

What You Need to Know The Facts About Emergency Contraception

What is Emergency Contraception?

The term “emergency contraception” (also known as “the morning-after pill” or “postcoital contraception”) refers to contraceptive methods that can be used to prevent pregnancy after unprotected sex (sex without effective birth control). Emergency contraception (EC) offers an important chance to prevent an unintended pregnancy when a regular method fails, no method was used, or sex was forced. Advance provision of EC is recommended for all women at risk for unintended pregnancy.

What Emergency Contraception Methods are Available in the U.S.?

Methods currently available include 1) pills that contain levonorgestrel - Plan B® One-Step, Levonorgestrel and Next Choice™, 2) pills that contain ulipristal acetate - ella™, 3) and the Copper T intrauterine device (IUD) - Paragard®.

Copper-containing IUDs are the most effective method of EC when placed within 5 days of unprotected sex.

Plan B One-Step, Levonorgestrel, Next Choice, and ella are specially packaged and labeled for use as emergency contraception.

Combined oral contraceptive pills have been used as EC pills in the past, but they are less effective and cause more nausea than either levonorgestrel or ulipristal acetate pills.

How Do Women Access Emergency Contraception in the U.S.?

In the United States, Plan B One-Step, Levonorgestrel, and Next Choice are available at pharmacies without a prescription to women and men 17 and older. Younger women may obtain Plan B One-Step, Levonorgestrel, and Next Choice from a pharmacy or clinic with a prescription. In nine states (AK, CA, HI, NH, NM, MA, ME, VT, and WA), pharmacists with collaborative practice agreements can prescribe EC directly. A prescription is required to

EC Web site:
www.not-2-late.com

obtain ella for women of all ages. Ella can also be ordered through an online prescription service with next-day shipping.¹

A patient must visit a trained health care provider for placement of a Copper T IUD.

How Should Dedicated Emergency Contraceptive Pills be Taken?

Plan B One-Step packages contain one 1.5mg levonorgestrel pill; product labeling states that this pill should be taken within 72 hours of unprotected intercourse.⁵ Research indicates that this pill can prevent pregnancy if taken within 5 days after intercourse.⁶

Levonorgestrel package contains two 0.75mg Levonorgestrel pills, and product labeling states that the first tablet should be taken orally as soon as possible within 72 hours after unprotected intercourse.³ The second tablet should be taken 12 hours after the first dose. Research proves that efficacy is better when Levonorgestrel tablets are taken as soon as possible after unprotected sex.³

Next Choice packages contain two 0.75mg levonorgestrel pills, and product labeling states that the first tablet should be taken orally as soon as possible within 72 hours after unprotected intercourse. The second tablet should be taken 12 hours after the first dose. Research shows that taking both pills at once works just as well and does not increase side effects.^{5,8} When taken as a single dose, these pills can also prevent pregnancy up to 120 hours after intercourse.⁷

Ella is one 30mg ulipristal acetate pill; product labeling advises use within 120 hours of unprotected intercourse.

Approximate Retail Cost of ECPs			
Plan B® One-Step	Levonorgestrel	Next Choice™	ella™
\$35-\$60 at pharmacies ²	Generic product priced between \$35-\$40 at pharmacies ³	Generic product is priced 10-20% lower than Plan B One-Step ⁴	Pharmacy prices are about \$5-\$10 more than Plan B One-Step.

Time is of the Essence

- Levonorgestrel pills are more effective when taken immediately after unprotected sex
- Both Next Choice pills should be taken at once, rather than waiting 12 hours between pills

How Effective is Emergency Contraception?

The Copper T IUD is the most effective form of emergency contraception with an estimated failure rate of less than 0.1%.^{9,10} IUDs are recommended by the American College of Obstetricians and Gynecologists as first choice contraceptives for teens,¹¹ and can be easily placed for nulliparous women with no adverse effect on future fertility.

EC pills, which may be more accessible than an emergency IUD, reduce the chance that pregnancy will happen after a single act of intercourse by at least 50 percent.^{9,12} Plan B One-Step, Levonorgestrel, and Next Choice, which both contain levonorgestrel, are equally effective in preventing pregnancy.^{5,13,14} The sooner after unprotected sex these levonorgestrel pills are used, the more effective they are.^{15,16} Ella remains equally effective up to 120 hours after sex.¹⁷ Thus, when taken more than 72 hours after sex, ulipristal acetate (ella) is more effective than Plan B. Overall, the odds of pregnancy after taking ella is about half the odds of pregnancy after taking Plan B or Next Choice pills.¹⁸

Recent data shows EC pills may work less well for obese women (BMI \geq 30) and women who have repeated episodes of unprotected sex.¹⁹ Thus, these women may particularly benefit from emergency placement of a copper IUD.

How Does Emergency Contraception Work?

The mechanism of action of ECPs depends on the time in a woman's menstrual cycle when intercourse occurred and when ECPs were taken.^{20,21} When taken before ovulation, ECPs have been shown to inhibit or delay an egg from being released from the ovary. ECPs do not interfere with an established pregnancy. They are generally believed to prevent sperm and egg from uniting, but in some cases they may prevent a fertilized egg from attaching to the uterus (implantation).

When the copper-containing IUD is used as emergency contraception, the copper ions are believed to prevent fertilization and implantation.²²

Dispelling Myths About Emergency Contraception

It's important for women and their providers to have accurate information about EC.

- EC pills do not harm an existing pregnancy.²³
- Neither EC pills nor the copper IUD cause abortion.²²
- Provision of EC in advance does not increase unprotected intercourse.²⁴

What are the Side Effects of Emergency Contraception?

Rare side effects of ECPs include nausea and vomiting, delay in menses, irregular vaginal bleeding, abdominal pain, breast tenderness, headache, dizziness, and fatigue. If these side effects occur, they generally resolve within 24 hours of pill use.²⁵

Side effects of the copper IUD are also rare but may include menstrual cramping or increased menstrual flow.^{26,27,28}

What are the Advantages and Disadvantages of Emergency Contraception?

The main advantage of EC is the chance to prevent pregnancy after unprotected sex. Both ECPs and Copper IUDs are discreet and reversible methods of contraception. Additionally, the Copper IUD can provide ongoing contraception for at least 10 years.

The main disadvantage of ECPs is that they only protect women from a single contraceptive emergency, and it is common for women to have multiple episodes of need for EC. More effective forms of EC require clinician assistance (for IUD placement, or a prescription).

When Should a Patient Expect Her Period After Using Emergency Contraceptive Pills?

A woman should have a normal period within one month of taking ECPs. If a patient does not menstruate within a month of taking ECPs, she should take a pregnancy test.

How Cost Effective is Emergency Contraception?

Studies based on economic models, assuming that EC would be used regularly to avoid pregnancy after unprotected intercourse, have shown that EC is nearly always cost effective. It would seem that making EC more widely available could save both medical care dollars and also the considerable societal costs of unintended pregnancy. However, real life use of EC differs from the theoretical models, and no published study has yet demonstrated that increasing access to ECPs reduces pregnancy or abortion rates,²⁹ as few women consistently use EC after all contraceptive emergencies. In contrast, emergency placement of a Copper T IUD provides women with ongoing protection, and produces cost savings if used for as little as four months.³⁰

A thorough and up-to-date review of the medical and social science literature is maintained here: <http://ec.princeton.edu/questions/ec-review.pdf>.

1. www.ella-kwikmed.com
2. Office of Population Research, Princeton University and Association of Reproductive Health Professionals. Answers to frequently asked questions about how to get emergency contraception: how much do emergency contraceptive pills cost? Available at <http://ec.princeton.edu/questions/eccost.html>. Accessed November 4, 2011.
3. Levonorgestrel Tablets. Available at <http://www.perrigo.com/uploadedFiles/Rx/products/L/840000J1.pdf>. Accessed December 15, 2011.
4. Reproductive Health Technologies Project. FDA approved emergency contraceptive products currently on the US market. August 2011. Available at <http://www.rhfp.org/contraception/emergency/documents/FDAApprovedEmergencyContraceptiveChartAugust2011-PRINTABLE.pdf>. Accessed November 4, 2011.
5. Plan B One Step prescribing information. Pomona, New York: Duramed Pharmaceuticals, Inc. August 2009. Available at <http://planbonestep.com/pdf/PlanBOneStepFullProductInformation.pdf>. Accessed October 5, 2011.
6. von Hertzen H, Piaggio G, Ding J, et al. Low dose mifepristone and two regimens of levonorgestrel for emergency contraception: a WHO multicentre randomized trial. *Lancet*. 2002;360:1803-10.
7. Next Choice physician labeling. Corona, California: Watson Pharma, Inc. June 2009. Available at <http://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?id=13086>. Accessed May 24, 2011.
8. Gold MA, Wolford JE, Smith KA, et al. The effects of advance provision of emergency contraception on adolescent women's sexual and contraceptive behaviors. *J Pediatr Adolesc Gynecol*. 2004;17(2):87-96.
9. Wu S, Godfrey EM, Wojdyla D, et al. T380A intrauterine device for emergency contraception: a prospective, multicentre, cohort clinical trial. *BJOG*. 2010;117(10):1205-10.
10. Trussell J, Ellertson C. Efficacy of emergency contraception. *Fertility Control Reviews*. 1995;4:8-11.
11. ACOG Committee Opinion No. 392: Intrauterine Device and Adolescents. *Obstet Gynecol*. 2007;110:1493-5
12. Trussell J, Ellertson C, von Hertzen H, et al. Estimating the effectiveness of emergency contraceptive pills. *Contraception*. 2003;67:259-65.
13. Dada OA, Godfrey EM, Piaggio G, von Hertzen H. Nigerian Network for Reproductive Health Research and Training. A randomized, double-blind, noninferiority study to compare two regimens of levonorgestrel for emergency contraception in Nigeria. *Contraception*. 2010;82(4):373-8.
14. Cheng L, Gülmezoglu AM, Piaggio G, et al. Interventions for emergency contraception. *Cochrane Database Syst Rev*. 2008;(2):CD001324.
15. Piaggio G, von Hertzen H, Grimes D, et al. Timing of emergency contraception with levonorgestrel or the Yuzpe regimen. Task Force on Postovulatory Methods of Fertility Regulation. *Lancet* 1999;353:721.
16. Task Force on Postovulatory Methods of Fertility Regulation. Randomised controlled trial of levonorgestrel versus the Yuzpe regimen of combined oral contraceptives for emergency contraception. *Lancet* 1998;352:428-33.
17. Fine P, Mathé H, Ginde S, et al. Ulipristal acetate taken 48-120 hours after intercourse for emergency contraception. *Obstet Gynecol*. 2010; 115(2 Pt 1):257-63.
18. Glasier AF, Cameron ST, Fine PM, et al. Ulipristal acetate versus levonorgestrel for emergency contraception: a randomised non inferiority trial and meta analysis. *Lancet*. 2010;375:555-62.
19. Glasier A, Cameron ST, Blithe D, et al. Can we identify women at risk of pregnancy despite using emergency contraception? Data from randomized trials of ulipristal acetate and levonorgestrel. *Contraception*. 2011;84:363-7.
20. Grimes DA, Raymond EG. Emergency contraception. *Ann Intern Med*. 2002;137:180-89.
21. Croxatto HB, Devoto L, Durand M, et al. Mechanism of action of hormonal preparations used for emergency contraception: a review of the literature. *Contraception*. 2001;63:111-21.
22. Schwarz EB, Trussell J. Emergency Contraception. In Hatcher RA, Trussell J, Nelson AL, Cates W, Kowal D, Policar M (eds). *Contraceptive Technology: Twentieth Revised Edition*. Ardent Media: New York NY, 2011. Pp.113—145.
23. ACOG. Practice Bulletin No. 112: Emergency contraception. *Obstet Gynecol*. 2010;115(5):1100-9.
24. Ellertson C, Ambardekar S, Hedley A, et al. Emergency contraception: randomized comparison of advance provision and information only. *Obstet Gynecol*. 2001;98(4):570-5.
25. Van Santen MR, Haspels AA. Interception II: postcoital low-dose estrogens and norgestrel combination in 633 women. *Contraception*. 1985;31:275-93.
26. Milsom I, Andersson K, Jonasson K, et al. The influence of the Gyne-T 380S IUD on menstrual blood loss and iron status. *Contraception*. 1995;52:175-79.
27. Milsom I, Rybo G, Lindstedt G. The influence of copper surface area on menstrual blood loss and iron status in women fitted with an IUD. *Contraception*. 1990;41(3):271-81.
28. Larsson G, Milsom I, Jonasson K, et al. The long-term effects of copper surface area on menstrual blood loss and iron status in women fitted with an IUD. *Contraception*. 1993;48(5):471-80.
29. Trussell J, Raymond EG. Emergency Contraception: A Last Chance to Prevent Unintended Pregnancy. October 2011. Available at <http://ec.princeton.edu/questions/ec-review.pdf>.
30. Trussell J, Leveque JA, Koenig JD, et al. The economic value of contraception: a comparison of 15 methods. *Am J Public Health*. 1995;85:494-503.

ARHP/BEDSIDER Program on Emergency Contraception (EC)

Visit www.bedsider.org for patient resources on birth control. For EC provider education, visit www.arhp.org/Topics/Emergency-Contraception.