Contraception

NOVEMBER 19, 2024

Emergency Contraception

SUMMARY FOR U.S. SPR, 2024 | PAGE 15 OF 26 | ALL PAGES ↓

AT A GLANCE

This page includes recommendations for health care providers that address provision and use of emergency contraception. This information comes from the *2024 U.S. Selected Practice Recommendations for Contraceptive Use* (U.S. SPR).

Overview

Emergency contraception consists of methods that persons can use after sexual intercourse to prevent pregnancy. Emergency contraception methods have varying ranges of effectiveness depending on the method and timing of administration. Four options are available in the United States: the copper intrauterine device (Cu-IUD) and three types of emergency contraceptive pills (ECPs). Emergency contraception does not protect against sexually transmitted infections (STIs), including human immunodeficiency virus (HIV) infection, and patients using emergency contraception should be counseled that consistent and correct use of external (male) latex condoms reduces the risk for STIs, including HIV infection.[31] Use of internal (female) condoms can provide protection from STIs, including HIV infection, although data are limited.[31] Patients also should be counseled that pre-exposure prophylaxis (PrEP), when taken as prescribed, is highly effective for preventing HIV infection.[32]

Types of emergency contraception

Intrauterine Device

- Cu-IUD

Emergency Contraceptive Pills

- Ulipristal acetate (UPA) in a single dose (30 mg)
- Levonorgestrel (LNG) in a single dose (1.5 mg) or as a split dose (1 dose of 0.75 mg of LNG followed by a second dose of 0.75 mg of LNG 12 hours later)
- Combined estrogen and progestin in 2 doses (Yuzpe regimen: 1 dose of 100 µg of ethinyl estradiol (EE) plus 0.50 mg of LNG followed by a second dose of 100 µg of EE plus 0.50 mg of LNG 12 hours later)

Initiation of emergency contraception

Timing

Cu-IUD

- The Cu-IUD may be placed within 5 days of the first act of unprotected sexual intercourse as emergency contraception.
- In addition, when the day of ovulation can be estimated, the Cu-IUD may be placed >5 days after sexual intercourse, as long as placement does not occur >5 days after ovulation.

ECPs

- ECPs should be taken as soon as possible within 5 days of unprotected sexual intercourse.

Comments and Evidence Summary

Cu-IUDs are highly effective as emergency contraception[340] and can be continued as regular contraception. UPA and LNG ECPs have similar effectiveness when taken within 3 days after unprotected sexual intercourse; however, UPA has been observed to be more effective than the LNG formulation 3–5 days after unprotected sexual intercourse.[341] The combined estrogen and progestin regimen is less effective than UPA or LNG and also is associated with more frequent occurrence of side effects (nausea and vomiting).[342] The LNG formulation might be less effective than UPA among women with obesity.[343]

Two studies of UPA use found consistent decreases in pregnancy rates when administered within 120 hours of unprotected sexual intercourse.[341],[344] Five studies found that the LNG and combined regimens decreased risk for pregnancy through the fifth day after unprotected sexual intercourse; however, rates of pregnancy were slightly higher when ECPs were taken after 3 days.[345-349] A meta-analysis of LNG ECPs found that pregnancy rates were low when administered within 4 days after unprotected sexual intercourse but increased at 4–5 days[350] (Level of evidence: I to II-2, good to poor, direct).

Advance provision of ECPs

- An advance supply of ECPs may be provided so that ECPs will be available when needed and can be taken as soon as possible after unprotected sexual intercourse.

Comments and Evidence Summary

A systematic review identified 17 studies that reported on safety or effectiveness of advance ECPs in adult or adolescent women.[351] Any use of ECPs was two to seven times greater among women who received an advance supply of ECPs. However, a summary estimate (RR = 0.9; 95% CI = 0.7–1.2) of four randomized clinical trials (RCTs) did not indicate a significant reduction in pregnancies at 12 months with advance provision of ECPs. In the majority of studies among adults or adolescents, patterns of regular contraceptive use, pregnancy rates, and incidence of STIs did not vary between those who received advance ECPs and those who did not. Although available evidence supports the safety of advance provision of ECPs, effectiveness of advance provision of ECPs in reducing pregnancy rates at the population level has not been demonstrated (Level of evidence: I to II-3, good to poor, direct).

Use of regular contraception after ECPs

Ulipristal Acetate

- Advise the patient to start or resume hormonal contraception no sooner than 5 days after use of UPA and provide or prescribe the regular contraceptive method as needed. For methods requiring a visit to a health care provider, such as provider-administered depot medroxyprogesterone acetate (DMPA), implants, and IUDs, starting the method at the time of UPA use may be considered; the risk that the regular contraceptive method might decrease the effectiveness of UPA must be weighed against the risk of not starting a regular hormonal contraceptive method.
- The patient needs to abstain from sexual intercourse or use barrier methods (e.g., condoms) for the next 7 days after starting or resuming regular contraception or until their next menses, whichever comes first.
- Any nonhormonal contraceptive method may be started immediately after the use of UPA.
- Advise the patient to have a pregnancy test if they do not have a withdrawal bleed within 3 weeks.

Levonorgestrel and Combined Estrogen and Progestin ECPs

- Any regular contraceptive method may be started or resumed immediately after the use of LNG or combined estrogen and progestin ECPs.
- The patient needs to abstain from sexual intercourse or use barrier methods (e.g., condoms) for 7 days.
- Advise the patient to have a pregnancy test if they do not have a withdrawal bleed within 3 weeks.

Comments and Evidence Summary

Because of the antiprogestin properties of UPA, concern exists that starting or resuming progestin-containing regular contraception around the same time as UPA administration might decrease the effectiveness of UPA or the regular contraceptive method. Therefore, the initiation or resumption of regular hormonal contraception after UPA use involves consideration of the risk for pregnancy if UPA fails and the risk for pregnancy if regular contraception use is delayed until the subsequent menstrual cycle. A health care provider can provide or prescribe pills, the patch, or the ring for a patient to start no sooner than 5 days after use of UPA. For methods requiring a visit to a health care provider, such as provider-administered DMPA, implants, and IUDs, starting the method at the time of UPA use may be considered; the risk that the regular contraceptive method might decrease the effectiveness of UPA must be weighed against the risk of not starting a regular hormonal contraceptive method.

No concern exists that administering LNG or combined estrogen and progestin ECPs concurrently with systemic hormonal contraception decreases the effectiveness of either emergency or regular contraceptive methods because these formulations do not have anti-progestin properties like UPA. If starting or resuming regular contraception after the next menstrual bleeding after ECP use, the cycle in which ECPs are used might be shortened, prolonged, or involve irregular bleeding.

A systematic review identified four studies that assessed contraceptive effectiveness (as measured by ovarian activity) of UPA or regular hormonal contraception, when the two drugs were taken at approximately the same time[352-355] (Supplementary Appendix, https://stacks.cdc.gov/view/cdc/156517). Two studies found no differences in ovarian activity when starting oral contraceptives (one study used combined oral contraceptives [COCs] and one study used desogestrel progestin-only pills [POPs]) after UPA administration compared with starting oral contraceptives after placebo, suggesting that UPA did not affect the ability of the oral contraceptive to inhibit ovulation (ovulations: 33% of UPA+COC group versus 32% of placebo+COC group; 45% of UPA+POP group versus 38% of placebo+POP group).[353],[354] However, two studies observed higher proportions of ovulation when starting oral contraceptives within 5 days of UPA administration compared with delayed or no use of hormonal contraception, suggesting that oral contraceptive use within 5 days of UPA administration decreased the ability of UPA to delay ovulation (ovulations: 27% of COC+UPA group versus 3% of UPA only group; 45% of POP+UPA group versus 3% of placebo+UPA group).[353],[355] One study examined the risk for ovulation after UPA was taken after missing three COC pills on days 5–7 of the cycle followed by immediate versus delayed resumption of COCs. Whereas no ovulations were observed within the first 5 days after UPA administration, there was a greater risk of ovulation >5 days after UPA administration among those who delayed COC resumption compared with those who resumed immediately (ovulations: four events in delayed group versus zero in immediate group [odds ratio = 7.78; 95% CI = 1.38–43.95]).[352] The evidence is limited to specific contraceptive formulations and study populations (e.g., limited age and BMI distributions and normal menstrual cycles) (Certainty of evidence: very low to moderate).

Prevention and management of nausea and vomiting with ECP use

Nausea and Vomiting

- LNG and UPA ECPs cause less nausea and vomiting than combined estrogen and progestin ECPs.
- Routine use of antiemetics before taking ECPs is not recommended. Pretreatment with antiemetics may be considered depending on availability and clinical judgment.

Vomiting Within 3 Hours of Taking ECPs

- Another dose of ECP should be taken as soon as possible. Use of an antiemetic should be considered.

Comments and Evidence Summary

Many patients do not experience nausea or vomiting when taking ECPs, and predicting which patients will experience nausea or vomiting is difficult. Although routine use of antiemetics before taking ECPs is not recommended, antiemetics are effective in certain patients and can be offered when appropriate. Health care providers who are deciding whether to offer antiemetics to patients taking ECPs should consider the following: 1) patients taking combined estrogen and progestin ECPs are more likely to experience nausea and vomiting than those who take LNG or UPA ECPs, 2) evidence indicates that antiemetics reduce the occurrence of nausea and vomiting in patients taking combined estrogen and progestin ECPs, and 3) patients who take antiemetics might experience other side effects from the antiemetics.

A systematic review examined incidence of nausea and vomiting with different ECP regimens and effectiveness of antinausea drugs in reducing nausea and vomiting with ECP use.[356] The LNG regimen was associated with significantly less nausea than a nonstandard dose of UPA (50 mg) and the standard combined estrogen and progestin regimen.[357-359] Use of the split-dose LNG demonstrated no differences in nausea and vomiting compared with the single-dose LNG[345],[347],[349],[360] (Level of evidence: I, good-fair, indirect). Two trials of antinausea drugs (meclizine and metoclopramide), taken before combined estrogen and progestin ECPs, reduced the severity of nausea.[361],[362] Significantly less vomiting occurred with meclizine but not metoclopramide (Level of evidence: I, good-fair, direct). No direct evidence was found regarding the effects of vomiting after taking ECPs.

SOURCES

CONTENT SOURCE:

National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP); Division of Reproductive Health