnancy
- **Do NOT** need to be removed for PID
- **Do NOT** have to be removed if:
  - Actinomyces noted on a Pap test

Screening: Poor Candidates for Intrauterine Contraception

- Known or suspected pregnancy
- Puerperal sepsis
- Immediate post septic abortion
- Unexplained vaginal bleeding
- Cervical or endometrial cancer

WHO. 2009.
Screening: Poor Candidates for Intrauterine Contraception

- Uterine fibroids that interfere with placement
- Uterine distortion (congenital or acquired)
- Current PID
- Current purulent cervicitis
- Current chlamydia or gonorrhea
- Known pelvic tuberculosis

WHO. 2009.
IUC: MEC Conditions

Age
- Menarche to <20: 2
- ≥ 20: 1

Nulliparous women: 2

Postpartum (PP): 2
- <10 minutes PP, CU 1
- **Puerperal sepsis:** 4

Postabortion
- First trimester: 1
- Second trimester: 2
IUC: Cardiovascular Disease

**Hypertension:**

1

*except*

- S $\geq 160$/D $\geq 100$ & vascular disease:
  
  LNG = 2

**DVT/PE**

- **Cu:**
  
  1

- **LNG:**
  
  2

Acute DVT/PE: 2

Known thrombosis 2
IUC Issues: Infection

- PID and IUC use: confined to early weeks
  - Low risk even then

- Large meta-analysis 22,908 insertions
  - Grimes et al. Cochrane Review 2004;3

- Infection in first 20 days 9.7/1,000 woman years
  - From vaginal contamination despite aseptic technique
  - Infection rate after 20 days 1.4/1,000 woman yrs of use (Very LOW risk)
PID with IUC:

- May leave IUC in place
- Treat infection
- Close follow-up, 1-3 days
- If not improved, consider removing IUC
- Counseling & Condoms
- If history of PID, increased risk for STIs

CDC, WHO, ACOG 2009-2010
Combined Hormonal Contraceptives: CHC

Pills: medium  Patch- high  Ring- low
Serum EE Levels of Ring, OC & Patch
Ethynyl Estradiol (EE)

- Vaginal Ring: **Lowest EE** serum levels
- Orals (COC): Mid-range serum levels
- Transdermal Patch: **Highest EE** serum levels

Hormonal Contraceptives and Coexisting Medical Conditions
CHC- Category 4
Contraindications

- Smokers $\geq 35$
- Breast cancer
- Postpartum $< 21$ days
- Acute hepatitis/ flare
- Severe cirrhosis
- Liver tumors
- Migraine with aura !!!
- Diabetes $> 20$ years

- Major surgery
- CVD
  - Ischemic, stroke,
  - Multiple risk factors
  - HTN $\geq 160/\geq 100$
- DVT/VTE
  - On therapy
  - Acute
  - History of

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CHC- Category 3
Relative Contraindications

- Drug interactions
- Rifampicin
- Certain anti-seizure meds ie Lamictil incr. seizures
- ARV meds (t)
  - Ritonavir-boosted PI
- BP 140-159/90-9
- CVD: multiple risk factors
- Diabetes <20 years: NO vascular complications
- Migraine without aura
- Hepatitis acute
- Bariatric surgery (bypass)
- Postpartum 21-42 days
CHC: Age

Menarche to <40 years = C 1
  40 years old 2

Smoking
  • <35 smoker: 2
  • >35 smoker <15/day: 3
  • >35 and smoke >15/day: 4 !!!
Post-partum: CDC MEC 2013 Update

- < 21 days postpartum: No CHCs- Cat 4!
- 21-42 days Postpartum PLUS risk for VTE, Cat 3

- 21-42 days, NO risk factors, Cat 2
- > 42 days, No restrictions, Cat 1
- > 1 month postpartum, breast feeding, Cat 2

- < 1 month postpartum, breast feeding, Cat 3
- Post abortion, Cat 1
CHC, Smokers, Obesity and VTE Risk:

- **Smokers** risk of CVD Death & using COCs
  - 3.3 per 100,000 women if < 35 yr
  - 29.4 per 100,000 women if > 35 yr !!!!

- If BMI $\geq$ 30 and CHC user
  - Lower risk of death than for smokers < 35 yr
  - 2.4/100,000 vs 3.3/100,000 smokers

- NO data on BMI $> 40$

CHC: Obesity

BMI > 30
- Category 2
- Possible increased risk of VTE, MI, stroke
- NOT more likely to gain
Obesity & Comb Hormonal Contraceptives (CHC): Failure Risk LOW !!!

- Efficacy of pill, patch, or vaginal ring NOT impaired by high BMI
- n 1523
- 128 Pregnancies
  - Higher parity
  - History of unintended pregnancies

Combined Oral Contraceptives

- Contain estrogen & progestin
- Most newer formulations contain 20 – 35 mcg of ethinyl estradiol + 1 of 8 available progestins

Contraceptive Approaches

Comb Oral Contraceptives (COCs)

- Quick start: In-office or same day
- First day start: 1ˢᵗ day of menses
- Extended regimens
- Continuous
- Shorter “placebo” interval (3-5 days)
- Low-dose placebo interval
COC: Initial Pill Selection

**Estrogen**: (cycle control primarily)
- Heavy periods: Higher estrogen 30-35 mcg
- “Normal” menses: Lower estrogen 20-25 mcg

**Progestin**: (contraceptive effects primarily)
- Levonorgestrel: Very safe, less BTB*
- Norethindrone: Safe, more BTB
- **Drospirenone**: AVOID if unknown family hx
  Or family hx of clots, or coagulopathies

MPR= Prescribers Reference, *BTB= breakthrough bleeding
Which Ocs are Lowest Risk: re PE, Ischemic Stroke, MI? May 2016

- French Cohort Study of 5 Million Women!

- **Lowest risk**: 20 mcg EE** plus Levonorgestrel
  
  17.3/100,000 for PE (crude event rate)
  
  LEVONORGESTREL is safest Progestin!

- **Highest risk**: 30 mcg EE** plus Desogestrel
  
  52.1/100,000 for PE (crude event rate)
  
  AVOID!!!!

**EE = Ethinyl estradiol**

Weill A et al. BMJ 2016 May 10;353:i2002

http://dx.doi.org/10.1136/bmj.i2002
COC: EE/LNG, (Quartette) by Teva: NEW 2013
Goal: to Minimize BTB

- 91-day oral regimen
- Triphasic: with Ethinyl Estradiol/EE
- Estrogen, EE increases at 3 distinct points over the first 84 days
- Progestin, “Levonorgestrel” remains consistent
- 7 days of ethinyl estradiol 10mcg
Estradiol Valerate, Dienogest (Natazia)  
2012 FDA Approved for Menorrhagia

- 2 dark yellow = 3 mg Estradiol Valerate
- 5 red = 2 mg EV and 2 mg Dienogest
- 17 light yellow = 2 mg EV, 3 mg Dienogest
- 2 dark red = 1 mg EV
- 2 white = inert pills
OCs and Breakthrough Bleeding (BTB) Early vs Later Use BTB

- BTB declines over 1\textsuperscript{st} year, TTT
- **Rule out infection**: Esp. chlamydia!!!
- Take same time each day: < 4 hours
- NSAIDS for 5 days !!!
- Change progestin: levonorgestrel, norgestimate
- Increase estrogen
- Generic to Brand
- **Later use BTB**: 4 to 7 placebo pills

*Am J Ob Gyn, 2006;195:935*
Venous Thrombosis: Risk and COCs*
2 - 3 X incr. risk: 8-10/10,000 women/years

RISKS !!!
- First 3 months of CHC* use, RED FLAGS!
- Age, especially smokers
- BMI higher: no data > 40
- ESTROGEN, higher dose
  - 20 mcg = 20% lower VT risk versus 30 mcg
  - 50 mcg = 50% higher VT risk vs. 30 mcg
  - 70% difference!
- PROGESTIN type, risk may differ
  *Combination hormonal contraceptives = CHC

FDA Warning 2011: 
Drospirenone & Risk of Non-fatal VTE

- 2 fold increased risk, compared to Levonorgestrel

- 30.8/100,000 woman years for Drospirenone

- 12.8/100,000 woman years for Levonorgestrel

Research: Drospirenone & Risk of Non-fatal VTE
2 Fold Increased Risk, Compared to Levonorgestrel


- Parkin L, Sharples K, Hernandez RK, Jick SS. Risk of venous thromboembolism in users of oral contraceptives containing drospirenone or levonorgestrel: nested case-control study based on UK General Practice Research Database. BMJ 2011; 342:d2139.

a. History of DVT/PE, not receiving anticoagulant therapy

i. Higher risk for recurrent DVT/PE (one or more risk factors)
   - History of estrogen-associated DVT/PE
   - Pregnancy-associated DVT/PE
     - Idiopathic DVT/PE
   - Known thrombophilia, including antiphospholipid syndrome
   - Active cancer (metastatic, on therapy, or within 6 months after clinical remission), excluding non-melanoma skin cancer
   - History of recurrent DVT/PE
Combination Hormone Contraceptives, CHC

NEW Medical Criteria: OK=2, NO=3

- Hepatitis acute viral = 3, 4
- Chronic ................................................. 1
- Liver adenoma, or hepatoma 4
- Sickle cell 2
- Anticonvulsants & Rifampin 3
  - Reduced efficacy of OC/CHC

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Combination Hormonal Contraceptives/ CHC
NEW 2010 Medical Criteria

- Hypertension:
  - Controlled 3
  - BP 140-159/90-99 3
  - BP > 160/100 4

- HTN in Pregnancy 2

- Vascular disease 4
CHC and NEW Medical Criteria

- History of DVT/PE 4
- Acute DVT/PE 4

- Family History of DVT/PE
  1\textsuperscript{st} degree relative 2

- Thrombogenic mutation 4 !!!
  Factor V Leiden, prothrombin, protein S
  2-20 x Fold increased risk !!!
CHC: History of DVT, PE

NOT on anticoagulant:

Higher risk of recurrence: 4
- Estrogen associated
- Pregnancy associated
- Idiopathic
- Thrombophilia
- Cancer
- History of recurrence

Lower risk for recurrence: 3
CVD: DVT & PE

- Family History: 1st degree  2

- Major surgery:
  Prolonged immobilization:  4
  (Not defined!)

  No prolonged immobilization:  2

- Minor surgery: no immobilization  1
NEW: Headaches and CHC/ Combination Hormonal Contraceptives

- Non-migraine  
  1, 2

- Migraines
  Without Aura
  - Age < 35  
    2, 3
  - Age > 35  
    3, 4

With Aura, ANY age  
4, 4

WHO, CDC, ARHP, Planned Parenthood 
International Headache Society 2009-2010

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CHCs: Drug Interactions

Antiretroviral therapy
- NRTIs: 1
- NNRTIs: 2
- Ritonavir-boosted protease inhibitors: 3

Anticonvulsant therapy
- COC: reduced efficacy!!!
- KEY: Use ≥30μg EE dose
- Lamotrigine (Lamictal)
  - Possible incr. seizures !!

Antimicrobial therapy
- Broad-spectrum antibiotics: 1
- Antifungals: 1
- Antiparasitics: 1
- Rifampicin: 3
  - Reduces OC efficacy

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Low Libido!

- Lower estrogen
- Change method
Breast Cancer Family History and OC Negligible Increased Risk!

Systematic review 1966 – 2008 (USPSTF) 42 years

- 10 studies, 1 pooled analysis of 54 studies
- 4 studies suggest some women may be at increased risk esp. if took OCs prior to 1975 (HIGHER DOSE, MANY OFF MARKET)

Conclusion:
- OCs did **NOT** significantly influence risk
NEW STUDY 2017: CHCs* and Slight Incr. Breast Cancer Risk

- Large Danish study of 1.8 million women

FINDINGS:

- Absolute risk very low!!!
- 13 cases /100,000 woman-years (#68 vs 55)
- 1 extra case per 7690 women using hormonal contraception for 1 year
- No incr risk with duration of use (except for Gestodene – unavailable in US)

REASURING


* CHC = Combo Horm Contraceptives
Ovarian Cancer and OCs

Protection with 15 years of Use!

Massive reanalysis study; 45 studies, \( n = 23,257 \) women

- **50% lower risk if used for 15 years**: even non-continuous!!!
- Longer duration associated w/ lower risk
- Protection up to 30 yrs after stopping OC !!!!
- Protects low AND high risk women

- 100,000 deaths prevented worldwide!
- Could prevent 30,000 cases annually in US


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2012: Update- Package Insert
Transdermal Patch: Package Information (PI)

- “You will be exposed to about 60% more estrogen than an OCP with 35 mcg of estrogen.” = 56 mcg

- NEW per FDA (May 2012) “the benefits outweigh the risks”, but consumers must be educated about the risks
2010: NO Incr. Risk of Nonfatal VTE in Users of Contraceptive Transdermal Patch: n 297,262

- Compared to users of OCs containing NGM/EE 35 mcg
  Observational case-control study
- 56 cases of VTE, 212 matched controls: New users only!
  PharMetrics US-based, longitudinal database on 55 million lives back to 1995
  Medical claims & diagnoses from managed care
- OR 1.1 (95% CI 0.6-2.1)
- NO increased risk compared to NGM /EE containing Ocs

Dore et al. Contraception 2010 May; 81(5):408-413
  VTE OR 2.0 extension study, n 38, c 148 (297,262 women)
  When new data pooled w previous data no increased risk
Jick, Kaye, Li and Jick. Contraception 2007;76: 4-7. (BU SOM Boston)
Same authors. Contraception 2006;73:223-228. 17 month study

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Contraceptive Vaginal Ring:

- Very low steady dose
  - 120 μg/day etonogestrel
  - 15 μg/day ethinyl estradiol
- Flexible (54 mm)
- Easy to insert
- One ring per cycle:
  - 3 weeks in, 1 week ring-free
  - Or change monthly
- Less BTB than with OC
  - With “Quick Start”

Westhoff et al. Ob Gyn 2005 Jul;106:89-96
NEW Annovera: FDA Approved 1-Year, Vaginal Ring

- Developed by the Population Council, Inc.
- Ethinyl estradiol (EE), Segesterone acetate (SA)
- 3 weeks in, 1 week out
- Refrigeration not required
- Same CHC contraindications/warnings
- FDA requiring post-marketing studies to further study safety, effects of tampons, etc.

FDA.gov
NEW FDA Approved:
Weekly Transdermal Patch (Twirla)

- Estrogen and Progestin 120 mcg (Levonorgestrel)
- Same CHC contraindications/warnings
- FDA requiring post-marketing studies to further study safety, side effects, etc.

FDA.gov
Progestin-Only Contraceptives: VERY SAFE, 1-2

Pills (POP), Injections, Implants
Progestin Only:

**Age**
- POP .......................... 1
- DMPA <18, >45  2

**Breastfeeding**
- < 1 month ............... 2
- ≥ 1 month  1

**Postpartum** ............. 1

**Postabortion** ............ 1

**Past ectopic**
- POP .......................... 2
Progestin Only: Misc Conditions

Smoking: .......................... 1

Obesity: .............................. 1
<18 .............................. 2

Bariatric:
Malabsorptive procedures
POPs (Mini Pills) only  ...... 3
Sz meds, Rifampin, ARV ...... 3
Progestin Only: Hypertension

Adequately controlled
- POP, Implant ……1
- DMPA…………………2

Elevated BP
S 140-159/D 90-99
- POP, Implant ……1
- DMPA…………………2

S $\geq$ 160/D $\geq$ 100
- POP/ I…………………… 2
- DMPA…………………… 3

HTN in pregnancy………1
Progestin Only: SAFE
NO Evidence of Incr. DVT/ PE Risk

DVT/ PE
- History or acute .................. 2
- On or off anticoagulant 2
- Major surgery, immobilized... 2

- Thrombotic mutations ........... 2
- Family History .................. 1
- Superficial thrombosis ........ 1
Progestin Only: Headache w Aura!

**Rheumatic**

- SLE
- Positive or unknown APL antibodies: 3
- Severe thrombocytopenia: 3
- Immunosuppressed: 2

**Neurologic NEW**

- Headaches, non-migraine: 1
- Migraines
  - No aura: 1
  - Start OC: 1
- Aura: Start: 1
- Aura: Continue: 1

- Epilepsy: 1
- Depressive disorders: 1

Liver tumors/Severe cirrhosis: 3
Breast cancer current: 4

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Contraceptive Implant: “Nexplanon” with NEW Inserter

- Single rod, “Radiopaque”: Mid- upper arm, above “groove”
- Progestin only
  - Etonogestrel
- 3 year contraceptive
- High efficacy > 99%
- No weight restriction
- Inhibits ovulation
- Unpredictable bleeding
- Special training required

Mansour et al. Contraception 2010 sep;82:243-49

Adapted from www.contraceptiononline.org

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Advantages

DMPA: Medroxyprogesterone Acetate

- Effective, easy, convenient
- Shorter menses, no menses
- No backup needed 1st month
- No BMI weight restriction
- May be used in smokers esp. >35 yrs
- OK if ESTROGEN contraindicated

Injection schedule: 4 week grace period
DMPA, HIV, or at High Risk for HIV and MEC: CDC Update 2012

- Safe: Category 1,2 (encourage condoms too)
  - Combined oral contraceptives
  - Progestin-only pills
  - Depot DMPA
  - Implants

- **Women at high risk for HIV !!!!**
  - Caution re: use of Progestin-only injectables
  - Inconclusive evidence re: HIV acquisition risk

NEXT SLIDE, CONTINUED

MMWR, June 22, 2012 / 61(24);449-452
2015 Study: DMPA and HIV Risk

- **Meta-analysis** adds to evidence suggesting that depot medroxyprogesterone acetate (DMPA, marketed as Depo-Provera)

- **Associated with incr. risk for HIV acquisition!**

- **12 observational studies** that evaluated the association between hormonal contraception and HIV acquisition in women in sub-Saharan Africa.

DMPA – Category 3, 4

Cat 3
- CVD
  - Hypertension ≥160/≥100
  - Stroke
  - Ischemic CVD
  - Multiple risk factors
- Liver tumors, cirrhosis

Cat 4
- Breast cancer-current
- Unexplained vaginal bleeding
Effects of Long Term DMPA on BMD

- **DMPA > 2 yrs had a significant adverse effect on BMD**
  - 2.8% loss after 1 yr, **5.8% loss after 2 years**


**BUT GOOD NEWS!**

- Large, cross sectional study of 3500 ethnically diverse pts
  - Used DMPA >10 years

- **Reversibility of loss complete in 2 to 3 years**

2013: DMPA and Bone Health
No Increased Fracture Risk

- Large retrospective cohort study
- n 312,395

- Fracture risk did NOT increase after initiation of DMPA

- “Black Box warning should be removed by the FDA”

BMD, Identifying “at Risk Patients”

- **Vaginal pH check routinely**
  Normal pH of 4.0 is yellow = normal estrogen levels!

- **Atrophic Vaginitis**
  - High pH, pallor, scant discharge, WBCs, small cells

- **Add back Estrogen** - may be considered
  - Ethinyl Estradiol 20 mcg oral daily
  - Vaginal Ring: may reduce BTB and bone loss!

Dempsey et al, Contraception 82 (Sept 2010) 25--255
Progestin Only: No Evidence of Incre. DVT/PE Risk

DVT/PE

- History or acute: 2
- On or off anticoagulant: 2
- Major surgery, immobilized: 2
- Thrombotic mutations: 2
- Family History: 1
- Superficial thrombosis: 1
Progestin Only: Cardiovascular Disease

Ischemic heart disease/Stroke
- Initiation:
  - POP: 2
  - DMPA: 3
- Continuation:
  - POP: 3

Valvular heart disease: 1

Peripartum cardiomyopathy
- Mild: 1
- Moderate/severe: 2

Hyperlipidemia: 3
Progestin Only (PO):

**Rheumatic**
- SLE
  - Positive or unknown APL antibodies: 3
  - Severe thrombocytopenia: 3
  - Immunosuppressed: 2

**Neurologic NEW**
- Headaches, non-migraine: 1
- Migraines
  - No aura: 1
  - Start OC: 1
- Aura:
  - Start: 1
  - Continue: 1

**RA**
- POP, I = 1
- DMPA = 2

**Depressive disorders:** 1

Epilepsy: 1
PO: Reproductive Tract Conditions

**Category 1:**
- Endometriosis
- Benign ovarian tumors
- Severe dysmenorrhea
- Gestational trophoblastic disease
- Benign breast disease
- FHx breast cancer
- Endometrial hyperplasia or cancer
- Ovarian cancer
- Uterine fibroids
- STIs, PID
- HIV/AIDS

**Category 2:**
- Irregular, heavy, or prolonged vaginal bleeding
- CIN/Cervical cancer (DMPA)
- Undiagnosed breast mass

**Category 3:**
- Past breast cancer (>5 years)
- Unexplained vaginal bleeding

**Category 4:**
- Current breast cancer
**Resources**

- **NEW:** Carcio & Secor. 2018. Advanced Health Assessment of Women (4\textsuperscript{nd} ed). Springer publishing, NY, [www.springerpub.com](http://www.springerpub.com) [www.mimisecor.com](http://www.mimisecor.com)

- ARHP.org
  
  “Contraception” Journal with membership
  Many other resources
  Contraceptive choices, online tool kit for patients

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References


- www.CDC.gov
  MEC Wheel, posters, MEC summary charts, PDF of full guidelines
Resources

- **U.S. Selected Practice Recommendations (US SPR) for Contraceptive Use, 2016**
  
  http://www.cdc.gov/reproductivehealth/UnintendedPregnancy/USSPR.htm

- **Journal Watch Women’s Health**
  
  www.jwatch.org
Objectives (100% Pharm)  
Contraception Update

- Describe trends and contraceptive challenges facing clinicians and patients.  
  15 minutes

- Explain the new CDC medical eligibility criteria for prescribing various contraceptive methods and medical conditions.  
  30 minutes

- Discuss new contraceptive research regarding efficacy, risks, benefits as this pertains to prescribing. 
  15 minutes
Questions
Thank you and good luck!

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