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Missed Hormonal Contraceptives: New Recommendations

This committee opinion has been reviewed by the Social and Sexual Issues Committee and reviewed and approved by the Executive of the Society of Obstetricians and Gynaecologists of Canada.

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Abstract

Objective: To provide evidence-based guidance for women and their health care providers on the management of missed or delayed hormonal contraceptive doses in order to prevent unintended pregnancy.

Evidence: Medline, PubMed, and the Cochrane Database were searched for articles published in English, from 1974 to 2007, about hormonal contraceptive methods that are available in Canada and that may be missed or delayed. Relevant publications and position papers from appropriate reproductive health and family planning organizations were also reviewed. The quality of evidence is rated using the criteria developed by the Canadian Task Force on Preventive Health Care.

Benefits, Harms, and Costs: This committee opinion will help health care providers offer clear information to women who have not been adherent in using hormonal contraception with the purpose of preventing unintended pregnancy.

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Summary Statements

1. Instructions for what women should do when they miss hormonal contraception have been complex and women do not understand them correctly. (I)
2. The highest risk of ovulation occurs when the hormone-free interval is prolonged for more than seven days, either by delaying the start of combined hormonal contraceptives or by missing active hormone doses during the first or third weeks of combined oral contraceptives. (II)

Key Words: Missed hormonal contraception, missed oral contraception, missed pills, pill omission, compliance, adherence, missed vaginal contraceptive ring, missed contraceptive patch, misuse of contraception, administration, therapeutic use, efficacy, ovarian follicular development, ovarian activity, ovarian development, inhibition of ovulation, hormone-free interval

Ovulation rarely occurs after seven consecutive days of combined oral contraceptive use. (II)

Recommendations

1. Health care providers should give clear, simple instructions, both written and oral, on missed hormonal contraceptive pills as part of contraceptive counselling. (III-A)
2. Health care providers should provide women with telephone/electronic resources for reference in the event of missed or delayed hormonal contraceptives. (III-A)
3. In order to avoid an increased risk of unintended pregnancy, the hormone-free interval should not exceed seven days in combined hormonal contraceptive users. (II-A)
4. Back-up contraception should be used after one missed dose in the first week of hormones until seven consecutive days of correct hormone use are established. In the case of missed combined hormonal contraceptives in the second or third week of hormones, the hormone-free interval should be eliminated for that cycle. (III-A)
5. Emergency contraception and back-up contraception may be required in some instances of missed hormonal contraceptives, in particular when the hormone-free interval has been extended for more than seven days. (III-A)
6. Back-up contraception should be used when three or more consecutive doses/days of combined hormonal contraceptives are missed in the second and third week until seven consecutive days of correct hormone use are established. For practical reasons, the scheduled hormone-free interval should be eliminated in these cases. (II-A)
7. Emergency contraception is rarely indicated for missed combined hormonal contraceptives in the second or third week of the cycle unless there are repeated omissions or failure to institute back-up contraception after the missed doses. In cases of repeated omissions of combined hormonal contraceptives, emergency contraception may be required, and back-up contraception should be used. Health care professionals should counsel women in these situations on alternative methods of contraception that do not demand such stringent compliance. (III-A)

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ABBREVIATIONS

COC	combined oral contraceptive
CHC	combined hormonal contraception
DMPA	depot medroxyprogesterone acetate
DSG	desogestrel
EC	emergency contraception
EE	ethinyl estradiol
FSH	follicle stimulating hormone
HFI	hormone-free interval
HC	hormonal contraceptive
LNG	levonorgestrel
Patch	transdermal contraceptive patch
Ring	vaginal contraceptive ring
NG	norgestrel
NGM	norgestimate
OC	oral contraceptive
RCT	randomized controlled trial
WHO	World Health Organization

INTRODUCTION

Despite the fact that Canadian women have access to a wide range of contraceptive options, unplanned pregnancies still occur.[1] According to the 2006 Canadian Contraception Study, 50% of sexually active women in Canada use a hormonal contraceptive method. Oral contraceptives are the most popular method, used by 43.8% of women, followed by depot medroxyprogesterone acetate (Depo-Provera, 2.4%), the contraceptive patch (Evra, 1.2%), and the vaginal contraceptive ring (NuvaRing, 0.6%).[2] Correct and consistent use of any contraceptive method is essential to its effectiveness, but adherence may vary significantly by contraceptive method. Hormonal contraceptives are nearly 100% effective with perfect use; however, typical failure rates in the range of 3% to 9%[3,4] reflect the fact that adherence with daily, weekly, monthly, or even tri-monthly regimens is a problem. Women commonly fail to take hormonal contraception as directed. Up to 60% of COC users report irregular COC use, including missing pills or starting new pill packages late.[5] North American studies have found that approximately 50% of women take one pill every day[6] but that the percentage of women missing at least three pills a month can vary from 10% to 51%.[5] In one survey conducted in 10 countries, nearly 75% of pill users forgot to take their daily pill when at home, and more than 25% said that they were more likely to forget to take their pill when on holiday.[7]

Although there are a number of guidelines for steps to take in the event of missed hormonal contraception, these instructions are often perceived as being too complex, because they vary for the type of pill, the number of pills missed, and the timing of the missed pill. Studies have found that although women may know what to do when one pill is missed, fewer women know what to do when two or more pills in a row are missed.[8] Women in these studies reported that graphic instructions for missed pills were easier to understand than text-only instructions, and that simplified forms were easier to comprehend than more complex versions.[8]

The current guidelines for missed hormonal contraception and the relevant literature on contraceptive efficacy, ovulation inhibition, and mechanism of action of hormonal contraceptives were reviewed in order to provide simplified, written, evidence-based instructions to women and health care providers for dealing with missed hormonal contraception. Recognizing that hormonal contraceptives have multiple mechanisms of action, that there is no direct evidence assessing the impact of missed pills on the risk of unintended pregnancy, that there may be significant variation among users, and that there are no studies assessing the