

Oral Contraceptives as Emergency Contraceptive Pills (ECPs)

Q.1. What combined oral contraceptive (COC) pill formulation is recommended for ECPs?

Recommendations	Rationale												
<p>a) If COCs containing 50 mcg ethinyl estradiol (EE) and 250 mcg levonorgestrel (or 500 mcg norgestrel) are used, two pills should be taken in each dose. Two doses are taken 12 hours apart.</p> <p>The two doses should total at least 200 mcg of EE and 1.0 mg of levonorgestrel (or 2.0 mg norgestrel). This is the Yuzpe method, which is the recommended ECP regimen.</p> <p>50 mcg EE pills (e.g., Ovral, Feminal) each with 250 mcg (0.25 mg) levonorgestrel or 500 mcg (0.5 mg) norgestrel:</p> <table style="margin-left: 20px;"> <tr> <td># pills in</td> <td> </td> <td># pills in</td> </tr> <tr> <td>first dose</td> <td> </td> <td>second dose</td> </tr> <tr> <td></td> <td> </td> <td>(12 hours later)</td> </tr> <tr> <td style="text-align: center;">2</td> <td> </td> <td style="text-align: center;">2</td> </tr> </table>	# pills in		# pills in	first dose		second dose			(12 hours later)	2		2	<p>a) The Yuzpe method is recommended because it has been shown to be approximately 75% effective in preventing pregnancy and because COCs are accessible and safe. The safety and efficacy of alternative methods is now under investigation.</p> <ol style="list-style-type: none"> 1) Trussell J, Ellertson C, Stewart F. The effectiveness of the Yuzpe regimen of emergency contraception. <i>Family Planning Perspectives</i> 1996;28:58-64,87. 2) Webb A. How safe is the Yuzpe method of emergency contraception? <i>Fertility Control Reviews</i> 1995;4(2):16-8. <p>The effectiveness calculation of 75% is based on the expected number of pregnancies compared to the observed number of pregnancies. Expected pregnancies are calculated by matching the cycle day of intercourse with expected cycle day-specific conception rates. Thus, if 100 women have unprotected intercourse once during the second or third week of their menstrual cycle, about eight would become pregnant. If those same 100 women used ECPs, only two would become pregnant (75% reduction).</p> <ol style="list-style-type: none"> 1) Trussell J, Ellertson C, Stewart F. The effectiveness of the Yuzpe regimen of emergency contraception. <i>Family Planning Perspectives</i> 1996;28:58-64,87.
# pills in		# pills in											
first dose		second dose											
		(12 hours later)											
2		2											

Recommendations	Rationale				
<p>b) If pills containing 30 mcg EE and 150 mcg levonorgestrel (or 300 mcg norgestrel) are used, four tablets should be taken followed by another four 12 hours later.</p> <p>30 mcg or 35 mcg EE pills (e.g., Lo-ovral, Lo-feminal) each with 150 mcg (0.15 mg) levonorgestrel or 300 mcg (0.3 mg) norgestrel:</p> <table border="1" data-bbox="240 590 716 800"> <thead> <tr> <th># pills in first dose</th> <th># pills in second dose (12 hours later)</th> </tr> </thead> <tbody> <tr> <td>4</td> <td>4</td> </tr> </tbody> </table>	# pills in first dose	# pills in second dose (12 hours later)	4	4	<p>b) Two doses each consisting of four 30/150 mcg pills are recommended because each dose at least meets the minimum of the Yuzpe regimen of 100 mcg of EE and 0.5 mg of levonorgestrel (or 1.0 mg of norgestrel) per dose.</p> <p>Norgestrel contains two isomers, only one of which is bioactive (levonorgestrel), thus 0.5 mg levonorgestrel is bioequivalent to 1.0 mg of norgestrel.</p> <ol style="list-style-type: none"> 1) International Medical Advisory Panel, IPPF. Statement on emergency contraception. <i>Planned Parenthood in Europe</i> 1995;24(2):5-6. 2) Program for Appropriate Technology in Health. <i>Emergency contraception: a resource manual for providers</i>. Seattle: PATH, 1997. 3) Consortium for Emergency Contraception. <i>Using emergency contraceptive pills (ECPs): a prototype ECP training curriculum</i>. Welcome, Maryland: The Consortium, 1996.
# pills in first dose	# pills in second dose (12 hours later)				
4	4				

Q.2. Who may use Emergency Contraceptive Pills (ECPs)?

Recommendations	Rationale
<p>Any woman who is concerned because she has had unprotected intercourse and who does not desire pregnancy may use ECPs. Use by women who are known to have an established pregnancy is not recommended, as evidence indicates that it will have no effect.</p>	<p>According to World Health Organization (WHO), International Planned Parenthood Federation (IPPF), the International Consortium for Emergency Contraception, Program for Appropriate Technology in Health (PATH) and most clinical guidelines, "established pregnancy" is the only medical contraindication for ECP use. "Established pregnancy" is technically defined by most specialists as an implanted embryo. Because ECPs will not disrupt an implanted embryo, ECPs will not have an effect on an established pregnancy. Further, the best evidence indicates that there are not any teratogenic effects from ECP exposure in utero.</p> <p>Beyond pregnancy, there are no other contraindications to ECP use, because the amount of steroids in the Yuzpe regimen and the duration of use are not considered substantial enough to have a clinically significant effect. A study of the effects of the Yuzpe method found no significant changes in clotting factors following treatment. Thus, the usual COC contraindications are not applicable.</p> <ol style="list-style-type: none">1) World Health Organization. Improving access to quality care in family planning: medical eligibility criteria for contraceptive use. Geneva: WHO, 1996.2) International Medical Advisory Panel, IPPF. Statement on emergency contraception. <i>Planned Parenthood in Europe</i> 1995;24(2):5-6.3) Consortium for Emergency Contraception. <i>Emergency contraceptive pills</i>. Welcome, Maryland: The Consortium, 1996.4) Program for Appropriate Technology in Health. <i>Emergency contraception: a resource manual for providers</i>. Seattle: PATH, 1997.5) Webb A. How safe is the Yuzpe method of emergency contraception? <i>Fertility Control Reviews</i> 1995;4(2):16-8.6) Bracken M. Oral contraception and congenital malformations in offspring: A review and meta-analysis of the prospective studies. <i>Obstetrics and Gynecology</i> 1990;76:552-7.7) Simpson JL, Phillips OP. Spermicides, hormonal contraception and congenital malformations. <i>Advances in Contraception</i> 1990;6:141-67.

Q.3. May emergency contraceptive pills (ECPs) be used four, five, or six days after unprotected intercourse?

Recommendations	Rationale
<p>While it is recommended that ECPs be taken within 72 hours of unprotected intercourse for maximum effectiveness, ECPs may have some residual effect beyond 72 hours, particularly if ovulation has not occurred.</p>	<p>It is theorized that the efficacy of ECPs taken after 72 hours is lower than the efficacy of ECPs taken within the recommended window of 72 hours. Almost all studies, thus far, have only measured the effectiveness of ECPs up to 72 hours after intercourse. If the regimen is initiated more than 72 hours after intercourse, the failure rate may be increased.</p> <ol style="list-style-type: none">1) Webb A. When to use post-coital contraception. <i>Fertility Control Reviews</i> 1992;2(2):15-7.2) Emergency oral contraception. <i>ACOG Practice Patterns</i> 1996;3. <p>However, if the primary mechanism of action of ECPs is the prevention or delaying of ovulation, variations in timing of ECP use in relation to ovulation could result in ECPs being effective for longer than 72 hours. The 72 hour limit is currently being investigated.</p> <ol style="list-style-type: none">1) Swahn ML, Westlund P, Johannisson E, Bygdeman M. Effect of post-coital contraceptive methods on the endometrium and the menstrual cycle. <i>Acta Obstetrica et Gynecologica Scandinavica</i> 1996;75:738-44.2) Trussell J, Ellertson C, Rodriguez G. The Yuzpe regimen of emergency contraception: How long after the morning after? <i>Obstetrics and Gynecology</i> 1996;88:150-4.3) Grou F, Rodrigues, I. The morning-after pill-how long after? <i>American Journal of Obstetrics and Gynecology</i> 1994;171:1529-34.4) Consortium for Emergency Contraception. Emergency contraceptive pills update. <i>Wellcome, Maryland: The Consortium</i>, March 1997.

Q.4. May emergency contraceptive pills (ECPs) be used if a woman has had more than one act of unprotected intercourse during the current cycle?

Recommendations	Rationale
<p>Yes, unless the woman has a known established pregnancy.</p>	<p>ECPs are not effective once implantation has occurred. While the mechanism of action of ECPs is not known for certain, several studies have shown that ECPs can inhibit or delay ovulation.</p> <ol style="list-style-type: none">1) International Medical Advisory Panel, IPPF. Statement on emergency contraception. <i>Planned Parenthood in Europe</i> 1995;24(2):5-6.2) Consortium for Emergency Contraception. Emergency contraceptive pills update. Welcome, Maryland: The Consortium, March 1997.3) Swahn ML, Westlund P, Johannisson E, Bygdeman M. Effect of post-coital contraceptive methods on the endometrium and the menstrual cycle. <i>Acta Obstetrica et Gynecologica Scandinavica</i> 1996;75:738-44. <p>ECPs do not interrupt an established pregnancy. Nevertheless, if an error is made in determining whether the woman is pregnant, the best evidence indicates that taking ECPs will not be harmful to an embryo.</p> <ol style="list-style-type: none">1) Webb A. How safe is the Yuzpe method of emergency contraception? <i>Fertility Control Reviews</i> 1995;4(2):16-8.2) Bracken M. Oral contraception and congenital malformations in offspring: A review and meta-analysis of the prospective studies. <i>Obstetrics & Gynecology</i> 1990;76(3):552-7.3) Simpson JL, Phillips OP. Spermicides, hormonal contraception and congenital malformations. <i>Advances in Contraception</i> 1990;6:141-67.4) Consortium for Emergency Contraception. Emergency contraceptive pills update. Welcome, Maryland: The Consortium, March 1997. <p>If, after evaluation (by history and, where indicated, by physical exam) the woman wants ECPs and an established pregnancy remains a possibility, it is permissible to give ECPs, if you explain that she could already be pregnant, in which case the regimen will not be effective.</p> <ol style="list-style-type: none">1) Consortium for Emergency Contraception. Emergency contraceptive pills. Welcome, Maryland: The Consortium, 1996.

Q.5. a) Since emergency contraceptive pills (ECPs) may cause nausea, should anti-emetics be routinely prescribed? b) What is the recommendation if a woman vomits shortly after taking ECPs? c) Will severe diarrhea decrease ECP effectiveness?

Recommendations	Rationale
<p>a) Should routine anti-emetics be given?</p> <p>Not necessarily. Anti-emetics have not been generally recommended for routine use because the use of anti-emetics will not benefit the majority of women receiving ECPs and routine use may not be cost-effective in some areas. Some providers recommend that ECPs be taken with food to reduce the risk of nausea and vomiting.</p> <p>However, when available, anti-emetics may be prescribed with instructions to take them an hour before the first dose of ECPs, particularly for a woman with a history of nausea and vomiting after taking estrogens.</p> <p>For anti-emetics to be effective with ECPs, they need to be taken before the onset of symptoms.</p>	<p>a) Approximately 30 to 65% of women who take ECPs experience nausea and up to 30% will vomit. Use of a prophylactic anti-emetic can prevent nausea and vomiting, but oral anti-emetics are not significantly helpful after nausea has developed.</p> <ol style="list-style-type: none"> 1) Emergency contraceptive pills: safe and effective but not widely used. <i>Outlook</i> 1996;14(2):1-6. 2) Webb A. Emergency contraception. <i>Fertility Control Reviews</i> 1995;4:2:3-7. 3) Emergency oral contraception. <i>ACOG Practice Patterns</i> 1996;3. 4) Bagshaw SN, Edwards D, Tucker AK. Ethinyl oestradiol and d-norgestrel is an effective postcoital emergency contraceptive: a report of its use in 1,200 patients in a family planning clinic. <i>Australian and New Zealand Journal of Obstetrics and Gynaecology</i> 1988;28:137-40.
<p>b) Vomiting?</p> <p>If a patient vomits within two hours of taking ECPs, some providers recommend repeating the dose.</p> <p>In the case of severe vomiting, some providers recommend that the pills be administered vaginally.</p>	<p>b) An effective dose of the hormones may not have been absorbed into the bloodstream within two hours. If vaginal administration is used, blood levels of estrogen and progesterin are probably equivalent to oral administration, based on the frequency of estrogen-induced side effects and preliminary studies of effectiveness.</p> <ol style="list-style-type: none"> 1) International Medical Advisory Board, IPPF. Statement on Emergency Contraception. <i>Planned Parenthood in Europe</i> 1995;24(2):5-6. 2) Consortium for Emergency Contraception. <i>Emergency contraceptive pills</i>. Welcome, Maryland: The Consortium, 1996.

Recommendations	Rationale
<p>c) Will severe diarrhea decrease effectiveness?</p> <p>Possibly. Severe diarrhea can potentially reduce the effectiveness of COCs, and thus ECPs.</p>	<p>c) Severe diarrhea for more than 24 hours may possibly interfere with absorption of ECPs and reduce the effectiveness of the regimen.</p> <p>1) Orme M, Back DJ. Oral contraceptive steroids - pharmacological issues of interest to the prescribing physician. <i>Advances in Contraception</i> 1991;7:325-31.</p>

Q.6. Are there important drug interactions with emergency contraceptive pills (ECPs)?

Recommendations	Rationale
<p>a) Probably. While there is little direct information for drug interactions with ECPs, known drug interactions with combined oral contraceptives (COCs) should be presumed to apply to ECPs.</p>	<p>a) Anticonvulsants, especially hydantoins (e.g., phenytoin), barbiturates (e.g., primidone, phenobarbital), and carbamazepine (non-barbiturates) lead to increased metabolism, thus eliminating estrogen and progestin in the bile and decreasing the effectiveness of COCs (newly marketed anti-epileptics, including vigabatrin, lamotrigine, and valproic acid are not included).</p> <ol style="list-style-type: none"> 1) Anderson GD, Graves NM. Drug interactions with antiepileptic agents. <i>CNS Drugs</i> 1994;2(4):268-79. 2) Webb A. How safe is the Yuzpe method of emergency contraception? <i>Fertility Control Reviews</i> 1995;4:2:16-18 3) Orme M, Back DJ. Oral contraceptive steroids - pharmacological issues of interest to the prescribing physician. <i>Advances in Contraception</i> 1991;7:325-31. <p>Rifampin/rifampicin (anti-tuberculosis) and griseofulvin (anti-fungal) cause hepatic micro-enzyme induction, thus reducing blood levels of COCs; it is presumed the effectiveness of the ECP regimen is also reduced.</p> <ol style="list-style-type: none"> 1) Orme M, Back DJ. Oral contraceptive steroids - pharmacological issues of interest to the prescribing physician. <i>Advances in Contraception</i> 1991;7:325-31. 2) Angle M, Huff P, Lea J. Interactions between oral contraceptives and therapeutic drugs. <i>Outlook</i> 1991;9(1):1-6.
<p>b) Women taking liver enzyme-inducing drugs, mainly anticonvulsant treatments (phenytoin, phenobarbital, and carbamazepine) and the antibiotic rifampicin, may have to take a higher dose than the recommended ECP regimen. However, an increased dose of ECPs may increase the severity or duration of side effects.</p>	<p>b) For women taking anticonvulsants and rifampicin who require emergency contraception (EC), some experts have recommended doubling the ECP dose.</p> <ol style="list-style-type: none"> 1) Guillebaud J. <i>Contraception: your questions answered</i>. New York: Churchill Livingstone, 1993:114-5. 2) Program for Appropriate Technology in Health. <i>Emergency contraception: a resource manual for providers</i>. Seattle: PATH, 1997.
<p>c) Since most anticonvulsants are associated with a risk of birth defects, prevention of unplanned pregnancy is particularly important.</p>	<p>c) Almost all anticonvulsants are teratogenic.</p> <ol style="list-style-type: none"> 1) <i>Drug facts and comparisons</i>. St. Louis: Facts and Comparisons, January 1997. 2) Mattson RH, Rebar RW. Contraceptive methods for women with neurologic disorders. <i>American Journal of Obstetrics and Gynecology</i> 1993;168:2027-32.

Recommendations	Rationale
d) It is unlikely that broad spectrum antibiotics significantly affect the action of COCs, including ECPs.	d) There is evidence that broad spectrum antibiotics do not decrease COC effectiveness, so in the absence of data for ECPs, the experts presume no clinically important effects on ECP use, either. <ol style="list-style-type: none">1) Back DJ, Orme M. Drug interactions. In: Goldzieher JW, Fotherby K, editors. Pharmacology of the contraceptive steroids. New York: Raven Press, 1994:407-26.2) Friedman CI, Huneke AL, Kim MH, Powell J. The effect of ampicillin on oral contraceptive effectiveness. <i>Obstetrics and Gynecology</i> 1980;55:33-6.3) Grimmer SFM, Allen WL, Back DJ, Breckenridge AM, Orme M, Tjia J. Cotrimoxazole on oral contraceptive steroids in women. <i>Contraception</i> 1983;28:53-9.4) Joshi JV, Joshi UM, Sankolli GM, Krishna U, Mandlekar A, Chowdhury V, et al. A study of interaction of a low-dose combination oral contraceptive with ampicillin and metronidazole. <i>Contraception</i> 1980;22:643-52.

Q.7. How frequently can emergency contraceptive pills (ECPs) be used?

Recommendations	Rationale
<p>a) While ECPs conceivably can be used as often as a woman has unprotected intercourse, this is not recommended. There are no data to suggest that there are serious medical consequences of repeated treatment within one cycle. However,</p> <ul style="list-style-type: none">● ECPs are not as effective as the regular use of other steroidal contraceptive methods;● repeated use of ECPs, especially during one cycle, can result in a level of exposure to contraceptive steroids equal to or above routine combined oral contraceptive (COC) use, in which case, COC medical eligibility concerns may become important; and● unpleasant side effects of nausea and vomiting and the disruption of a woman's menstrual bleeding pattern due to ECPs make repeated use undesirable for most women. <p>b) Counseling about other contraceptive options after the use of ECPs should be encouraged at the same time as ECPs are provided, when appropriate.</p>	<p>a) The consequences of repeated use will be lower efficacy than other steroidal methods, repeated nausea and vomiting and a disruption in the bleeding pattern. There is some concern if ECPs are used so frequently that the average level of exposure to contraceptive steroids over one cycle is equal to or above routine COC use.</p> <p>1) Webb A. How safe is the Yuzpe method of emergency contraception? <i>Fertility Control Reviews</i> 1995;4(2):16-8.</p>

Q.8. May emergency contraceptive pills (ECPs) be provided in advance of possible unprotected intercourse?

Recommendations	Rationale
<p>Yes.</p> <p>Providing ECPs in advance will improve access to the method and the ability of the client to use the regimen within the recommended 72 hours.</p> <p>For example, when a woman visits a provider for gynecological care, contraception or sexually transmitted disease (STD) treatment, she can be provided with ECPs and counseled on their use.</p> <p>Providing ECP information and supplies (or a prescription) in advance may be especially relevant for women relying on barrier methods or periodic abstinence.</p>	<p>The Yuzpe regimen is quite safe. If the prescription guidelines are followed by the provider, it is highly unlikely that women would suffer adverse affects from the regimen. In addition, ECPs help protect a woman from pregnancy and abortion, which are more dangerous than ECP use.</p> <p>Difficulty in getting access to ECPs within 72 hours of unprotected intercourse is a barrier to use. Providing ECP information and supplies (or a prescription) in advance can be convenient for both providers and women, educates women about how ECPs may be of use, eliminates the need for another clinic visit, and ensures that ECPs are available promptly after unprotected intercourse.</p> <ol style="list-style-type: none">1) Trussell J, Stewart F, Guest F, Hatcher R. Emergency contraceptive pills: a simple proposal to reduce unintended pregnancies. <i>Family Planning Perspectives</i> 1992;24(6):269-73.2) Webb A. How safe is the Yuzpe method of emergency contraception? <i>Fertility Control Reviews</i> 1995;4(2):16-28.3) Glasier A. Emergency contraception: time for deregulation? (commentary) <i>British Journal of Obstetrics and Gynaecology</i> 1993;100:611-24) Program for Appropriate Technology in Health. <i>Emergency contraception: a resource manual for providers</i>. Seattle: PATH, 1997.5) Trussell J, Ellertson C, Stewart F. The effectiveness of the Yuzpe regimen of emergency contraception. <i>Family Planning Perspectives</i> 1996;28:58-64,87.

Q.9. What contraceptive methods are appropriate for immediate initiation after use of emergency contraceptive pills (ECPs)? When are they appropriate to start?

Recommendations	Rationale
<p>Barrier methods and other non-hormonal methods may be initiated immediately after ECP use.</p> <p>Oral contraceptives may be initiated immediately after ECP use (with routine screening). With routine screening, some providers also provide depo-medroxyprogesterone acetate (DMPA) immediately, because of the low risk of pregnancy (2%) following ECP use, and the low risk of teratogenic effects; other providers await the start of menses before providing injectable contraceptives.</p> <p>Long-term methods, such as an IUD or NORPLANT® Implants, can be initiated when menses return.</p>	<p>There are no clinical data indicating that one method is more appropriate than another for use after ECPs. The choice should be made by the client and the provider. If the client was a pill user when she came in for ECPs, the reason for her missed pills should be discussed.</p> <p>It is always recommended that a pregnant woman avoid unnecessary medication. However, if the woman is already pregnant or becomes pregnant due to failure of ECPs, and chooses a hormonal method, the best evidence indicates no increased risk of birth defects for the fetus.</p> <ol style="list-style-type: none">1) Bracken M. Oral contraception and congenital malformations in offspring: A review and meta-analysis of the prospective studies. <i>Obstetrics and Gynecology</i> 1990;76:552-7.2) Simpson JL, Phillips OP. Spermicides, hormonal contraception and congenital malformations. <i>Advances in Contraception</i> 1990;6:141-67.3) Webb A. How safe is the Yuzpe method of emergency contraception? <i>Fertility Control Reviews</i> 1995;4(2):16-28.4) World Health Organization. <i>Improving access to quality care in family planning: medical eligibility criteria for contraceptive use</i>. Geneva: WHO, 1996.

Q.10. What instructions should be given to the client if she suspects she is pregnant after using emergency contraceptive pills (ECPs)?

Recommendations	Rationale
<p>Tell the client to return to the provider if she becomes suspicious she is pregnant. In particular, symptoms include the absence of a menstrual period for longer than three weeks (see definition for other signs and symptoms of pregnancy).</p>	<p>ECPs are 75% effective, with a 2% risk of pregnancy for one-time use among all women who use ECPs. The client needs to be aware of the possible signs of failed ECPs in order to recognize pregnancy.</p> <ol style="list-style-type: none"><li data-bbox="824 632 1377 730">1) Farrell B, Solter C, Huber D. Comprehensive reproductive health and family planning training curriculum. Module 5: emergency contraceptive pills. Watertown, MA: Pathfinder International, 1997.<li data-bbox="824 737 1377 806">2) CSAC. Emergency (postcoital) contraception guidelines for doctors. <i>British Journal of Family Planning</i> 1992;18(3):centrefold.<li data-bbox="824 812 1377 882">3) Trussell J, Ellertson C, Stewart F. The effectiveness of the Yuzpe regimen of emergency contraception. <i>Family Planning Perspectives</i> 1996;28(2):58-64, 87.

Q.11. If low-dose combined oral contraceptives (COCs) are initiated immediately after use of emergency contraceptive pills (ECPs), should a full or partial cycle be provided?

Recommendations	Rationale
<p>a) Either a full cycle of 21 hormonal pills may be provided or a woman can complete the cycle from which she took the ECPs. However, if high dose COCs (50 mcg EE) were used, completing the pill pack from which the ECPs were taken is not recommended.</p>	<p>a) There is no medical evidence indicating that less than a full cycle of COCs should be provided after ECP use. The length of the COC cycle is arbitrary.</p>
<p>b) Some providers recommend that a non-hormonal back-up method (e.g., abstinence, condoms) be used for seven days.</p>	<p>b) Use of COCs for seven days suppresses ovulation.</p> <ol style="list-style-type: none"> 1) Smith SK, Kirkman RJ, Arce BB, McNeilly AS, Loudon NB, Baird DT. The effect of deliberate omission of Trinordiol or Microgynon on the hypothalamo-pituitary-ovarian axis. <i>Contraception</i> 1986;34(5):513-22. 2) Molloy BG, Coulson KA, Lee JM, Watters JK. "Missed pill" conception: a fact or fiction? <i>British Medical Journal, Clinical Research Edition</i> 1985;290(6480):1474-5.
<p>c) Linking ECP use to long term use of COCs is helpful to women desiring COCs for contraception.</p>	<p>c) Because the woman has just used ECPs, the provider can be reasonably sure the woman is not pregnant. There is only a 2% risk of pregnancy with one-time use of ECPs.</p> <ol style="list-style-type: none"> 1) Trussell J, Stewart F. The effectiveness of postcoital hormonal contraception. <i>Family Planning Perspectives</i> 1992;24(6):262-4.

Q.12. Should emergency contraceptive pill (ECP) use be restricted to the time around expected ovulation?

Recommendations	Rationale
<p>No. ECPs can be used at any time during the menstrual cycle. If the client is concerned about the risk of pregnancy, she should receive ECPs regardless of the timing. This is especially true if the client has been using oral contraceptives (OCs).</p>	<p>It is difficult to know when ovulation occurs in a given cycle, particularly for women with irregular cycles. The risk of conception is highest between six days before and one day after ovulation.</p> <ol style="list-style-type: none">1) Webb A. Emergency contraception. <i>Fertility Control Reviews</i> 1995;4:2:3-7.2) Wilcox AJ, Weinberg CR, Baird DD. Timing of sexual intercourse in relation to ovulation. <i>New England Journal of Medicine</i> 1995;333:1517-21. <p>COC users do not have a "menstrual cycle" but withdrawal bleeding; missed OCs can permit follicular development which can lead to ovulation.</p> <ol style="list-style-type: none">1) Landgren BM, Emiczky CS. The effect on follicular growth and luteal function of "missing the pill." <i>Contraception</i> 1991;43(2):149-59.2) Killick SR, Bancroft K, Oelbaums MJ, Elstein M. Extending the duration of the pill-free interval during combined oral contraception. <i>Advances in Contraception</i> 1990;6:33-40.

Q.13. May oral levonorgestrel be recommended for use as ECPs?

Recommendations	Rationale
<p>Yes. Preliminary data suggest that 0.75 mg levonorgestrel (e.g., Postinor[®], Postinor[®] II) is at least as effective as combined oral contraceptives (COCs) for ECP use, with fewer side effects than COCs.</p> <p>When high-dose oral levonorgestrel pills are used as ECPs, two doses of 0.75 mg levonorgestrel pills are taken 12 hours apart. The first dose should be taken within 72 hours of unprotected intercourse.</p> <p>If 0.75 mg levonorgestrel pills are not available, low-dose progestin-only pills (POPs) containing levonorgestrel might be tried.</p> <p>The use of low-dose progestin-only pills (POPs) as ECPs would require a woman to take 20 of the 0.0375 mg levonorgestrel POPs or 20 of the 0.075 mg norgestrel POPs in order to get the indicated 0.75 mg dose of levonorgestrel. The total course of therapy would therefore, be 40 tablets.</p>	<p>Early studies of levonorgestrel studied a 48-hour period after unprotected intercourse compared to 72 hours for the COC method. Another study is underway wherein the time limit has been extended to 72 hours after unprotected intercourse. Preliminary studies suggest that levonorgestrel is as effective or more effective than COCs as EC. Oral levonorgestrel pills as EC could improve patient compliance because of the lower incidence of side effects than is associated with COCs as ECPs.</p> <ol style="list-style-type: none">1) Ho PC, Kwan MSW. A prospective randomized comparison of levonorgestrel with the Yuzpe regimen in post-coital contraception. <i>Human Reproduction</i> 1993;8(3):389-92.2) Trussell J, Ellertson C. Efficacy of emergency contraception. <i>Fertility Control Reviews</i>, 1995; 4(2):8-11.3) Consortium for Emergency Contraception. <i>Emergency contraceptive pills</i>. Welcome, Maryland: The Consortium, 1996. <p>An alternative regimen is comprised of a single dose of 0.6 mg of norgestrel (a racemic mixture of which levonorgestrel is the active isomer) taken within 12 hours of intercourse.</p> <ol style="list-style-type: none">1) Marechaud M. La pilule du lendemain: contraception post-coitale. <i>Soins Gynecologie Obstetrique Puericulture Pediatrie</i> Dec. 1990-Jan 1991;115-6:29-30.

Classification of Selected Procedures for contraceptives (OCs) as Emergency Contraceptive Pills (ECPs)

Procedure	Class	Rationale
Pelvic examination (speculum and bimanual)	C	<ul style="list-style-type: none"> ● Established pregnancy, the only condition which would restrict use of COCs, should be identified by history before method initiation. A pelvic exam is not necessary to ensure safe use of short-term COCs^{1,2}. ● When a pelvic exam is necessary to help evaluate the possibility of pregnancy, then it becomes Class A.
Blood pressure	C	Because of the short duration of the ECP regimen, it is highly unlikely that ECPs would have adverse effects ³ .
Breast examination	C	A breast exam is not necessary to ensure the safe use of OCs or ECPs. While any hormonal treatment may in theory cause a pre-existing lump to grow it is highly unlikely that ECPs will affect the preexisting condition, due to the short duration of the regimen ^{1,3} .
Sexually transmitted disease (STD) screening by lab tests (for asymptomatic persons)	C	STD screening by lab tests for asymptomatic clients is not necessary for the safe, short-term use of COCs ¹ .
Cervical cancer screening	C	Cervical cancer screening is unrelated to ECP use.
Routine, mandatory lab tests (e.g., cholesterol, glucose, liver function tests)	D	The effects of COCs on cholesterol, blood glucose and normal liver function are slight, and of no demonstrated clinical significance ⁴ .
Proper infection prevention procedures	C	Proper infection prevention procedures are not applicable to ECP use.
Specific counseling points for ECP use: <ul style="list-style-type: none"> ● efficacy ● correct use of the method (including instructions for vomited pills) 	A	<ul style="list-style-type: none"> ● Counseling is essential for the client to make an informed choice. ● Accurate client education regarding efficacy is necessary to prepare the client for the possible failure of the method and subsequent pregnancy⁵. ● In the event of ECPs failure, counseling on the absence of known risk of ECPs on fetal development, and referral to follow-up care, are necessary.

Procedure	Class	Rationale
<ul style="list-style-type: none"> ● what to do in the event ECPs fail ● follow-up schedule ● information on other contraceptive methods and time of initiation ● signs and symptoms for which to see a health provider 		<ul style="list-style-type: none"> ● Lower abdominal pain, abnormally light, heavy or short bleeding, and the absence of a menstrual period three weeks after using ECPs are signs that a woman could be pregnant or experiencing an ectopic pregnancy. Both of these situations require medical attention⁶. ● Appropriate counseling about common side effects of ECPs will prepare the client for the potential uncomfortable side effects and help her effectively manage them.
<ul style="list-style-type: none"> ● common side effects (including potential disruption of menstrual cycle) ● STD protection (when/as appropriate) 		<ul style="list-style-type: none"> ● ECPs commonly cause a disruption in the length of the next menstrual cycle⁷. The client needs to be aware of this temporary disturbance because the arrival of the menstrual period will signify that she is not pregnant. ● When time permits and the situation is appropriate, the client should be counseled on STD protection because the "unprotected" act of intercourse was unprotected from infection as well as from pregnancy.

KEY:

- Class A** = essential and mandatory or otherwise important in all circumstances, for safe and effective use of the contraceptive method
- Class B** = medically/epidemiologically rational in some circumstances to optimize the safe and effective use of the contraceptive method, but may not be appropriate for all clients in all settings
- Class C** = may be appropriate for good preventive health care, but not materially related to safe and effective use of the contraceptive method
- Class D** = not materially related to either good routine preventive health care or safe and effective use of the contraceptive method

Citations for Procedures Table:

- 1) World Health Organization. Improving access to quality care in family planning: medical eligibility criteria for contraceptive use. Geneva: WHO, 1996.
- 2) Program for Appropriate Technology in Health. Emergency contraception: a resource manual for providers. Seattle: PATH, 1997.
- 3) Glasier A. Emergency Contraception: time for deregulation? *British Journal of Obstetrics and Gynaecology* 1993;100:611-2.
- 4) Speroff L, Glass R, and Kase N. *Clinical gynecologic endocrinology and infertility*, 5th edition. Baltimore: Williams and Wilkins, 1994.
- 5) Potter L. Oral contraceptive compliance and its role in the effectiveness of the method. In: Cramer J, Spilker B. *Patient compliance in medical practice and clinical trials*. New York: Raven Press, Ltd., 1991.
- 6) CSAC. Emergency (postcoital) contraception guidelines for doctors. *British Journal of Family Planning* 1992;13(3):centrefold.
- 7) Haspels A. Emergency contraception: a review. *Contraception* 1994;50:101-9.