



Complete Summary

GUIDELINE TITLE

Drug interactions with hormonal contraception.

BIBLIOGRAPHIC SOURCE(S)

Faculty of Family Planning and Reproductive Health Care Clinical Effectiveness Unit. FFPRHC Guidance (April 2005). Drug interactions with hormonal contraception. J Fam Plann Reprod Health Care 2005 Apr;31(2):139-51. [117 references] [PubMed](#)

GUIDELINE STATUS

This is the current release of the guideline.

** REGULATORY ALERT **

FDA WARNING/REGULATORY ALERT

Note from the National Guideline Clearinghouse: This guideline references a drug(s) for which important revised regulatory and/or warning information has been released.

- [January 19, 2008, Ortho Evra](#): The U.S. Food and Drug Administration (FDA) modified the prescribing information to include results of a new epidemiology study that found that users of the birth control patch were at higher risk of developing serious blood clots, also known as venous thromboembolism (VTE), than women using birth control pills.

COMPLETE SUMMARY CONTENT

** REGULATORY ALERT **

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INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT

CATEGORIES

IDENTIFYING INFORMATION AND AVAILABILITY

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SCOPE

DISEASE/CONDITION(S)

- Unintended pregnancy
- Drug interactions with hormonal contraception

GUIDELINE CATEGORY

Counseling
Management
Prevention

CLINICAL SPECIALTY

Family Practice
Internal Medicine
Obstetrics and Gynecology
Pharmacology

INTENDED USERS

Advanced Practice Nurses
Nurses
Patients
Pharmacists
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

- To provide information for clinicians and women using hormonal contraception applicable when concurrent medications are prescribed
- To summarize evidence on interactions between hormonal contraception and liver enzyme-inducing drugs, non-liver enzyme-inducing antibiotics, drugs which may be toxic if serum concentrations increase, and commonly used drugs (prescription and non-prescription), which do and do not affect contraceptive efficacy

TARGET POPULATION

Women of reproductive age using contraception who have been prescribed concomitant medication

INTERVENTIONS AND PRACTICES CONSIDERED

1. Enquire and counsel patient about current and previous drug use, including prescription, non-prescription, and herbal drug use
2. Provide women with information about possible drug interaction between hormonal contraception and other drugs

3. Encourage women to consider a contraceptive method that is unaffected by the interacting drug
4. Educate women about which drugs may reduce the efficacy of hormonal contraception and advise about additional contraceptive protection, such as condoms

MAJOR OUTCOMES CONSIDERED

- Mechanism of drug interaction with hormonal contraception
- Efficacy of hormonal contraception
- Effects of drug interactions on contraceptive efficacy

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Electronic searches were performed for MEDLINE (CD Ovid version) (1990-2004); EMBASE (1990-2004); PubMed (1990-2004); the Cochrane Library (to November 2004), and the US National Guideline Clearing House. The searches were performed using relevant medical subject headings (MeSH), terms, and text words. The Cochrane Library was searched for systematic reviews, meta-analyses, and controlled trials relevant to drug interactions with hormonal contraception. Previously existing guidelines from the Faculty of Family Planning and Reproductive Health Care (FFPRHC), the Royal College of Obstetricians and Gynaecologists (RCOG), the World Health Organization (WHO), and reference lists of identified publications were also searched. Similar search strategies have been used in the development of other national guidelines.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Selected key publications were appraised according to standard methodological checklists before conclusions were considered as evidence. Evidence was graded using a scheme similar to that adopted by the Royal College of Obstetricians and Gynaecologists (RCOG) and other guideline development organizations.

Evidence tables are available on the Faculty of Family Planning and Reproductive Health Care (FFPRHC) Web site (<http://www.ffprhc.org.uk/>). These summarise relevant published evidence on drug interactions with hormonal contraception, which was identified and appraised in the development of this Guideline.

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Grades of Recommendation

A Evidence based on randomised controlled trials (RCTs)

B Evidence based on other robust experimental or observational studies

C Evidence is limited but the advice relies on expert opinion and has the endorsement of respected authorities

Good Practice Point where no evidence exists but where best practice is based on the clinical experience of the Expert Group

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Definitions of the grades of recommendation based on levels of evidence (A-C, Good Practice Point) are provided at the end of the "Major Recommendations" field.

What should be discussed when prescribing drugs to women using hormonal contraception?

1. Clinicians should consider the possibility of a drug interaction when prescribing contraception and when prescribing other medicines to women using hormonal contraception **(Good Practice Point)**.
2. Clinicians giving women information on contraceptive options should enquire about current and previous drug use; prescription, nonprescription and herbal drug use; and specifically about use of drugs which induce liver enzymes and non-liver enzyme-inducing antibiotics **(Good Practice Point)**.
3. Women should be informed that some drugs might reduce the effectiveness of hormonal contraception and should be advised where to seek advice if other drugs are taken **(Good Practice Point)**.
4. After counseling, women using short courses of drugs that interact with hormonal contraception may choose to continue their current hormonal method even if additional contraception, such as condoms, is required. However, women on long-term courses of drugs that continue to interact with hormonal contraception should be encouraged to consider a contraceptive method that is unaffected by the interacting drug **(Good Practice Point)**.

What drugs may reduce the efficacy of hormonal contraception?

Liver Enzyme-inducing Drugs

5. Women should be informed that drugs which induce liver enzymes can reduce the efficacy of combined hormonal contraception, progestogen-only pills (POPs), and implants but do not appear to reduce the efficacy of progestogen-only injectables or the levonorgestrel-releasing intrauterine system (LNG-IUS) **(Grade C)**.

Refer to Table 1 titled, "Drugs that induce liver enzymes and relevant associated drugs that do not induce liver enzymes" in the original guideline document for additional information.

Non-liver Enzyme-inducing Antibiotics

6. Women should be informed that non-liver enzyme-inducing antibiotics can reduce the efficacy of combined hormonal contraception but there is no reduction in the efficacy of progestogen-only methods **(Grade C)**.

What advice should be given to women using hormonal contraception and liver enzyme-inducing drugs?

Combined Hormonal Contraception

7. Women taking liver enzyme-inducing drugs who wish to use combined oral contraception (COC) should choose a regimen containing at least 50 micrograms ethinylestradiol (EE) daily. Additional contraceptive protection, such as condoms, should be used until 4 weeks after the liver enzyme-inducing drug has been stopped. Information should be given on the use of alternative methods of contraception if liver enzyme-inducing drugs are to be used long term **(Grade C)**.
8. Breakthrough bleeding does not necessarily indicate low serum EE concentrations and risk of ovulation. Nevertheless, women using liver enzyme-inducing drugs with breakthrough bleeding may increase their dose of EE above 50 micrograms daily **(Good Practice Point)**.
9. No evidence was identified that supports omitting or reducing the pill-free interval to reduce the risk of ovulation in women using liver enzyme-inducers **(Good Practice Point)**.
10. Women using liver enzyme-inducing drugs may use a combined contraceptive patch with additional contraceptive protection, such as condoms, until 4 weeks after the liver enzyme-inducing drug has been stopped. Information should be given on the use of alternative methods of contraception **(Grade C)**.
11. Women using even short courses of rifampicin (for prophylaxis) should be advised to use additional contraception during the course and for 4 weeks afterwards **(Grade C)**.

Refer to Table 2, "Advice regarding contraceptive use for women using liver enzyme-inducing drugs" in the original guideline document for additional information.

Progestogen-only Contraception

12. Women using liver enzyme-inducing drugs should be advised that progestogen-only injectables are unaffected and can be continued with the usual injection interval **(Grade C)**.
13. Women using liver enzyme-inducing drugs in the short term may choose to continue with progestogen-only implants. Additional contraceptive protection, such as condoms, should be used until 4 weeks after the liver enzyme-inducing drug has stopped. Information should be given on the use of alternative contraception if liver enzyme-inducing drugs are to be used long term **(Good Practice Point)**.
14. Women using POPs should be advised to consider alternative contraception if liver enzyme-inducing drugs are used **(Grade C)**.
15. Women can be advised that the LNG-IUS appears to be unaffected by liver enzyme-inducing drugs **(Grade B)**.
16. Women using liver enzyme-inducing drugs who require progestogen-only emergency contraception (POEC) should be advised: to take a total of 2.25 mg levonorgestrel (LNG) as a single dose as soon as possible and within 72 hours of unprotected sex; that this use is outside the product license; and about the alternative use of an intrauterine contraceptive device (IUD) **(Grade C)**.

What advice should be given to women using hormonal contraception and non-liver enzyme-inducing antibiotics?

17. Women should be advised that pregnancies have been reported in COC users taking non-liver enzyme-inducing antibiotics, but the evidence does not generally support reduced COC efficacy and causation **(Grade B)**.
18. A COC user taking a short course (less than 3 weeks) of non-liver enzyme-inducing antibiotics should be advised to use additional contraceptive protection, such as condoms, during the treatment and for 7 days after the antibiotic has been stopped. If fewer than seven active pills are left in the pack after antibiotics have stopped, she should omit the pill-free interval (or discard any inactive pills) **(Grade C)**.
19. A combined contraceptive patch user taking a short course (less than 3 weeks) of non-liver enzyme-inducing antibiotics (except tetracycline) should be advised to use additional contraceptive protection, such as condoms, during the treatment and for 7 days after the antibiotic is stopped. If there are less than 7 days remaining before her usual patch-free week, another patch should be applied when due for changing and the patch-free week delayed by 7 days **(Grade C)**.
20. A woman who is an established user of non-liver enzyme-inducing antibiotics (longer than or equal to 3 weeks) does not require additional contraceptive protection when starting combined hormonal contraception unless she changes to a different antibiotic **(Grade C)**.
21. Women should be informed that the efficacy of progestogen-only methods of contraception is not reduced by non-liver enzyme-inducing antibiotics and additional contraceptive protection is not required **(Grade C)**.
22. Women using non-liver enzyme-inducing antibiotics (short- or long-term) who require POEC may be advised that the usual dose (1.5 mg within 72 hours of unprotected intercourse) is appropriate **(Grade C)**.

Refer to Table 3, "Advice regarding contraceptive use for women using non-liver enzyme inducing antibiotics" in the original guideline document for additional information.

Definitions:

Grades of Recommendation

A Evidence based on randomised controlled trials (RCTs)

B Evidence based on other robust experimental or observational studies

C Evidence is limited but the advice relies on expert opinion and has the endorsement of respected authorities

Good Practice Point where no evidence exists but where best practice is based on the clinical experience of the Expert Group

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations" field).

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate counseling and management of women of reproductive age who are prescribed medication that may affect contraceptive efficacy

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- This guideline does not consider the effects on hormonal contraception of the underlying condition that necessitated concurrent medication.
- There is a lack of good quality, robust evidence on the effects of drugs on hormonal contraception. Most data was obtained from case reports, which provides limited evidence. Pregnancy has been reported in women using hormonal contraception following use of concomitant drugs. Nevertheless, this does not prove that the drug was responsible for contraceptive failure leading to pregnancy.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Faculty of Family Planning and Reproductive Health Care Clinical Effectiveness Unit. FFPRHC Guidance (April 2005). Drug interactions with hormonal contraception. *J Fam Plann Reprod Health Care* 2005 Apr;31(2):139-51. [117 references] [PubMed](#)

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2005 Apr

GUIDELINE DEVELOPER(S)

Faculty of Sexual and Reproductive Healthcare - Professional Association

SOURCE(S) OF FUNDING

Faculty of Family Planning and Reproductive Health Care

GUIDELINE COMMITTEE

Clinical Effectiveness Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the [Faculty of Family Planning and Reproductive Health Care Web site](#).

Print copies: Available from the Faculty of Family Planning and Reproductive Health Care, 27 Sussex Place, Regent's Park, London NW1 4RG

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on July 19, 2005. This summary was updated by ECRI on October 4, 2006 following the new FDA advisory on Ortho Evra. This summary was updated by ECRI Institute on February 4, 2008 following the new U.S. Food and Drug Administration advisory on Ortho Evra Contraceptive Transdermal Patch.

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Date Modified: 11/3/2008

