Acknowledgements

Slide Development

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Objectives

At the completion of this activity, the participant will be able to:

• Assess pregnancy status and when it is appropriate to start a contraceptive product
• Identify contraindications to the use of contraceptive products according to CDC Medical Eligibility Criteria (MEC) guidelines
• Select an appropriate contraceptive product and provide patient counseling and education
Why Pharmacists Should Prescribe Contraceptives

- 90% of Americans live within 5 miles
- There is a public health need
- Pharmacists are medication experts

Finer LB New England Journal of Medicine, 2016, 374(9):843–852
Where can pharmacists prescribe contraceptives now?
Presentation Overview

- National Policy Overview
- Clinical Details
- Available Resources
Let’s Get Clinical!

Menstrual Cycle/ Family Planning Review

- Clinical Guidelines
- Example Treatment Algorithm
- Counseling Points
- Side Effect Management
- Practice Cases
Review of the Menstrual Cycle
Review of Family Planning Methods

**MOST EFFECTIVE**

- Implant
  - Once in place, little or nothing to do or remember.
  - 0.05% pregnancy rate

- Intrauterine Device (IUD)
  - Take a pill each day.
  - 0.2% LNG
  - 0.8% Copper T

**PERMANENT STERILIZATION**

- Female (Abdominal, Laparoscopic, and Hysteroscopic)
  - After procedure, little or nothing to do or remember.
  - Use another method for first 3 months.
  - 0.5% pregnancy rate

- Male (Vasectomy)
  - Use correctly every time you have sex.
  - 0.15% pregnancy rate

**REVERSIBLE**

- Injectable
  - 6% pregnancy rate

- Pill
  - 9% pregnancy rate

- Patch
  - 9% pregnancy rate

- Ring
  - 9% pregnancy rate

- Diaphragm
  - 12% pregnancy rate

**LEAST EFFECTIVE**

- Male Condom
  - 18% pregnancy rate

- Female Condom
  - 21% pregnancy rate

- Withdrawal
  - 22% pregnancy rate

- Sponge
  - 12% Nulliparous Women
  - 24% Parous Women

**Condoms should always be used to reduce the risk of sexually transmitted infections.**

**Fertility Awareness-Based Methods**

- Abstain or use condoms on fertile days.

- 24% pregnancy rate

**Spermicide**

- 28% pregnancy rate
Let’s Get Clinical!

- Menstrual Cycle/ Family Planning Review
- Clinical Guidelines
- Example Treatment Algorithm
- Counseling Points
- Side Effect Management
- Practice Cases
CDC Medical Eligibility Criteria (MEC) for Contraceptive Use. 2016

Provides guidance on who can use various methods of contraception.

https://www.cdc.gov/mmwr/volumes/65/rr/pdfs/rr6503.pdf
CDC Select Practice Recommendations (SPR) for Contraceptive Use, 2016

Companion to document to the MEC

Provides guidance on how contraceptive methods can be used

http://www.cdc.gov/mmwr/volumes/65/rr/pdfs/rr6504.pdf
Example Treatment Algorithm

Health/ History Screening
- MEC Category 3 or 4?

Yes: Refer

No: Pregnancy Screening
- Possibly Pregnant?

Yes: Refer

No: Medication Screening
- Contraindicated Medications?

Yes: Refer

No: Blood Pressure Screening
- BP > 140/90?

Yes: Refer

No: Select Contraceptive Method!
Example Treatment Algorithm

Health/ History Screening
- MEC Category 3 or 4?

Yes: Refer

No: Pregnancy Screening
- Possibly Pregnant?

Yes: Refer

No: Medication Screening
- Contraindicated Medications?

Yes: Refer

No: Blood Pressure Screening
- BP > 140/90?

Yes: Refer

No: Select Contraceptive Method!
Obtain Background Information

- Have you ever experienced a bad reaction to using BC?
- What was the first day of your last menstrual cycle?
- What have you used in the past (if applicable)?
- Do you think you may be pregnant?
- Do you smoke?
Health & Medical History

• Have you given birth in the past 6 weeks?
• Are you currently breastfeeding?
• What chronic medical conditions are you currently being treated for?
• Do you have a history of a heart attack, stroke or do you have heart disease?
• Have you ever had a blood clot?
• Have you ever had, or do you have breast cancer?
• What contraceptive method do you prefer?
Contraindications to Contraceptive Use

- Focus on Categories 3 & 4
  - 3 = Theoretical or proven risks usually outweigh the advantages
    - Ex: Smoking
  - 4 = Unacceptable health risk (method not to be used)
    - Ex: IUD’s while pregnant

<table>
<thead>
<tr>
<th>Condition</th>
<th>Sub-Condition</th>
<th>Co-IUD</th>
<th>LNG-IUD</th>
<th>Implant</th>
<th>DMPA</th>
<th>POP</th>
<th>CHC</th>
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<td>c) Other factors relating to STDs</td>
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<td>c) Immunosuppressive therapy</td>
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<td>d) None of the above</td>
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<td>Tuberculosis1 (see also Drug Interactions)</td>
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<td>a) Mottic, tuberculous</td>
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<td>Unexplained vaginal bleeding</td>
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<td>4 2*</td>
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<td>a) Uterine fibroids</td>
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<td>b) Valvar heart disease</td>
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<td>Vaginal bleeding pattern</td>
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<td>2 4</td>
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<td>a) Irregular pattern without heavy bleeding</td>
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<td>2</td>
<td>2 2</td>
<td>2 2</td>
<td>2 4</td>
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<tr>
<td>b) Heavy or prolonged bleeding</td>
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<td>Viral hepatitis</td>
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<tr>
<td>a) Acute or flu</td>
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<td>b) Carrier/Chronic</td>
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**Drug Interactions**

- Fosamprenavir (FPV)
- All others are 1 or 2 for all methods,
- ART: Certain antiretrovirals (phenytoin, carbamazepine, barbiturates, primidone, theophylline, oxcarbazepine)
- Lamotrigine
- All others are 1 or 2 for all methods,
- ART: Certain antiretrovirals (phenytoin, carbamazepine, barbiturates, primidone, theophylline, oxcarbazepine)
- Lamotrigine
- All others are 1 or 2 for all methods,
- ART: Certain antiretrovirals (phenytoin, carbamazepine, barbiturates, primidone, theophylline, oxcarbazepine)
- Lamotrigine
- All others are 1 or 2 for all methods,
Which of the following is/are contraindications to combined oral contraceptive products (COC)?

A. A nursing mom with a 2 month old
B. A 36 year old woman who smokes 1 pack per day
C. A 24 year old woman with depression
D. All of the above
Example Treatment Algorithm

Health/ History Screening
- MEC Category 3 or 4?
  - Yes: Refer
  - No: Pregnancy Screening
    - Possibly Pregnant?
      - Yes: Refer
      - No: Medication Screening
        - Contraindicated Medications?
          - Yes: Refer
          - No: Blood Pressure Screening
            - BP > 140/90?
              - Yes: Refer
              - No: Select Contraceptive Method!
How to Be Reasonably Certain That a Woman is Not Pregnant

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

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

A. A 28 year old female who is 5 days after the start of normal menses and last had intercourse 10 days ago

B. A 32 year old female who is on day 12 of her cycle and had unprotected intercourse 2 days ago

C. A 26 year old female who is 4 months postpartum and is occasionally breastfeeding

D. A 22 year old female who is 6 weeks postpartum
Example Treatment Algorithm

Health/ History Screening
- MEC Category 3 or 4?
  - Yes: Refer
  - No:
    - Pregnancy Screening
      - Possibly Pregnant?
        - Yes: Refer
        - No:
          - Medication Screening
            - Contraindicated Medications?
              - Yes: Refer
              - No:
                - Blood Pressure Screening
                  - BP > 140/90?
                    - Yes: Refer
                    - No:
                      - Select Contraceptive Method!
## Medication Screening

### Drug Interactions

<table>
<thead>
<tr>
<th>Antiretroviral therapy</th>
<th>Fosamprenavir (FPV)</th>
<th>1/2*</th>
<th>1*</th>
<th>1/2*</th>
<th>1*</th>
<th>2*</th>
<th>2*</th>
<th>2*</th>
<th>3*</th>
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</thead>
<tbody>
<tr>
<td>All other ARV's are 1 or 2 for all methods.</td>
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</table>

| Anticonvulsant therapy | | 1 | 1 | 2* | 1* | 3* | 3* |
|------------------------||   |   |    |    |    |    |
| a) Certain anticonvulsants (phenytoin, carbamazepine, barbiturates, primidone, topiramate, oxcarbazepine) | | 1 | 1 | 2* | 1* | 3* | 3* |
| b) Lamotrigine | | 1 | 1 | 1 | 1 | 1 | 3* |

| Antimicrobial therapy | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|-----------------------||   |   |   |   |   |   |   |
| a) Broad spectrum antibiotics | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| b) Antifungals | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| c) Antiparasitics | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| d) Rifampin or rifabutin therapy | | 1 | 1 | 2* | 1* | 3* | 3* |

| SSRIs | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

| St. John's wort | | 1 | 1 | 2 | 1 | 2 | 2 | 2 |
Example Treatment Algorithm

Health/ History Screening
- MEC Category 3 or 4?

Yes: Refer

No: Pregnancy Screening
- Possibly Pregnant?

Yes: Refer

No: Medication Screening
- Contraindicated Medications?

Yes: Refer

No: Blood Pressure Screening
- BP>140/90?

Yes: Refer

No: Select Contraceptive Method!
Blood Pressure Screening

- Stroke risk and birth control
- 140/90
Considerations when Choosing a Method

- Background & Med History
- Adverse Events & Safety
- Risk for STDs
- Pattern/Frequency of Sexual Activity
- Culture
- Concomitant Disease States
- Convenience
- Cost
Counseling Points

• When to start taking product
• Importance of adherence
• Side effects and how to manage them

Encourage routine health screenings!
When to start taking?

- Anytime!
- Might need a “back up” method
- Reminder: check patient’s blood pressure before starting a combo product

| Contraceptive method                  | When to start (if the provider is reasonably certain that the woman is not pregnant) | Additional contraception (i.e., back up) needed | Examinations or tests needed before initiation?
|---------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------|------------------------------------------------------------------------
| Copper-containing IUD                 | Anytime                                                                              | Not needed                                    | Bimanual examination and cervical inspection¹                           |
| Levonorgestrel-releasing IUD           | Anytime                                                                              | If >7 days after menses started, use back-up method or abstinence for 7 days. | Bimanual examination and cervical inspection²                           |
| Implant                               | Anytime                                                                              | If >5 days after menses started, use back-up method or abstinence for 7 days. | None                                                                    |
| Injectable                             | Anytime                                                                              | If >7 days after menses started, use back-up method or abstinence for 7 days. | None                                                                    |
| Combined hormonal contraceptive       | Anytime                                                                              | If >5 days after menses started, use back-up method or abstinence for 7 days. | Blood pressure measurement                                               |
| Progestin-only pill                    | Anytime                                                                              | If >5 days after menses started, use back-up method or abstinence for 2 days. | None                                                                    |
When could a patient start a newly prescribed CHC pill?

A. On the Sunday of the start of their next menses
B. Anytime, if reasonably certain they are not pregnant
C. Within 5 days after menses started
D. All the above
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<thead>
<tr>
<th>A</th>
<th>Abdominal pain</th>
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<td>• Pancreatitis</td>
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<td>• Abdominal artery or vein thrombosis</td>
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<td>C</td>
<td>Chest pain</td>
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<td>• PE</td>
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<td>Headache</td>
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<td>• Vascular spasm</td>
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<td>• Stroke</td>
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<td>• HTN</td>
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<td>Eye/vision changes</td>
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<td>• Stroke</td>
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<td>• HTN</td>
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<td>S</td>
<td>Severe leg pain</td>
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<td>• DVT</td>
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</table>
Putting VTE Risk Into Perspective

![Bar chart showing likelihood of developing a blood clot (number of women with a blood clot per 10,000 women-years).]


Fig. 1. Likelihood of developing a blood clot (number of women with a blood clot per 10,000 women-years).
Let’s Get Clinical!

- Menstrual Cycle/ Family Planning Review
- Clinical Guidelines
- Example Treatment Algorithm
- Counseling Points
- Side Effect Management
- Practice Cases
**Too Much Estrogen?**

- Breast cystic changes/tenderness
- Dysmenorrhea
- Chloasma (discoloration of skin)

**Too Little Estrogen?**

- Spotting (days 1-9)
- Continuous bleeding/spotting
- Hypomenorrhea
- Atrophic vaginitis
Too Much Progestin?

- Increase in appetite
- Depression
- Fatigue
- Libido decrease
- Weight gain (non-cyclic)
- Hypertension

Too Little Progestin?

- Break through bleeding (days 10-21)
- Delayed withdrawal bleeding
- Dysmenorrhea
- Hypomenorrhea
Excess Androgen Activity

- Acne
- Increase in libido
- Hirsutism
- Oily skin/scalp
- Edema
# Side Effect Overview

<table>
<thead>
<tr>
<th>Side effect</th>
<th>Management</th>
<th>Side effect</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acne</td>
<td>• ↑ estrogen or,</td>
<td>Androgenic effect</td>
<td>• Select 3rd generation progestin, low dose norethindrone or ethynodiol diacetate</td>
</tr>
<tr>
<td></td>
<td>• ↓ androgen/progestin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amenorrhea</td>
<td>• ↑ estrogen</td>
<td>Irregular, heavy, painful</td>
<td>• ↑ progestin or,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>menses</td>
<td>• ↓ estrogen</td>
</tr>
<tr>
<td>Breast tenderness/swelling</td>
<td>• ↓ estrogen</td>
<td>Hirsutism</td>
<td>• ↑ estrogen or,</td>
</tr>
<tr>
<td>BTB, spotting (days 1-9)</td>
<td>• ↑ estrogen</td>
<td>BTB, spotting (days 10-28)</td>
<td>• ↑ progestin</td>
</tr>
<tr>
<td>Nausea</td>
<td>• Take with food at night</td>
<td>High risk of thrombosis</td>
<td>• ↓ estrogen</td>
</tr>
<tr>
<td></td>
<td>• ↓ estrogen or ↑ progestin</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Which one of the following would least likely cause acne/oily skin?

A. Levonorgestrel
B. Norgestrel
C. Drosperinone
D. Norgestimate
<table>
<thead>
<tr>
<th>Generation</th>
<th>Examples</th>
<th>Issues to Consider</th>
</tr>
</thead>
</table>
| 1<sup>st</sup> generation | Norethindrone  
Norethindrone acetate  
Ethynodiol | Highest risk for spotting and unscheduled bleeding |
| 2<sup>nd</sup> generation | Norgestrel  
Levonorgestrel | Less spotting than 1<sup>st</sup> gen, but more androgenic |
| 3<sup>rd</sup> generation | Desogestrel  
Norgestimate | Same benefit as 2<sup>nd</sup> and less androgenic, but higher VTE rates |
| 4<sup>th</sup> generation | Drospirenone  
Dienogest | Least androgenic, but higher VTE rates |
## Monophasic Products – Hormonal Activity

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Estrogen (mcg)</th>
<th>Progestin (mg)</th>
<th>Estrogen activity</th>
<th>Progestin activity</th>
<th>Androgenic activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Necon 1/50°, Norinyl 1+50°, Ortho-Novum 1/50°</td>
<td>50 Mestranol 50 EE</td>
<td>1 NE 1 NE</td>
<td>I H</td>
<td>I I</td>
<td>I I</td>
</tr>
<tr>
<td>Ovcon-50°</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zovia 1/50E°</td>
<td></td>
<td>1 ED</td>
<td>H H</td>
<td>I I</td>
<td>I I</td>
</tr>
<tr>
<td>Ogestrel 0.5/50°</td>
<td></td>
<td>0.5 NT</td>
<td>H H</td>
<td>I I</td>
<td>I I</td>
</tr>
<tr>
<td>Necon 1/35°, Norinyl 1+35°, Nortrel 1/35®, Ortho-Novum 1/35°</td>
<td>35 EE</td>
<td>1 NE</td>
<td>I I/H</td>
<td>I I</td>
<td>I I</td>
</tr>
<tr>
<td>Necon 0.5/35°, Nortrel 0.5/35°, Brevicon®, Modicon®</td>
<td></td>
<td>0.5 NE</td>
<td>I L</td>
<td>I L</td>
<td>I L</td>
</tr>
<tr>
<td>Balziva™, Zenchent™, Ovcon-35®, Femcon® Fe Chw</td>
<td></td>
<td>0.4 NE</td>
<td>I L</td>
<td>I L</td>
<td>I L</td>
</tr>
<tr>
<td>MonoNessa®, Preivifem™, Sprintec™, Ortho-Cyclen®</td>
<td></td>
<td>0.25 NG</td>
<td>I L</td>
<td>I L</td>
<td>I L</td>
</tr>
</tbody>
</table>
## Multi-phase Product – Hormonal Activity

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Estrogen activity</th>
<th>Progestin activity</th>
<th>Androgenic activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Triphasic Products</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aranelle®, Leena®, Tri-Norinyl®</td>
<td>35 EE x 21d 0.5 NE x 7d</td>
<td>35 EE 1 NE x 9d</td>
<td>35 EE 0.5 NE x 5d</td>
<td>I</td>
<td>I</td>
<td>L/1</td>
</tr>
<tr>
<td>Necon 7/7®, Ortho-Novum 7/7®</td>
<td>35 EE x 21d 0.5 NE x 7d</td>
<td>35 EE 0.75 NE x 7d</td>
<td>35 EE 1 NE x 7d</td>
<td>I</td>
<td>I</td>
<td>L/1</td>
</tr>
<tr>
<td>Enpresse®, Trivora®, Triphasil®</td>
<td>30 EE x 6d 0.05 LV</td>
<td>40 EE x 5d 0.075 LV</td>
<td>30 EE x 10d 0.125 LV</td>
<td>I</td>
<td>H</td>
<td>L</td>
</tr>
</tbody>
</table>
Case #1

A 28 year old female presents to your pharmacy requesting birth control. She states she is 6 weeks post-partum and is currently fully breastfeeding her daughter. She is in a monogamous relationship.

Should you proceed with contraceptive screening for this patient or refer?
A 37 year old female presents to your pharmacy for birth control. She has just relocated to the area. Her PMH is significant for depression, which she takes sertraline 100mg once daily. She also smokes 2 packs per day of cigarettes. She has been on Ortho Tri Cyclen (EE 35mcg and norgestimate 0.18mg x 7d, 0.215mg x7d, 0.25mgx7d) for the past 5 years and is happy with it. She just needs a new prescription until she finds a provider. She states she never misses a dose and takes her pill every morning before taking her shower. She weighs 215 pounds and is in a monogamous relationship.

What would you recommend for the patient with regards to her birth control?
A 27 year old female presents to your pharmacy. You prescribed Aviane-28 (ethinyl estradiol 20mcg and levonorgestrel 0.1mg) 14 weeks ago for contraception. She complains today of early break through bleeding occurring during the 2nd week of her cycle. She is unhappy with this side effect and no longer wants to remain on it.

Which of the following is the BEST to recommend for this patient?

A. Continue her current COC  
B. Change to a COC with less estrogen  
C. Change to a COC with more estrogen  
D. Change to a COC with more progestin  
E. Change to a progestin-only product
Presentation Overview

National Policy Overview
Clinical Details
Available Resources
How effective are birth control methods?

The effectiveness of birth control methods is critically important for reducing the risk of unintended pregnancy. Effectiveness can be measured during “perfect use,” when the method is used correctly and consistently as directed, or during “typical use,” which is how effective the method is during actual use (including inconsistent and incorrect use). The best way to reduce the risk of unintended pregnancy among women who are sexually active is to use effective birth control correctly and consistently. Among reversible methods of birth control, intrauterine contraception and the contraceptive implant remain highly effective for years once correctly in place. The effectiveness of the contraceptive shot, pills, patch, and ring, and barrier and fertility awareness-based methods, depends on correct and consistent use—so these methods have lower effectiveness...
From the CDC: Mobile App: Contraception

- IOS and Android
- User-friendly
- Navigate between MEC and SPR
- Links to CDC guidance
- Easy to use in everyday practice
From the CDC: Mobile App: Contraception

Full Guidelines

The following are external links:

- U.S. Medical Eligibility Criteria (U.S. MEC) for Contraceptive Use, 2016 – MMWR
- U.S. Medical Eligibility Criteria (U.S. MEC) for Contraceptive Use, 2016 – Webpage
- U.S. Selected Practice Recommendations (U.S. SPR) for Contraceptive Use, 2016 – MMWR
- U.S. Selected Practice Recommendations (U.S. SPR) for Contraceptive Use, 2016 – Webpage
How to Be Reasonably Certain That a Woman is Not Pregnant

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

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

Select Condition

- Age
- Anatomical abnormalities
- Anticonvulsant therapy
- Antimicrobial therapy
- Antiretroviral therapy
- Benign ovarian tumors (including cysts)
- Breast disease
- Breastfeeding
- Other health conditions

Antimicrobial therapy
- Broad-spectrum antibiotics

Method | Category | Clarification
------ | -------- | --------------
CHCs    | 1        |               

Emergency Contraception | Additional Methods
Late or Missed Doses and Side Effects from Combined Hormonal Contraceptive Use

For the following recommendations, a dose is considered late when ≤24 hours have elapsed since the dose should have been taken. A dose is considered missed if ≥24 hours have elapsed since the dose should have been taken. For example, if a COC pill was supposed to have been taken on Monday at 9:00 a.m. and is taken at 11:00 a.m., the pill is late; however, by Tuesday morning at 11:00 a.m., Monday’s 9:00 a.m. pill has been missed and Tuesday’s 9:00 a.m. pill is late. For COCs, the recommendations only apply to late or missed hormonally active pills and not to placebo pills. Recommendations are provided for late or missed pills (Figure 2), the patch (Figure 3), and the ring (Figure 4).
Questions?