World Health Organization

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# Emergency contraception

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## Key facts

- **Emergency contraception (EC) can prevent up to over 95% of pregnancies when taken within 5 days after intercourse.**
- **EC can be used in the following situations: unprotected intercourse, concerns about possible contraceptive failure, incorrect use of contraceptives, and sexual assault if without contraception coverage.**
- **Methods of emergency contraception are the copper-bearing intrauterine devices (IUDs) and the emergency contraceptive pills (ECPs).**
- **A copper-bearing IUD is the most effective form of emergency contraception available.**
- **The emergency contraceptive pill regimens recommended by WHO are ulipristal acetate, levonorgestrel, or combined oral contraceptives (COCs) consisting of ethinyl estradiol plus levonorgestrel.**

## What is emergency contraception?

Emergency contraception refers to methods of contraception that can be used to prevent pregnancy after sexual intercourse. These are recommended for use within 5 days but are more effective the sooner they are used after the act of intercourse.

# Mode of action

Emergency contraceptive pills prevent pregnancy by preventing or delaying ovulation and they do not induce an abortion. The copper-bearing IUD prevents fertilization by causing a chemical change in sperm and egg before they meet. Emergency contraception cannot interrupt an established pregnancy or harm a developing embryo.

# Who can use emergency contraception?

Any woman or girl of reproductive age may need emergency contraception to avoid an unwanted pregnancy. There are no absolute medical contraindications to the use of emergency contraception. There are no age limits for the use of emergency contraception. Eligibility criteria for general use of a copper IUD also apply for use of a copper IUD for emergency purposes.

# In what situations can emergency contraception be used?

Emergency contraception can be used in a number of situations following sexual intercourse. These include:

- **When no contraceptive has been used.**
- **Sexual assault when the woman was not protected by an effective contraceptive method.**
- **When there is concern of possible contraceptive failure, from improper or incorrect use, such as:**
  - **condom breakage, slippage, or incorrect use;**
  - **3 or more consecutively missed combined oral contraceptive pills or 3 days late during the first week of the cycle;**
  - **more than 3 hours late from the usual time of intake of the progestogen-only pill (minipill), or more than 27 hours after the previous pill;**
  - **more than 12 hours late from the usual time of intake of the desogestrel-containing pill (0.75 mg) or more than 36 hours after the previous pill;**
  - **more than 2 weeks late for the norethisterone enanthate (NET-EN) progestogen-only injection;**
  - **more than 4 weeks late for the depot-medroxyprogesterone acetate (DMPA) progestogen-only injection;**
  - **more than 7 days late for the combined injectable contraceptive (CIC);**
  - **dislodgment, breakage, tearing, or early removal of a diaphragm or cervical cap;**
  - **failed withdrawal (e.g. ejaculation in the vagina or on external genitalia);**
  - **failure of a spermicide tablet or film to melt before intercourse;**

- **miscalculation of the abstinence period, or failure to abstain or use a barrier method on the fertile days of the cycle when using fertility awareness based methods; or**
- **expulsion of an intrauterine contraceptive device (IUD) or hormonal contraceptive implant.**

An advance supply of ECPs may be given to a woman to ensure that she will have them available when needed and can take as soon as possible after unprotected intercourse.

- **WHO Selected practice recommendations for contraceptive use**

# Shifting to regular contraception

Following use of ECPs, women or girls may resume or initiate a regular method of contraception. If a copper IUD is used for emergency contraception, no additional contraceptive protection is needed.

Following administration of ECPs with levonorgestrel (LNG) or combined oral contraceptive pills (COCs), women or girls may resume their contraceptive method, or start any contraceptive method immediately, including a copper-bearing IUD.

Following use of ECPs with ulipristal acetate (UPA), women or girls may resume or start any progestogen containing method (either combined hormonal contraception or progestogen only contraceptives) on the 6th day after taking UPA. They can have an LNG-IUD inserted immediately if it can be determined they are not pregnant. They can have the copper IUD inserted immediately.

# Methods of emergency contraception

The 4 methods of emergency contraception are:

- **ECPs containing UPA**
- **ECPs containing LNG**
- **combined oral contraceptive pills**
- **copper-bearing intrauterine devices.**

# Emergency contraception pills (ECPs) and combined oral contraceptive pills (COCs)

WHO recommends any of the following drugs for emergency contraception:

- **ECPs with UPA, taken as a single dose of 30 mg;**
- **ECPs with LNG taken as a single dose of 1.5 mg, or alternatively, LNG taken in 2 doses of 0.75 mg each, 12 hours apart.**

- **COCs, taken as a split dose, one dose of 100 µg of ethinyl estradiol plus 0.50 mg of LNG, followed by a second dose of 100 µg of ethinyl estradiol plus 0.50 mg of LNG 12 hours later. (Yuzpe method)**

## Effectiveness

A meta-analysis of two studies showed that women who used ECPs with UPA had a pregnancy rate of 1.2%. Studies have shown that ECPs with LNG had a pregnancy rate of 1.2% to 2.1% *(1) (2)*.

Ideally, ECPs with UPA, ECPs with LNG or COCs should be taken as early as possible after unprotected intercourse, within 120 hours. ECPs with UPA are more effective between 72–120 hours after unprotected intercourse than other ECPs.

## Safety

Side effects from the use of ECPs are similar to those of oral contraceptive pills, such as nausea and vomiting, slight irregular vaginal bleeding, and fatigue. Side effects are not common, they are mild, and will normally resolve without further medications.

If vomiting occurs within 2 hours of taking a dose, the dose should be repeated. ECPs with LNG or with UPA are preferable to COCs because they cause less nausea and vomiting. Routine use of anti-emetics before taking ECPs is not recommended.

Drugs used for emergency contraception do not harm future fertility. There is no delay in the return to fertility after taking ECPs.

## Medical eligibility criteria

There are no restrictions for the medical eligibility of who can use ECPs.

Some women, however, use ECPs repeatedly for any of the reasons stated above, or as their main method of contraception. In such situations, further counselling needs to be given on what other and more regular contraceptive options may be more appropriate and more effective.

Frequent and repeated ECP use may be harmful for women with conditions classified as medical eligibility criteria (MEC) category 2, 3,or 4 for combined hormonal contraception or Progestin-only contraceptives (POC). Frequent use of emergency contraception can result in increased side-effects, such as menstrual irregularities, although their repeated use poses no known health risks.

Emergency contraceptive pills were found to be less effective in obese women (whose body mass index is more than 30 kg/m2), but there are no safety concerns. Obese women should not be denied access to emergency contraception when they need it.

Counselling for use of emergency contraceptive pills should include options for using regular contraception and advice on how to use methods correctly in case of perceived method failure.

# Copper-bearing intrauterine devices

WHO recommends that a copper-bearing IUD, when used as an emergency contraceptive method, be inserted within 5 days of unprotected intercourse. This method is particularly appropriate for women who would like to start using a highly effective, long-acting, and reversible contraceptive method.

## Effectiveness

When inserted within 120 hours of unprotected intercourse, a copper-bearing IUD is more than 99% effective in preventing pregnancy. This is the most effective form of emergency contraception available. Once inserted, women can continue to use the IUD as an ongoing method of contraception, or may choose to change to another contraceptive method.

## Safety

A copper-bearing IUD is a safe form of emergency contraception. It is estimated that there may be less than 2 cases of Pelvic Inflammatory Disease (PID) per 1000 users *(3)*. (FP Global Handbook). The risks of expulsion or perforation are low.

## Medical eligibility criteria

Eligibility criteria for general use of a copper IUD also apply for use of a copper IUD for emergency purposes. Women with a condition classified as MEC category 3 or 4 (for example, with current PID, puerperal sepsis, unexplained vaginal bleeding, cervical cancer, or severe thrombocytopenia) for the copper IUD should not use a copper IUD for emergency purposes. In addition, a copper-bearing IUD should not be inserted for emergency contraception following sexual assault as the woman may be at high risk of a sexually transmitted infection such as chlamydia and gonorrhoea. A copper-bearing IUD should not be used as emergency contraception when a woman is already pregnant.

The *WHO Medical eligibility criteria for contraceptive use* states that IUD insertion may further increase the risk of PID among women at increased risk of sexually transmitted infections (STIs), although limited evidence suggests that this risk if low. Current algorithms for determining increased risk of STIs have poor predictive value. Risk of STIs varies by individual behaviour and local STI prevalence. Therefore, while many women at increased risk of STIs can generally have an IUD inserted, some women at a very high likelihood of STIs should generally not have an IUD inserted until appropriate testing and treatment occur.

- **Medical eligibility criteria for contraceptive use**

# WHO recommendations for provision of emergency contraception

All women and girls at risk of an unintended pregnancy have a right to access emergency contraception and these methods should be routinely included within all national family planning programmes. Moreover, emergency contraception should be integrated into health care services for populations most at risk of exposure to unprotected sex, including post-sexual assault care and services for women and girls living in emergency and humanitarian settings.

- **Ensuring human rights within contraceptive programmes: a human rights analysis of existing quantitative indicators**

WHO reaffirms its commitment to constantly reviewing emerging evidence through its Continuous Identification of Research Evidence (CIRE) system and also by regularly updating its guidance accordingly.

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*(1)* Can we identify women at risk of pregnancy despite using emergency contraception? Data from randomized trials of ulipristal acetate and levonorgestrel.
Glasier A, Cameron ST, Blithe D, Scherrer B, Mathe H, Levy D, et al. Contraception. 2011 Oct;84(4):363-7. doi: 10.1016/j.contraception.2011.02.009. Epub 2011 Apr 2.

*(2)* Effect of BMI and body weight on pregnancy rates with LNG as emergency contraception: analysis of four WHO HRP studies.
Festin MP, Peregoudov A, Seuc A, Kiarie J, Temmerman M. Contraception. 2017 Jan;95(1):50-54. doi: 10.1016/j.contraception.2016.08.001. Epub 2016 Aug 12.

*(3)* Family planning: a global handbook for providers 2011 Update
Johns Hopkins Bloomberg School of Public Health/Center for Communication Programs and World Health Organization

## Related documents

- **Medical eligibility criteria for contraceptive use**