Get the Facts About Emergency Contraception

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Program Overview: Accidents happen, that's why we have emergency contraception (the morning after pill). Emergency contraception (EC) is a safe and effective way to prevent pregnancy after unprotected intercourse. It can be started up to five days (120 hours) after unprotected intercourse. This knowledge based activity will enhance the health care provider's understanding of emergency contraception and how to counsel patients on the proper use of EC.

Objectives:
• Explain the consequences of unintended pregnancy.
• Compare and contrast emergency contraceptive methods.
• Describe the ideal candidate for use of emergency contraception.
• Discuss the mechanism of action, efficacy, dosing, safety, and tolerability of progestin-only emergency contraception.
• Demonstrate how to counsel patients regarding the proper use of emergency contraception.

Speaker: Dr. Borgelt is an Associate Professor at the University of Colorado School of Pharmacy and a lead investigator in the School of Pharmacy and Family Medicine. She received her Bachelors of Science degree from the University of Iowa and her Doctor of Pharmacy degree from the University of Colorado. She completed a Primary Care Residency with the University of Colorado and Kaiser Permanente Rocky Mountain Division. Dr. Borgelt is a board-certified pharmacotherapy specialist and a fellow of the American College of Clinical Pharmacy.

Speaker Disclosure: Dr. Borgelt has no actual or potential conflicts of interest in relation to this program.

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Get the Facts About Emergency Contraception

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Outline

- Introduction
- Unintended pregnancy
  - Prevalence
  - Consequences
- Emergency contraception
  - Regimens
  - Mechanism of action
  - Efficacy and dosing
  - Safety and tolerability
  - Over-the-counter status
- Role of the pharmacist
  - Counseling
  - CARE program
  - Clinical pearls
- Conclusions and questions

TRUE OR FALSE: The most common form of contraception used in the United States is the oral contraceptive pill.

Contraceptive Use in the U.S.

- 62% of the 62 million women aged 15-44 currently practice contraception
- 31% of the 62 million women do not need a method
- Only 7% of women aged 15-44 are at risk of unwanted pregnancy, but not using contraceptives
- Among the 42 million fertile, sexually active women who do not want to become pregnant, 89% are practicing contraception

Interesting Facts about Contraception in the U.S.

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What if…
- A condom broke or slipped off
- Two or three birth control pills were missed
- Diaphragm or cervical cap was not used correctly
- Birth control was not used during sex
- Sex occurred unexpectedly
- Sex was forced

The number of women that experience an unintended pregnancy in one year is 1 in ___.
A. 10  
B. 20  
C. 50  
D. 100

Unintended Pregnancy
- Definition
  - A pregnancy that is either mistimed or unwanted at the time of conception
- The facts
  - In 2001, 49% of pregnancies were unintended
  - 48% of unintended conceptions occurred during a month when contraceptives were used
  - Risk factors: women aged 18-24 years, unmarried, low-income status, did not complete high school, minority
  - Highest rates occur in women 15-19 years
  - One of every two women aged 15-44 in the United States has experienced at least one unintended pregnancy

1 in 20 American women has an unintended pregnancy each year

Pregnancy Distribution

Why Do Unintended Pregnancies Happen?

- Lack of preparation
- Lack of education
- Poor communication between partners
- Limited success with contraception
  - Ambivalence about contraception and pregnancy
  - Lack of access to most effective methods
  - Method side effects
  - Difficulties using methods
  - Lack of satisfaction with or availability of providers

Committee on Unintended Pregnancy
Institute of Medicine, 1995

“The consequences of unintended pregnancy are serious, imposing appreciable burdens on children, women, men, and families.”


Consequences of Unintended Pregnancy

What If We Could Reduce Unintended Pregnancy?

By averting the 52 million unwanted pregnancies that occur worldwide each year, 22 million induced abortions, 1.4 million infant deaths, and 142,000 maternal deaths could also be prevented.
We can reduce unintended pregnancy with….

**Emergency Contraception (EC)**

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**Emergency Contraception**

American Academy of Pediatrics:

“The use of hormonal medications within 72 to 120 hours after unprotected or underprotected coitus for the prevention of unintended pregnancy.”

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**EC: Regimens**

- Copper intrauterine device (IUD)
- Progestin-only
  - Plan B OneStep®, Next Choice®
- Combined estrogen-progestin (Yuzpe regimen - two doses of 100 mcg ethinyl estradiol plus ≥ 0.5 mg levonorgestrel taken 12 hrs apart)

<table>
<thead>
<tr>
<th>Brand</th>
<th>Dosage</th>
<th>Active Ingredients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alesse</td>
<td>5 pink pills</td>
<td>100 mcg EE 0.50 mg LNG</td>
</tr>
<tr>
<td>Nordette</td>
<td>4 light-orange pills</td>
<td>120 mcg EE 0.60 mg LNG</td>
</tr>
<tr>
<td>Levlen</td>
<td>4 light-orange pills</td>
<td>120 mcg EE 0.60 mg LNG</td>
</tr>
<tr>
<td>Levlite</td>
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</tr>
</tbody>
</table>

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Why is there such debate about this topic?

[Image](http://connection.lww.com/Products/sadler/images/figurelarge2-11.jpg)
EC: Dosing

- **Levonorgestrel (0.75 mg) regimen**
  - 2 doses: 1 tablet ASAP (within 72-120 hours), 1 tablet 12 hours later
  - 2 doses: 1 tablet ASAP (within 72-120 hours), 1 tablet up to 24 hours later
  - 1 dose (1.5 mg): 1 tablet ASAP

- **Yuzpe regimen**
  - 2 doses: #x tablets ASAP (within 72-120 hours), #x tablets 12 hours later

Who is Eligible for EC?

- No contraception used during intercourse
- Condom slipped, broke, or leaked
- Incorrect use of diaphragm or cervical cap
- Missing combined oral contraceptives (COCs)
- ≥ 3 hrs late for progestin-only pill
- ≥ 2 day late starting new vaginal ring cycle
- ≥ 2 day late starting new patch cycle
- Couple erred in practicing coitus interruptus or periodic abstinence
- IUD partially or totally expelled or has been removed ≤ 7 days after last act of intercourse
- Woman exposed to possible teratogen (e.g., retinoic acid)

EC: Effectiveness

<table>
<thead>
<tr>
<th>Method</th>
<th>Effectiveness</th>
<th># Expected Pregnancies</th>
</tr>
</thead>
<tbody>
<tr>
<td>No treatment</td>
<td>N/A</td>
<td>80/1000</td>
</tr>
<tr>
<td>Copper IUD</td>
<td>99% (99-100%)</td>
<td>1/1000</td>
</tr>
<tr>
<td>Levonorgestrel</td>
<td>89% (52-94%)</td>
<td>10/1000</td>
</tr>
<tr>
<td>Yuzpe regimen</td>
<td>74% (47-89%)</td>
<td>20/1000</td>
</tr>
</tbody>
</table>

EC: Effectiveness

![Graph showing pregnancy rates at different time intervals before treatment](https://www.exact.com)
Hormonal EC: Mechanism of Action

- Preventing or postponing ovulation by suppressing, blunting, or delaying LH surge
- Possibly prevent the sperm and the egg from meeting by affecting the cervical mucus or the ability of sperm to bind to the egg

Summary: Mechanism of Action

KEY POINT:
Primary mechanism for both emergency contraception and traditional contraception is a delay or inhibition of ovulation

Evidence: no post-fertilization effect
Levonorgestrel EC: Contraindications

- Known or suspected pregnancy

Hormonal EC: Adverse Effects

- **Levonorgestrel EC**
  - Nausea: 18%
  - Vomiting: 4%
  - Menstrual cycle changes/irregular bleeding
  - Headaches
  - Breast tenderness
  - Dizziness

- **Yuzpe regimen EC**
  - Nausea: 50%
  - Vomiting: 20%
  - Anti-emetic therapy may be needed 1 hour before 1st dose
  - Menstrual cycle changes/irregular bleeding
  - Headaches
  - Breast tenderness
  - Dizziness

EC: OTC Status in U.S.

- OTC option for women aged ≥17 years
- Prescription-only for women < 17 years

**Plan B One-Step** and **Next Choice** are approved for sale without prescription to women and men 17 and older. Women aged 16 and younger need a prescription.

**Plan B** (the original version, which contains 2 pills instead of one) is still carried in some pharmacies but will be phased out soon. To buy this pill without prescription, you must be aged 18 or older.

TRUE OR FALSE: Pharmacists should have the right to refuse dispensing emergency contraception.
EC: Pharmacists Right to Refusal

Arguments in Favor
• Can and should exercise independent judgment
• Should not forsake morals as a condition of employment
• Integral to democracy

Arguments Against
• Choose to enter a profession bound by fiduciary responsibilities
• EC is not an abortifacient
• Objections significantly affect patients’ health
• Great potential for abuse and discrimination

EC: Patient Counseling

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EC: Patient Counseling

As a pharmacist, if a woman comes in for EC, take the opportunity to counsel on the following:

• Proper contraception techniques and methods available
• Risk of STIs and regular examinations by a physician or health care provider

CARE℠ (Convenient Access, Responsible Education) Program

Four core elements
• Labeling/packaging/informational toll free #
  • Dispensed as either Rx or OTC product
• Education
  • Healthcare professionals and consumers
• Distribution
  • Appropriate retail pharmacy outlets
• Monitoring
  • Trends in EC use

http://www.accessdata.fda.gov/drugsatfda_docs/appletter/2009/021998s000ltr.pdf
**Counseling Pearls**

What questions do you get from patients about emergency contraception?

### #1: Menstrual Cycle Changes

The Menstrual Cycle

- **Cycle length**:
  - \( \downarrow \) 1 day
  - **No change**
  - \( \uparrow \) 2 days

After EC taken, menses usually occurs within 1 week before or after the expected time.

### #2: Starting/Restarting Routine Contraception

- **Condom or spermicide**: immediately
- **Diaphragm or cervical cap**: immediately
- **Combined oral contraceptive**: begin day after EC treatment complete (use condoms x 7 days) or beginning of next menstrual period
- **Vaginal ring, patch or progestin-only pills**: begin day after EC treatment complete (use condoms x 7 days) or within 5 days of next menstrual period

Start routine contraception as soon as possible.

### #3: Frequent Use of EC

- When EC is frequently used, it does NOT:
  - Increase risk taking
  - Adversely effect regular contraceptive use
  - Increase the incidence of STIs
  - Increase sexual activity level or risks among teens
  - Repeated use is not known to pose health risks
- When EC is used frequently, it IS:
  - Less effective than routine contraception

Frequent use not associated with adverse effects, but not effective as only contraceptive option.
#4: Drug Interactions

- CYP450 inducers (e.g., phenytoin, rifampin) could theoretically reduce effectiveness of EC
- Consider increasing amount of hormone administered in one or both doses or give an extra dose
- No significant interactions found with concurrent use of antibiotics

It is not known if potential drug interactions reduce EC treatment effectiveness.

#5: Resources

- NOT-2-LATE.com
  - 1-888-NOT-2-LATE
- Planned Parenthood
  - 1-800-230-PLAN
- Association of Reproductive Health Professionals
  - www.arhp.org
- Pharmacy Access Partnership
  - www.pharmacyaccess.org

Resources can be very helpful for more information and patient access to EC.

Conclusions

- Unintended pregnancy can have significant health consequences for the mother, child, and families
- Several emergency contraceptive regimens available, although levonorgestrel EC most commonly seen by pharmacists
- Levonorgestrel EC is most effective when provided within 72-120 hours and is well-tolerated
- Pharmacists have an important role in identifying and counseling patients when they are seeking emergency contraception

Questions?

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