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How family planning providers and programs can help clients choose and use suitable methods

When Contraceptives Change Monthly Bleeding



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Key Points

Changes in vaginal bleeding make more women stop using hormonal family planning methods or IUDs than any other method-related reason, and sometimes bleeding changes are the most common reason overall. When women are considering these methods, informing and counseling them about bleeding changes helps them choose methods that suit them, and it helps them know what to expect. If the methods cause bothersome bleeding changes, managing the problems can help women continue to prevent unwanted pregnancy effectively. In fact, addressing bleeding changes may be the most important way that family planning providers can help users of these methods.

Combined hormonal methods usually make monthly bleeding lighter and more predictable. Progestin-only methods can cause bleeding changes that range from spotting and bleeding at unexpected times to no monthly bleeding. Copper IUDs can cause somewhat heavier and longer monthly bleeding.

These steps can help new clients decide whether to choose a family planning method that may change monthly bleeding:

- Describe the common bleeding changes in ways that clients understand, including how the changes may vary over time.
- Explain that such bleeding changes are normal with these contraceptives. They are not harmful, and they are not signs of illness.
- Help each client consider how she would feel and what she would do if these bleeding changes happened to her.
- Invite her to return any time that she has concerns.

These steps can help continuing clients manage bleeding changes caused by a family planning method:

- In the first few months of use, explain that the changes probably will lessen with time.
- If the bleeding changes persist, or at any time a client asks, offer available treatments to relieve the bleeding changes.
- At any time a client finds bleeding changes unacceptable, help her choose a method that better suits her.

See companion INFO Reports, "Key Facts About the Menstrual Cycle"

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Family Planning Programs

Photo: A family planning provider in El Salvador uses a diagram of a woman's reproductive organs to describe how different family planning methods affect a woman's menstrual cycle.

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POPULATION REPORTS

Bleeding Changes Affect Contraceptive Choice and Use

Menstruation, the vaginal bleeding that women experience monthly for much of their lives, can mean many different things to women—a sign of femininity, youth, and the ability to reproduce, a reassurance of not being pregnant, and an indicator of health. It also can mean a monthly chore, pain, restricted contact with family and friends, limitations on activities, and feeling and being regarded as “unclean.” The onset of monthly bleeding signals the beginning of fertility. Its sudden absence may indicate pregnancy or health problems.

It is no surprise, then, that many women are concerned when a contraceptive method changes monthly bleeding. These bleeding changes differ, depending on the method. Combined hormonal methods—the pill and monthly injectables, for example—tend to make monthly bleeding shorter and more predictable. Progestin-only methods such as long-acting injectables, implants, progestin-only oral contraceptives (“the minipill”), and the hormonal levonorgestrel-releasing IUD (LNG-IUD) all can cause bleeding changes that range from bleeding and spotting at unexpected times to no monthly bleeding.¹ Copper IUDs do not change the length of menstrual cycles but do tend to cause somewhat heavier and longer monthly bleeding. Often, the same method can have different effects for different women or different effects over time for the same woman.

These bleeding changes are rarely harmful, and they do not signify underlying or impending illness. Nonetheless, bleeding changes constitute women’s most commonly reported method-related reason—and sometimes the most common reason overall—for discontinuing hormonal methods and copper IUDs (4, 15, 30, 34, 35, 39, 40, 47, 49, 61, 112, 119, 120, 152, 156).

Bleeding changes are rarely harmful, and they do not signify underlying or impending illness.

While many women stop their method due to bleeding changes, other women are less bothered. For example, in a clinical trial of the copper TCU-380A IUD in Nigeria, Peru, and Turkey, only 6% of women reporting menstrual complaints had their IUDs removed for this reason (48). Also, discontinuation rates vary by country. For instance, rates of discontinuation of the TCU-380A IUD due to bleeding changes have varied from 1 per 100 women (in Cameroon)

to 17 per 100 women (in Egypt) after 12 months of use (see Quick Look, below). In Peru 0 per 100 women discontinued the combined monthly injectable because of bleeding changes, whereas in Colombia 9 per 100 women did (15). In Pakistan 11 per 100 women discontinued progestin-only pills as a result of bleeding changes, while 0 per 100 women in Ghana did so (61).



Discontinuation of Contraceptive Methods Due to Bleeding Changes Varies in Clinical Trials^a

Contraceptive Method	Rates of Discontinuation per 100 Women at 12 Months Due to:	
	No Monthly Bleeding	Other Bleeding Changes
Combined Oral Contraceptives	0.2 to 7 ^b	
Combined (Monthly) Injectables	0 to 5 ^c	0 to 13 ^c
Progestin-Only Oral Contraceptives ^d	6 to 26 ^c	
Progestin-Only Injectables ^d	7 to 13 ^f	13 to 15 ^f
Implants ^d	0 to 12 ^g	
Hormonal IUD ^d	2 to 5 ^h	6 ^h
Copper IUDs	Not applicable ⁱ	1 to 17 ^j

^a Studies selected for adequate sample size, covering multiple centers or multiple countries, sound study methodology, and discontinuation rates reported as gross cumulative life table rates. (Gross cumulative rates are discontinuation rates for a single event among current users. That is, when the rate is calculated, discontinuations for other reasons are taken into account. These are most appropriate for comparing event rates among different methods.)

^b Sources: Dunson 1993 (38), Dunson 1993 (40), McLaurin 1991 (90)

^c Sources: Bassol 2000 (15), Cuong 1996 (32), Garza-Flores 1998 (56), Hassan 1999 (66), Koetsawang 1994 (83), Martinez 1998 (88), World Health Organization 1988 (153)

^d Breastfeeding women may be more likely than women not breastfeeding to tolerate bleeding changes with progestin-only methods. Discontinuation rates, however, are not reported for breastfeeding women and for other women separately in these studies.

^e Sources: Dunson 1993 (39), Sheth 1982 (118)

^f Sources: Cuong 1996 (32), Said 1986 (113)

^g Sources: Ba 1999 (12), Grubb 1995 (61), Sivin 1998 (120), Sivin 1998 (124), Zheng 1999 (161)

^h Sources: Andersson 1994 (9), Luukkainen 1986 (86), Pakarinen 2003 (101), Sivin 1990 (121). For discontinuation rates due to “other bleeding changes,” Luukkainen 1986 (86) and Sivin 1990 (121), report rates for bleeding issues and/or pain.

ⁱ No monthly bleeding is uncommon among users of copper IUDs. Thus, discontinuation rates are not reported for this bleeding change.

^j Sources: Farr 1994 (47), Farr 1995 (48), Farr 1996 (49), Petta 1994 (103), Reinprayoon 1998 (108), Sivin 1984 (119), World Health Organization 1997 (156)

¹ In this report the medical term for absence of monthly bleeding—amenorrhea—is used only in relation to pregnancy or disease to make the distinction between medical conditions and a normal and harmless contraceptive side effect.

How To Use This Report

Family planning providers can use this report to:

- Help explain possible bleeding changes to clients considering certain contraceptive methods (see p. 12).
- Help clients choose a family planning method with bleeding changes that they can accept, or else a method that does not change bleeding, if that is their preference (see p. 6).
- Offer practical advice and, when available, treatment to clients who experience bleeding changes due to their contraceptive methods (see pp. 10–11).
- Learn when bleeding changes might *not* be related to contraception and need referral for further investigation (see p. 12).
- Better understand the personal and social factors that affect women's views on menstruation so they can better counsel about bleeding changes due to contraceptives (see p. 14).

Programs and organizations can use this report to:

- Learn creative approaches for educating girls and young women about menstruation and preparing them for the start of monthly bleeding (see pp. 16–17).
- Work with parents and communities to increase understanding about menstruation and to help correct mistaken beliefs (see pp. 17–18).

How a woman reacts to bleeding changes and what she tolerates depends on many factors, such as on the type of bleeding change and how severe it is, on whether it interferes with her daily activities or personal relationships, and on traditional beliefs or restrictions surrounding bleeding (see p. 14). How she reacts also depends on what she knows about these bleeding changes—what they mean and what they do not mean.

Providers and Programs Can Help

The contraceptives that can cause bleeding changes are the most effective reversible family planning methods, and many women choose them for their effectiveness. Thoroughly discussing possible bleeding changes ahead of time and helping manage any bleeding changes that prove bothersome are among the most important ways that family planning providers can help these women continue to prevent unwanted pregnancy (see p. 5).

Bleeding changes are just one topic that family planning providers need to discuss with clients considering hormonal methods or IUDs. Other key topics include effectiveness, other advantages and disadvantages of the method, how to use the method, when to return, and, as appropriate, prevention of sexually transmitted infections (94).

At a broader level, a better understanding of menstruation can improve women's well-being—not only women's own understanding but the understanding of family members and the community as well. Family planning programs can work with other organizations to improve knowledge and change attitudes about menstruation. Educating adolescent girls, mothers, and other family members about the start of menstruation during adolescence and about hygiene during monthly bleeding is especially important (see box, pp. 16–17).

Contraceptive Methods That ...

Change Bleeding



Do Not Change Bleeding



Left: Combined and progestin-only contraceptives, copper and hormonal IUDs, injectables, the patch, vaginal ring, and implants all change monthly bleeding to different degrees. Also, the Lactational Amenorrhea Method (LAM)—breastfeeding in a way that reliably postpones the return of fertility—delays the return of monthly bleeding after childbirth. Right: Male and female sterilization, barrier methods (male and female condoms and the diaphragm), spermicides, and fertility-awareness based methods do not change monthly bleeding.

Illustrations: Left, Rita Meyer and Fran Mueller/Johns Hopkins' CCP; Right, Rita Meyer and Mark Beisser/Johns Hopkins' CCP

Counseling and Treatment Can Help

Counseling family planning clients about potential bleeding changes with hormonal methods and IUDs helps them to choose suitable methods, increases their satisfaction with those methods, and encourages continued use of effective methods. Before a woman starts a new method, counseling about these methods includes describing the potential bleeding changes, explaining that these changes are normal and not harmful, and discussing how she would feel about these changes. Preparing clients in advance for potential bleeding changes helps them avoid unnecessary worry if they experience such changes.

Providers can encourage clients to return if they have problems. For the continuing user, bleeding problems often can be managed through counseling and sometimes treatment. Of course, providers should always offer clients the choice of switching methods if they are not satisfied or if their needs or preferences have changed.

Besides good counseling, family planning programs can employ other strategies to help clients continue to use contraception effectively. For example, health care workers can visit clients' homes. Community-based agents or outreach personnel can discuss the client's experience with the method, answer questions, help solve problems, and facilitate clinic visits if needed. This approach can reach clients who might stop a method despite continuing need but do not return to the clinic (76, 80). (A forthcoming issue of *Population Reports*, "Developing a Continuing Client Strategy," will discuss ways to help clients continue preventing unwanted pregnancies.)

Counseling Improves Client Satisfaction and Continuation

Women who know in advance about possible bleeding changes are more satisfied with their method. For example, in Indonesia users of *Norplant*[®] implants who were more knowledgeable about the method and about potential bleeding changes were more satisfied with the method

Preparing clients in advance for potential bleeding changes helps them avoid unnecessary worry.

than those who had less knowledge. In the province with the greatest differences in satisfaction, 98% of women with a "high" level of knowledge about the method were satisfied overall compared with 33% of women with a "low" level of knowledge (129). In Finland users of the hormonal levonorgestrel-releasing IUD (LNG-IUD) who reported receiving "a lot" of information about the occasional or complete absence of monthly bleeding with the method were five times more satisfied than LNG-IUD users who

reported receiving "very little" information (13). Such findings may suggest both better-informed method choices and better-prepared users.

Evidence from diverse places—Bolivia, China, and Mexico—suggests that in-depth explanatory counseling about bleeding changes and encouragement to return with any problems contributes to longer use of a method. Repeating this information at follow-up visits may help (63).

For example, in a rural area of Yucatan, Mexico, women generally believe that absence of monthly bleeding is bad for health. In a study of Yucatan women who chose the progestin-only DMPA injectable, women who had received in-depth counseling continued using the injectable longer than women who received only routine counseling. Routine counseling consisted of general information about DMPA side effects, given at the first visit only. In-depth counseling consisted of information about the risks, benefits, and overall characteristics of the method, including common side effects such as lack of monthly bleeding, bleeding and spotting at unexpected times, and heavy bleeding. Providers also emphasized that side effects are not harmful, and they encouraged clients to return to the clinic if they had any concerns. These messages were repeated at each reinjection visit, every three months. Among women receiving routine counseling, 27% had discontinued the method at 12 months due to absence of monthly bleeding or bleeding at unexpected times, compared with 6% of women given in-depth and repeated counseling (21).

Similarly, in Sichuan Province, China, women who received in-depth, structured counseling before and during DMPA use were significantly less likely to have discontinued the method because of bleeding irregularities at 12 months than women who received routine counseling—5% compared with 19% (85). The in-depth counseling covered mode of action and common side effects. It made the point that bleeding irregularities would lessen with continued use. Also, these clients watched a video of satisfied DMPA users and received an informational booklet about the method. The group of women who received routine counseling did not receive information about potential side effects unless they asked.

In 30 government health centers in Bolivia, women who said they were told at the first visit that monthly bleeding might stop were more likely to be using DMPA after 12 months than women who said that they did not receive such information (73% compared with 57%) (71). In addition, 71% of women who said they were advised to return to the clinic in case of side effects were still using DMPA at 12 months compared with 42% of women who said they did not receive that advice.

Useful Steps and Explanations To Help the **NEW** Client Consider Monthly Bleeding Changes

Describe common bleeding changes, including how these changes may vary over time (see Counseling Aid, p. 12).

- Providers can give information during one-to-one counseling or during group sessions.
- Visual aids (such as flipcharts, wall charts, cue cards, and checklists) are useful tools to help present information. For example, an illustration of the menstrual cycle from the *Decision-Making Tool for Family Planning Clients and Providers* (150), adapted and reprinted in the companion *INFO Reports*, “Key Facts About the Menstrual Cycle,” can help to explain how menstruation works and how contraceptive methods affect it.

Explain bleeding changes in ways that clients easily understand.

- For instance, in India some providers compare absence of monthly bleeding with certain contraceptives to agricultural practices (7): A farmer prepares her field before sowing seeds by tilling the soil so that the seeds can easily take root and grow. In a similar fashion, a woman’s body prepares for pregnancy by the thickening of the womb lining (like tilling the soil) so that an egg (seed) that is released can easily implant in the womb and grow. If the farmer does not want to grow anything in her field, however, she will not need to till the soil. Similarly, if a woman uses contraception because she does not want to get pregnant, the egg is not released (with some hormonal methods) and so the womb lining does not need to thicken to prepare for a fertilized egg. Thus, the womb lining does not need to shed as monthly bleeding because it has not thickened.

Describe how likely the bleeding changes are.

- Focus first on the most likely bleeding changes (see Counseling Aid, p. 12).
- Use descriptive terms and comparisons. For instance, absence of monthly bleeding is quite common with progestin-only injectables but uncommon with combined injectables.
- Use both positive and negative statements. For example, almost half of women using DMPA stop having monthly bleeding by the time they have used the method for 12 months, and slightly more than half do not experience absence of monthly bleeding (147).

Explain that these bleeding changes are normal with these contraceptives.

- These changes are not signs that something is wrong with her health.
- Providers can dispel common myths about bleeding changes associated with contraceptives (see box, p. 8).
- To help ensure that providers have up-to-date and accurate knowledge about bleeding changes, initial training and refresher courses can cover this information, and supervisors can repeat it.

Discuss with the client how she would feel if these bleeding changes happened to her.

- Would such changes be bothersome or interfere with her daily life? How would they affect the client’s sexual relationship with her partner?
- How would she interpret the specific bleeding changes? For instance, with DMPA how would she feel if she did not bleed monthly? Would she welcome it or would she worry that it is a sign of illness or pregnancy? Would she want to change methods if she had these side effects? (It is not the bleeding change itself, but rather how the woman feels about it and interprets it that will determine how she reacts.)
- How would her partner and other family members feel about and interpret the bleeding change? Other family members often play important roles in a woman’s contraceptive decision-making process (133, 134).

If the woman has a medical condition that could be relieved by certain family planning methods, mention that.

- In some cases bleeding changes with a hormonal method can help relieve existing menstrual problems or reproductive conditions (see Quick Look, p. 9). For women with these conditions, this could be a factor in their choice of a contraceptive method.

Once the client has chosen a method, explain all possible bleeding changes and how these changes may vary over time.

- Stress again that these bleeding changes are normal and not signs of serious illness.
- Encourage the client to return any time that she has concerns.

Useful Steps and Explanations To Help the **CONTINUING** Client Manage Bleeding Changes Caused by Her Method

In the first few months of use, explain that the changes probably will lessen with time.

- Common with all hormonal methods and IUDs: Breakthrough bleeding and spotting, bloody vaginal discharge at an unexpected time during the cycle.
- Injectables, implants, copper IUDs, and the LNG-IUD can also cause prolonged or heavy bleeding in the first few months.
- These problems usually lessen or stop with time.

If the client is using pills for contraception, check that she is taking a pill each day.

- Skipping or missing pills repeatedly can lead to even more bleeding irregularities and also could make the pills less effective.
- New pill users, particularly, may skip pills, thinking wrongly that this will relieve side effects.

If the bleeding problems persist or the client asks at any time, offer available treatments (see Provider Guide, pp. 10–11).

- Treatment may improve bleeding symptoms and help the client use her method longer (105).
- If there is reason to suspect an underlying medical condition unrelated to the contraceptive, such as pregnancy, infection, or cancer, refer for diagnosis (see Provider Guide, p. 12).

If at any time the client finds the bleeding changes unacceptable or is not satisfied with the method for any other reason, help her choose an available method that better suits her.

- Clients can be counseled to have patience and wait for bleeding problems to lessen. Providing this kind of support is especially important given that the contraceptive methods that cause bleeding changes are also among the most effective methods. Still, no client should feel pressured to keep using a method that she wants to change. Any family planning client having problems with a method should be offered a change of methods as one of her options. Using the Counseling Aid on p. 12, the provider can counsel the client on other effective methods that are less likely to cause the bleeding changes that she finds unacceptable.
- It is particularly important to ask users of implants and IUDs if they want to switch, since women cannot stop using these methods without a provider's help.
- If the client wants a method that does not affect her menstrual cycle, the client can consider condoms or fertility-awareness based methods, such as the *Standard Days Method*® or the *TwoDay Method*®. A client needs to understand that these methods require her partner's cooperation and that their effectiveness is highly dependent on continuing correct use. If a couple is sure that they will want no more children, they can choose vasectomy or female sterilization.

How Providers Can Help

A woman's attitude toward bleeding changes caused by her contraceptive method depends on many factors, both personal and social (see p. 14). Providers need not spend a lot of extra time and resources to draw out each client's perceptions and feelings about menstruation and bleeding changes. To help clients choose and use methods that fit their needs and their attitudes toward bleeding changes, providers can take the simple steps on page 6. If a continuing user of a method finds that bleeding changes are a problem, providers can follow the steps on

this page (page 7) to help the client. It is a good idea to ask all returning users of hormonal methods and IUDs about bleeding changes. It is not necessary to cover all these steps, however, if a woman's bleeding changes are not bothering her.

Counseling about bleeding changes and encouraging clients to return with any problems contributes to longer use.

Contraception and Bleeding Changes: What Are the Facts?

HORMONAL METHODS

- **Lighter monthly bleeding is normal with combined hormonal methods, and infrequent or no bleeding is normal with progestin-only methods (151).** Lighter bleeding or lack of bleeding does not cause any health problem—not cancer, not infertility, and not early menopause. It does not mean that blood is building up inside the woman’s body. Lack of bleeding is not likely to be due to pregnancy if the woman has been using her method correctly and if she was not already pregnant when she started her method.
- **Bleeding and spotting at unexpected times are common among women using oral contraceptives, especially at first.** Skipping pills will not help. In fact, it will make the bleeding and spotting worse. This type of irregular bleeding usually lessens after the first few months of use. For example, in one study among women taking combined pills correctly, bleeding or spotting at unexpected times occurred in about 20% of cycles during the first three months. This dropped to about 10% of cycles during the next three months, and to approximately 5% of cycles during the last six months of a 12-month period (22).
- **When women stop most hormonal methods, their normal menstrual cycles and fertility come back almost immediately, taking into account that fertility decreases with age (151).** Injectables are the exception: Women who stop injectables to become pregnant wait a few months longer for pregnancy on average than women who have stopped other methods, largely because it can take some months after the last injection for the body to fully process the hormone. The delay averages four additional months for DMPA and one additional month for NET-EN and combined injectables (102, 106, 155). This means that women become pregnant on average 10 months after their last DMPA injection (that is, 3 months of contraceptive protection from their last DMPA injection + average 4 extra months of contraceptive protection + average 3 months to become pregnant when stopping other methods = 10 months). NET-EN and combined injectable users become pregnant on average 5 months after their last injection. Among women who stop contraception to become pregnant, pregnancy rates in former users of DMPA eventually come to match rates among similar women who have used oral contraceptives or IUDs (102).
- **Young women and women without children can use hormonal methods (155).** These methods do not affect their future fertility. Any bleeding irregularities while using hormonal methods are temporary.

COPPER IUDS

- **Increased bleeding with copper IUDs can slightly reduce blood iron levels, but this is rarely harmful.** The World Health Organization considers normal blood iron levels in nonpregnant women to be levels above 120 grams per liter (149). Decreases in blood iron levels among users of copper IUDs measure about two to four grams per liter after 12 months of IUD use (45, 50, 60, 66, 131). While the average change is small (2% to 3% reduction), these decreases could be enough to lead to a diagnosis of clinical anemia among women who already have low blood iron stores before IUD insertion (66, 109). In contrast, by decreasing bleeding, the hormonal IUD can increase blood iron levels (8, 111, 122, 123) and sometimes help prevent anemia (50).

TUBAL STERILIZATION

- **Women who undergo tubal sterilization still ovulate and have menstrual periods after the procedure.** The procedure blocks the fallopian tubes, where fertilization occurs. Thus sperm cannot reach and fertilize an egg. The procedure does not affect a woman’s ability to produce eggs. She will still ovulate and continue to have menstrual periods until she reaches menopause. The eggs that a woman releases break down in her body harmlessly. This happens in all women any time an egg is not fertilized.
- **Women who undergo tubal sterilization probably do not have heavier, prolonged, or more painful menstrual periods as a result.** While the matter is difficult to study, women’s reports of menstrual bleeding changes soon after sterilization probably reflect discontinuation of a previous method that increased or decreased bleeding, such as copper IUDs or combined oral contraceptives. A landmark study in the 1970s found that women who had been using oral contraceptives before undergoing sterilization reported more pain and bleeding after sterilization, while women who had been using copper IUDs reported significantly shorter and lighter menstrual periods after sterilization. Women who had not been using any form of contraception experienced no significant change in the duration or amount of menstrual bleeding (28). A review of more than 200 studies of bleeding patterns after tubal sterilization found that most of the studies that had taken into account prior contraceptive use observed no significant changes in menstrual symptoms due to the sterilization procedure (58).

Hormonal Contraception Relieves Some Reproductive Conditions

Some hormonal contraceptive methods can help relieve menstrual-related disorders and other reproductive conditions or symptoms related to those conditions. Multiple studies find evidence of the effects listed below, and the benefits are nearly universal for all formulations and for all women.¹



Combined Oral Contraceptives

- May help protect against iron-deficiency anemia by reducing monthly bleeding (53, 99).
- Reduces the following:
 - ▶ Amount of monthly bleeding (18, 92, 141).
 - ▶ Dysmenorrhea (cramps that come with monthly bleeding) (29, 33, 92).
 - ▶ Menstrual bleeding problems such as menorrhagia (prolonged or excessive menstrual bleeding) (33, 74) and dysfunctional uterine bleeding (a diagnosis of exclusion that is made only after ruling out all other possible causes of abnormal bleeding) (36).
 - ▶ Acne (72).
 - ▶ Pain at the time of ovulation (when an egg is released from the ovary) (77).
 - ▶ Excess hair on face or body (20).
 - ▶ Symptoms of polycystic ovarian syndrome (irregular bleeding, acne, excess hair on face or body), a condition caused by a hormonal imbalance that prevents ovulation and is characterized by many cysts forming on the ovaries (20, 142).
 - ▶ Symptoms of endometriosis (pelvic pain, irregular bleeding), a condition in which tissue that normally lines the uterus is present in abnormal locations, such as the ovaries, fallopian tubes, and abdominal cavity (140).

Extended or Continuous Use of Combined Oral Contraceptives

Extended use is taking combined hormonal pills for 12 or more weeks without a break, followed by a week of nonhormonal pills or no pills. This reduces the number of monthly bleeding episodes to four or fewer each year. Continuous use is taking combined hormonal pills without any break at all to avoid monthly bleeding altogether.

- May help protect against iron-deficiency anemia by reducing monthly bleeding (144).
- Relieves menstrual migraines (127, 144).
- Helps reduce symptoms of endometriosis (pelvic pain, irregular bleeding) (41, 140, 144).
- Used for treating:
 - ▶ Menorrhagia (110, 127, 144).
 - ▶ Dysmenorrhea (127, 144).

Progestin-Only Injectables (DMPA and NET-EN)

- May help protect against iron-deficiency anemia by reducing monthly bleeding (69, 70, 131).
- DMPA reduces symptoms of endometriosis (pelvic pain, irregular bleeding) (115, 139, 145).
- DMPA may help reduce:
 - ▶ Menorrhagia (79).
 - ▶ Dysmenorrhea (79).
 - ▶ Symptoms of premenstrual syndrome, a range of physical and emotional symptoms that some women experience before their menstrual periods (79).

Implants

- May help protect against iron-deficiency anemia by reducing monthly bleeding (52).
- May help reduce symptoms of endometriosis (pelvic pain) (160).

Hormonal Levonorgestrel-Releasing IUD

- Used for treating menorrhagia (8, 31, 73, 130).
- Increases blood iron levels over time (8, 111, 122, 123); helps protect against anemia (50).
- Used as the progestin component of menopausal hormone therapy—medication containing hormones, commonly an estrogen plus progestin, to treat symptoms of menopause. Used in place of oral progestins to avoid bleeding (107, 128, 146).
- May help in treating endometriosis, fibroids (noncancerous growths in the uterus that can cause prolonged or heavy menstrual bleeding and pelvic pressure or pain), endometrial hyperplasia (abnormal thickening of the uterine lining), and adenomyosis (a condition in which the tissue that normally lines the uterine wall extends into the middle, muscular wall of the uterus) (138).

¹ If an effect starts with “may help,” it indicates that emerging evidence or the balance of evidence points toward a beneficial effect. Also, the benefit is perhaps less widespread than with other effects listed.



Provider Guide: Managing Bleeding Changes Caused by Contraceptive Methods

How to use this tool: Family planning providers can use this guide to help clients manage bleeding changes caused by their contraceptive method. It includes advice that the provider can give to clients, questions to help determine the cause of the bleeding change, and options for treating the bleeding change. (Evidence about the effectiveness of treatment options is limited. Much of the evidence indicates that treatments may help in the short-term only. Providers should make clear that treatment may or may not succeed.) If, after counseling and treatment, the client is not satisfied, help her choose another method. These recommendations will appear in the forthcoming *Family Planning: A Global Handbook for Providers*. Much of the guidance comes from the World Health Organization's *Selected Practice Recommendations for Contraceptive Use*.

Bleeding Change and Methods

Guidance

No monthly bleeding OR infrequent bleeding (fewer than 2 episodes of bleeding over 3 months)

METHODS: Progestin-only pills (POPs), progestin-only injectables, hormonal levonorgestrel-releasing IUD (LNG-IUD), combined oral contraceptives (COCs), implants, combined monthly injectables

Advice:

- Explain that this is common with POPs, progestin-only injectables, and the LNG-IUD. This also happens occasionally with COCs, implants, and combined (monthly) injectables. Reassure client that this is not harmful to her health.
- For clients over 40, this bleeding change is not a reliable indicator of menopause when using hormonal contraceptives. In general, women should continue using their contraceptive method until age 55. (Majority of women reach menopause by then.)

For the COC or POP user: Has she been taking one pill each day, at about the same time?

- If so, reassure her that she is not likely to be pregnant and advise her to continue taking one pill each day.
- If, however, she started her current pack of COCs more than 3 days late or missed 3 or more hormonal pills in a row, ask her to return if she notices signs and symptoms of early pregnancy (for pills with 20 µg or less of ethinyl estradiol, 2 days late or 2 pills missed).
- If she is not breastfeeding and took a progestin-only pill more than 3 hours late, ask her to return if she notices signs and symptoms of early pregnancy.

Treatment Options:

Progestin-only injectables:

- If she wants to continue using an injectable contraceptive method, she may want to switch to a combined (monthly) injectable, if available.

LNG-IUD:

- If she wants to continue using an IUD, she can switch to a copper IUD.

Bleeding or spotting at unexpected times

METHODS: COCs, injectables, POPs (especially among women who are not breastfeeding), implants, LNG-IUD, copper IUDs

Advice:

Is this occurring during the first few months of use (for implants, during the first year of use)?

- If so, reassure her that such bleeding changes are common initially, are not harmful, and usually lessen or stop with time.

For the COC or POP user (during the first few months of use or later):

Has she been taking one pill each day, at about the same time?

- If not, suggest that she do so.

Has she had vomiting or diarrhea?

- If so, advise her to take another pill if vomiting occurs within 2 hours after taking a pill.

Is she taking medicines for seizures or rifampicin (typically used to treat tuberculosis)?

- These medicines interfere with the absorption of hormones taken orally and may cause bleeding or spotting at unexpected times in addition to possibly reducing the effectiveness of the method. If using these medicines long-term, she may want to use another contraceptive method such as any injectable or IUD.

Treatment Options: If no reason to suspect a medical problem, try these treatments, if available, one at a time. They may help some women.

Bleeding Change and Methods

Guidance

Bleeding or spotting at unexpected times (continued)

METHODS:

Injectables, COCs, POPs (especially among women who are not breastfeeding), implants, LNG-IUD, copper IUDs

Combined (monthly) injectables:

- She can try 800 mg ibuprofen, or other non-steroidal anti-inflammatory drugs (NSAIDs), 3 times daily after meals for 5 days when the bleeding starts. NSAIDs provide short-term relief of bleeding for other contraceptive methods and may help users of monthly injectables, too.

COCs: Same as for combined (monthly) injectables, above.

- If she has been taking pills for more than a few months and NSAIDs do not help, give her a different COC formulation, if available. Ask her to use it for at least 3 months.

POPs: Same as for COCs, above.

Progestin-only injectables:

- She can try 800 mg ibuprofen 3 times daily or 500 mg mefenamic acid 2 times daily after meals for 5 days when the bleeding starts. NSAIDs provide short-term relief of bleeding for contraceptive methods and may help users of progestin-only injectables, too.

Implants: Same as for progestin-only injectables, above.

- If NSAIDs do not help, she can try:
 - ▶ COCs with the progestin levonorgestrel. Ask her to take one pill daily for 21 days when the bleeding starts.
 - ▶ 50 µg ethinyl estradiol daily for 21 days when the bleeding starts.

Copper IUDs: For short-term relief she can try:

- NSAIDs such as ibuprofen (400 mg) or indomethacin (25 mg) 2 times daily after meals for 5 days when the bleeding starts.

Heavy bleeding (twice as much bleeding as usual for her) OR

Prolonged bleeding (longer than 8 days)

METHODS:

Injectables, POPs, implants, LNG-IUD, copper IUDs

Advice:

Injectables and IUDs: Reassure her that this is common during the first few months and usually lessens over time. This is normal and usually not harmful to her health. (Users of the LNG-IUD or of a progestin-only injectable tend eventually to have infrequent or no monthly bleeding.)

POPs and implants: Explain that this occasionally occurs with her method and is not harmful.

Treatment Options: If no reason to suspect a medical problem, try these treatments, if available, one at a time. They may help some women.

Combined (monthly) injectables: Same as for unexpected bleeding or spotting, above.

Progestin-only injectables: For short-term relief, she can try:

- COCs. Ask her to begin taking one pill daily for 21 days when heavy or prolonged bleeding starts.
- 50 µg of ethinyl estradiol daily for 21 days to take when heavy or prolonged bleeding starts.

POPs: Same as for unexpected bleeding or spotting.

Implants: For short-term relief, same as for unexpected bleeding or spotting. COCs with 50 µg of ethinyl estradiol may work better than lower-dose pills.

Copper IUDs: For short-term relief, she can try:

- Tranexamic acid (1500 mg) 3 times daily for 3 days, then 1000 mg daily for 2 days when heavy or prolonged bleeding starts.
- NSAIDs such as ibuprofen (400 mg) or indomethacin (25 mg) 2 times daily after meals for 5 days when heavy or prolonged bleeding starts.

For all methods: If heavy or prolonged bleeding persists and there is no reason to suspect an underlying medical cause of bleeding, tell her that, if she wants to keep using her method, she can take iron tablets and/or eat foods containing iron, if possible, to help prevent anemia. If she shows signs of severe anemia advise her to choose another method.

Provider Guide (continued):

When to Refer for Bleeding Changes

Sometimes bleeding changes indicate health problems unrelated to the contraceptive method. Reasons to suspect such an underlying medical condition include:

- Bleeding problems last more than a few months after starting the method, and they are not common side effects of that contraceptive.
- Bleeding problems start suddenly, after several months of a regular bleeding pattern.
- Bleeding patterns are different from the ones usually associated with the contraceptive method. For example, if a client has infrequent or no monthly bleeding with copper IUDs, or heavy or prolonged bleeding with COCs.
- Pain is associated with the bleeding.
- Bleeding occurs after sex.
- Bleeding problems started before use of the contraceptive method.

Such bleeding problems should be referred for diagnosis and care as they may indicate:

- Complications of pregnancy, such as miscarriage or ectopic pregnancy (pregnancy outside the uterus);
- Certain systemic diseases (diseases that affect the entire body), such as blood clotting disorders;
- Reproductive tract abnormalities, such as cervicitis (irritation of the cervix), sexually transmitted infections, endometritis (inflammation of the lining of the uterus), pelvic inflammatory disease, or tumors of the cervix or the lining of the uterus;
- Side effects of certain medications, such as drugs that prevent blood from clotting (anticoagulants); or
- If no specific cause can be found, dysfunctional uterine bleeding (a diagnosis of exclusion made only after ruling out all other possible causes of abnormal bleeding) (6, 82, 116).



Counseling Aid:

Typical Bleeding Patterns With Selected Contraceptive Methods

How to use this tool: Family planning providers can use this chart to help clients consider typical bleeding changes with certain contraceptive methods. (Other bleeding changes may occur but are less common. For detailed information about each method, see the forthcoming *Family Planning: A Global Handbook for Providers*; ordering information, p. 19.) If a client has a specific method in mind, the provider can quickly identify the typical bleeding changes she might experience, both in the first few months and in the long-term. If a client wants a contraceptive method that does not change bleeding patterns, she can consider female or male sterilization, barrier methods (male and female condoms and diaphragms), spermicides, or fertility-awareness based methods.

Contraceptive Method	Typical Bleeding Patterns							
	First Few Months				Long-Term			
	Lighter, regular, and predictable bleeding	Infrequent, extremely light ¹ , or no monthly bleeding	Bleeding or spotting at unexpected times	Heavy or prolonged bleeding	Lighter, regular, and predictable bleeding	Infrequent, extremely light ¹ , or no monthly bleeding	Bleeding or spotting at unexpected times	Heavy or prolonged bleeding
Combined Oral Contraceptives	✓		✓		✓			
Combined (Monthly) Injectables			✓	✓	✓			
Progestin-Only Injectables			✓	✓		✓	✓	
Progestin-Only Oral Contraceptives		✓	✓			✓	✓	
Implants ²	✓			✓	✓	✓	✓	
Hormonal IUD			✓	✓	✓	✓		
Copper IUDs			✓	✓				✓

¹The client may have just a small stain on her underclothing and not recognize it as vaginal bleeding.

²*Implanon*[®] implant less often causes prolonged bleeding than *Norplant*[®] and *Jadelle*[®] implants in the first few months. Also, users of *Implanon* implants are more likely to have infrequent or no bleeding in the long-term than users of *Norplant* or *Jadelle* implants.

Would More Women Use a Family Planning Method That Stops Monthly Bleeding?

Women in developing countries may be more open to using contraception that stops monthly bleeding than in the past. For example, in 2001 a survey of women in three developing countries found that 73% of women in Nigeria and 52% to 64% of women in South Africa would be willing to try a contraceptive that stopped monthly bleeding (59). In Hong Kong and Shanghai, China, more women would be willing to try such a contraceptive than would not, but some women were undecided.

Women who are willing to accept no monthly bleeding or prefer it appear to be younger, more educated, and to live in urban areas—a pattern that suggests the attitude will spread. A recent survey of 2,000 Indian women found that 80% of women living in urban areas preferred to bleed infrequently or not at all (16). A smaller percentage of women living in rural areas (30%) preferred such bleeding patterns. In São Paulo, Brazil, most women interviewed did not want to prevent menstruation, but some of the younger women considered menstruation an unnecessary nuisance (43). They would be willing to try a contraceptive method that caused no monthly bleeding as long as it did not cause other problems.

The recent findings contrast with findings of surveys in the 1980s and early 1990s that most women would not be willing to try a contraceptive method that stopped monthly bleeding (125, 154). Many women thought that not bleeding would damage their health or else indicated pregnancy. Also, they worried that the absence of monthly bleeding would reveal secret use of contraception.

At the same time, however, the DMPA injectable, which eventually stops monthly bleeding for many users, became one of the most popular contraceptive methods in some places. For example, in 1992 in Rwanda 40% of married women using contraception were using injectables, making it the most popular method at that time (100). Injectables now have become the fourth most commonly used contraceptive method worldwide. (See forthcoming *Population Reports* issue on Injectable Contraceptives.) Some women stop using injectables because of the lack of monthly bleeding (34, 113), but many others continue the method either despite the absence of monthly bleeding or because they welcome it (2).

In developed countries manufacturers of contraceptives have identified enough women who do not want to bleed every

month that they are now marketing special oral contraceptives for this purpose. Available in the United States since the fall of 2003, a formulation called *Seasonale*[®] is packaged specifically for use that limits bleeding to once every three months. The regimen consists of 84 uninterrupted days of hormonal pills followed by 7 days of nonhormonal pills, when bleeding occurs. This is known as extended use. Only 10 months after *Seasonale* became available, providers had written more than 260,000 prescriptions for it (135). Its manufacturer plans to apply for regulatory approval in other countries. After *Seasonale* became available, a survey found that 59% of the U.S. women questioned would be interested in avoiding bleeding each month. One-third would choose never to bleed (10). A combined oral contraceptive formulation called *Lybrel*[™] is currently awaiting approval by the U.S. Food and Drug Administration (FDA).

Women would take a combined hormonal pill continuously 365 days a year without a nonhormonal pill phase or pill-free interval and thus they would avoid monthly bleeding altogether (157). Short-term studies and clinical review data from the FDA suggest that the safety of extended and continuous use are similar to that of conventional regimens (41). There are no studies on the long-term safety of these regimens.

Meanwhile, some women have already been avoiding monthly bleeding while using conventional combined oral contraceptives. They take the active, hormonal pills (the first 21 pills in a pack), one every day. Then they skip the inactive, nonhormonal pills (the last 7 pills in a 28-pill pack) or the 7-day hormone-free interval (with 21-pill packs) and start a new pill pack the next day. Women often use this approach to avoid bleeding during special events, such as vacations and athletic competitions (132). Some women also use this approach to avoid social and religious restrictions. For instance, some Muslim women skip the inactive, nonhormonal pills during *Ramadan* (the month of fasting) or during *hajj* (pilgrimage to Mecca) to avoid interrupting fasting or religious rituals as required during monthly bleeding (37, 57, 68).

Seasonale is an oral contraceptive formulation consisting of 84 hormonal pills followed by 7 nonhormonal pills. This extended use regimen is packaged specifically to reduce monthly bleeding to once every three months, an option that appeals to more and more women.

Photo: © 2004 Take Control of Your Period



What Shapes Women's Attitudes About Bleeding Changes

Health care providers can find it useful to understand what shapes women's attitudes toward bleeding changes caused by contraceptive methods. A general understanding of local beliefs and behavior can help providers be sensitive to clients' points of view.

As menstruation has monthly practical consequences for a woman, her personal experience with menstruation of course influences her attitude towards contraceptive-related bleeding changes, as does the nature and severity of the changes she experiences. But she sees these changes through the lens of her beliefs and understanding

Understanding local beliefs and behavior can help providers be sensitive to clients' points of view.

about menstruation. Her partner, family, and community usually share and shape these beliefs about the meaning and significance of menstruation, which include social restrictions placed on menstruating women. Common beliefs and restrictions do not necessarily apply to each and every woman, however. Women's attitudes differ and each woman's attitude tends to be mixed (for example, see box, p. 13).

Menstrual Conditions Are Common

Painful menstruation (dysmenorrhea)—usually cramping in the lower abdomen—is the most common menstrual problem that women face. Prostaglandins, naturally occurring fatty acids that stimulate uterine contractions, cause the cramping pain (126). About one-fourth to one-half of women of reproductive age and about three-fourths of adolescents report having had menstrual pain in the previous three months (64, 65). Severe menstrual pain can keep women from work, school, and daily activities (65, 97, 143). Migraine headaches, which can be disabling, are among the most frequent symptoms accompanying monthly bleeding. They are due to changing levels of reproductive hormones (87). About half of migraines in women of reproductive age occur around the time of monthly bleeding (17).

Excessive or prolonged menstrual bleeding (menorrhagia) affects between 5% and 30% of women of reproductive age (65, 75). It is more common among women under age 20 and over age 40 than among other women. Dealing with excessive blood flow can be particularly difficult where women wear and wash menstrual cloths made from

old sarongs, towels, t-shirts, or the like or where purchasing commercial menstrual products can become costly (19).

Excessive or prolonged bleeding may bring about or worsen anemia, a common disorder around the world. It is estimated that in developing countries more than 40% of women ages 15 to 59 are anemic (149). In developed countries about 10% of women in this age group are anemic.

Societal Beliefs Influence and Restrict Menstruating Women

Women's attitudes about menstruation are shaped not only by experience but also by beliefs about the social and cultural meaning of menstruation and what is acceptable monthly bleeding, taboos, and behavioral restrictions (117, 154).

Despite the high value that many societies place on menstruation and its perceived necessity, the names for menstruation in different languages and cultures suggest how societies also view this monthly event with disfavor. Terms in many cultures describe menstrual blood as "polluting." These terms reflect the common misbelief that the purpose of menstruation is to rid the woman of "bad blood" that is building up inside her body. For example, in Niger menstruation is referred to as "women's dirt," and in northern Ghana, as "washing of the stomach" (98). British women often refer to menstruation as "the curse" (154).

Another common set of names refers to menstruation in terms of the behavioral restrictions placed on menstruating women. For example, in Nepal menstruation is referred to as *para-sarne* (moving off a distance from her usual space) because in many areas menstruating women are isolated from other people (3).

Women's attitudes about menstruation are shaped by experience, beliefs about the meaning of menstruation and what is acceptable monthly bleeding, taboos, and behavioral restrictions.

Although not all beliefs are reflected in practice, in many places cultural and religious beliefs prevent menstruating women from participating in worship, sex, domestic chores, and many social activities (3, 62, 93). Most of these restrictions reflect the mistaken belief that menstruation

is unclean and therefore a menstruating woman should limit her contact with others. These beliefs also can restrict women's diets and bathing (96). Thus, contraceptive methods that prolong bleeding or cause bleeding at unexpected times may hinder a woman's personal relationships and limit her daily activities.

Worship. In a survey conducted by the World Health Organization (WHO) in the 1980s, nearly all women in Egypt, India, Indonesia, and Pakistan said that menstruating women should not visit places of worship (154). Smaller, more recent studies confirm that many women of different faiths avoid praying, touching religious texts, or visiting religious places during their monthly bleeding (3, 5, 24, 55, 136).

Sexual relations. In the absence of HIV or other sexually transmitted infection, vaginal intercourse during monthly bleeding causes no harm to either partner, and the risk of pregnancy is slight. Still, in societies around the world most women and men avoid sexual relations during a woman's monthly bleeding, and some, even for a few days after.

Some 95% of women surveyed in the 1980s in Egypt, India, Indonesia, Jamaica, Korea, Mexico, Pakistan, the Philippines, and what was then Yugoslavia said that sexual intercourse should be avoided during monthly bleeding (154). In contrast, only about half of women in the United Kingdom, the only developed country in the study, believed sex should be avoided during monthly bleeding. Even among women who thought that it was acceptable, however, many did not have sex then as a matter of personal choice. In some cultures husbands and wives sleep in separate beds while the woman is menstruating (3, 5).

Social activities. Menstruating women often face restrictions on their social activities. Over half of women surveyed in Egypt and India and more than one-fourth in Jamaica, the Philippines, and former Yugoslavia believed that menstruating women should not visit female friends or relatives. This was particularly important when the friend or relative was pregnant or newly delivered. Women believed that the menstruating woman could harm her friend's reproductive health or fertility (154). Among high-caste Hindu families in Nepal, it is customary to send adolescent girls who start to menstruate to relatives' homes during their first three menstrual cycles (3). Fathers and brothers are not allowed to see a newly menstruating girl's face during this time.

Domestic chores. In some Asian countries menstruating women are not allowed to perform their domestic chores such as cooking and washing clothes (3, 5, 62, 154). Some women appreciate this relief from chores for a few days each month (3, 16). Many women living in urban areas without family or friends close by to help them cannot avoid chores, however (55).

Women Have Mixed Perceptions

Given that menstruation can cause inconvenience and pain and limit women's activities, it is not surprising that many women see menstruation as a nuisance. The WHO multi-country study from the 1980s, involving more than 5,000 women, found that women generally saw the physical, social, and behavioral consequences of menstruation as negative (154). They complained that menstruation was uncomfortable, messy, and inconvenient.

The onset of menstruation during puberty evokes generally negative reactions, perhaps because many girls are not prepared for it ahead of time (136, 159). Few are told that menstruation is a normal part of growing up, and that it is preceded by other changes to their bodies such as hair growth in new places, breast growth, and mood swings (see box, p. 16).

In contrast, many women welcome the end of menstruation and fertility (menopause) (84, 148, 158). Generally, menopause improves women's lives, freeing them from the risks of childbirth and from cultural restrictions on their social and religious activities (148).

Contraceptive methods that prolong bleeding or cause bleeding at unexpected times may hinder a woman's personal relationships and limit her daily activities.

Even if most women find menstruation a nuisance, they still consider menstruation a natural and positive event and a sign of continuing youth, fertility, and femininity. According to the WHO study, women saw regular bleeding as necessary for good health, and excessive bleeding as damaging to health. Recent small surveys and focus-group discussions in such countries as Nepal and The Gambia reveal similar perceptions (3, 143). During focus-group discussions in São Paulo, Brazil, one woman explained, "We damn menstruation, but on the other hand we want to menstruate, because we want to feel as a woman, feminine" (43). Therefore, it is understandable that many women do not want a contraceptive method that stops monthly bleeding, even though they may complain about the physical and social consequences of bleeding.

Better Understanding Menstruation

Helps Girls and Women



A community educator shows adolescent girls in India how to make their own reusable, hygienic menstrual pads using inexpensive and readily available materials.
Photo: Lakshimi Murthy/Vikalpdesign

Menstruation is a natural event throughout much of a woman's life. Yet menstruation is often a taboo topic and seldom openly discussed. Thus many women lack sufficient or accurate knowledge about it. They often have misunderstandings and mistaken beliefs passed on by family and community (3, 23, 91, 154).

Many women do not understand the purpose of menstruation, what happens in their bodies during menstruation, or—most important for avoiding or achieving pregnancy—when they are likely to be fertile during the menstrual cycle. Fertilization of a woman's egg by sperm normally takes place in the fallopian tubes, which lead from the ovaries to the womb. A woman can become pregnant only while the egg is in the tube and there are sperm there to meet it. Ovulation (release of an egg into a fallopian tube by an ovary) usually occurs about midway between two menstrual periods. Because sperm can live in the cervical mucus for several days,

sexual intercourse does not have to take place very close to the time of ovulation to result in pregnancy. A woman's fertile phase begins five days before ovulation. It ends 24 hours after ovulation (67).

Across 47 countries, most in sub-Saharan Africa, only 22% of women ages 15 to 49 know that a woman is fertile generally about midway between two menstrual periods. This statistic is an unweighted average¹ derived from findings compiled by the Demographic and Health Surveys (DHS) (see Web Table 1²). In only one of these countries, Jordan, do more than half of surveyed women know when the fertile time usually occurs. Most commonly, women say that they do not know when the fertile time occurs.

DHS data on men ages 15 to 49, available for seven sub-Saharan African countries, Haiti, and Bolivia, show that, on average, 18% know that a woman is fertile generally in the middle of the cycle. About 26% say that they do not know.

Smaller, in-depth studies find that adolescents' knowledge of fertility, of menstua-

tion, and of hygienic practices during menstruation is poor in many countries (81, 104). For example, in Dakar, Senegal, two-thirds of adolescent girls and boys ages 15 to 19 could not identify the midpoint in the menstrual cycle as the time when a woman is most likely to get pregnant (78). In Ile-Ife, Nigeria, some 40% of school girls surveyed did not know the meaning or cause of menstruation (1). Among school girls ages 12 to 17 in Tamil Nadu, India, more than half of girls who used an old cloth, napkin, or only their undergarments as a menstrual product washed them only once or twice a day, rather than four or five times a day, as is best. Rather than learning about hygiene, much of what these girls had learned concerned restrictions to their mobility and behavior during menstruation and superstitions about their being "polluting" to others who touch them or their used menstrual cloths (96).

Programs Teach Girls About Menstruation

Education about menstruation needs to start at an early age, before girls reach puberty. When taught beforehand, girls are better prepared emotionally for the experience of menstruation and have fewer negative reactions (136, 159). They also are better able to care for themselves during menstruation. Especially important is learning about hygienic practices since a common taboo is for women to either avoid washing themselves or their genital area during menstruation (96, 154). In fact, washing the genital area daily is important for maintaining hygiene during menstruation, as is changing menstrual pads or cloths at least four to five times a day, and washing used menstrual cloths as soon as possible and drying them completely. These practices can help avoid problems such as burning during urination and genital itching.

Programs that involve women, their partners, and communities are equally important. Teaching the facts about menstruation—what it means and what it does not mean—and about hygienic menstrual practices enables parents to better inform their daughters. Also, boys often have questions about menstruation. Improving their knowledge of menstruation and of

¹ An unweighted average does not reflect differences in population among the countries.

² Web Table 1 is available for download and printing at <http://www.populationreports.org/j54/j54tables.shtml>.

puberty is just as important as improving that of girls. Since puberty affects both girls and boys but in different ways, they should each understand what the other is going through and that the changes are not shameful or harmful. Understanding the physiology of menstruation can help dispel misconceptions about it, help change taboos against talking about bleeding, and in some cases even help ease restrictions on women's lives around the time of menstruation.

Stories, visual aids offer creative approaches. Storybooks with fictional characters and situations help girls connect to the characters' experiences and understand emotions and behavior. Posters and providers' communication aids are a good way to visually explain the menstrual cycle and ovulation. Many programs worldwide employ these approaches. For instance, an edition from a popular comic book series in Bolivia called *The stories of Yoni*, "A new awakening: The story of a young girl discovering the changes in her body" (*Las historias de Yoni*, "Un nuevo despertar: La historia de una muchacha que descubre los cambios de su cuerpo") features a 12-year-old girl, Carina, going through puberty. One morning Carina wakes up and finds blood on her sheets. She is afraid to tell her mother, but she does tell a teacher. The teacher explains to Carina about her body and menstruation (114).

Similarly, in Bangladesh a set of communication materials for girls called *Nijeke Jano*, or *Know Yourself*, features a comic book issue in which two young cousins, Shanu and Nasima, deal with menstruation and puberty. With information and help from their family and friends, Shanu and Nasima overcome their concerns and fears. The comic book also debunks common misperceptions, such as one that restricts a girl's diet during her monthly bleeding (14). In addition to using comic books, the Bangladesh communication program engaged adolescents and their families with interactive videos and group discussions.

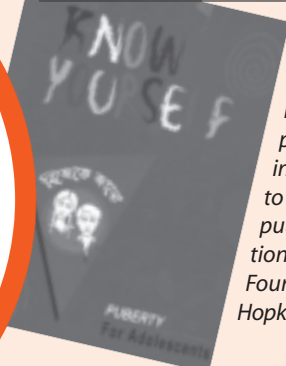
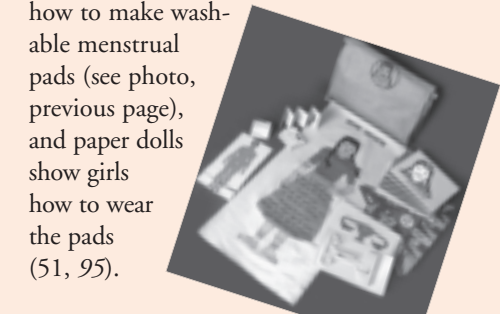
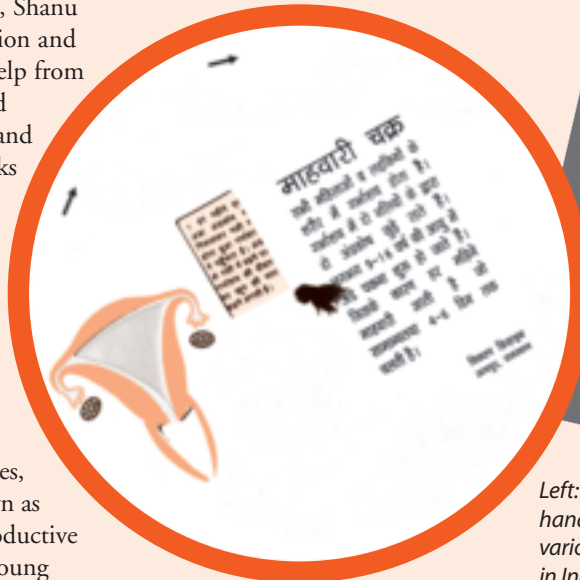
In Bengal, India, a toolkit of games, stories, pictures, and models known as the Champa Kit helps make reproductive health education come alive for young

people in the community. The kit is based on a story. The 12-year-old girl Champa is its central character. A flipchart in the menstruation module of the kit uses Champa's story to explore myths about menstruation, to help young women deal with menstrual pain and hygiene, and to explain low, heavy, and irregular blood flow. The module includes an activity book that describes the process of menstruation and the natural changes that take place during the cycle (137) (For more information, see <<http://www.thoughtshopfoundation.org/ChampaKit.html>>).

School and community programs can succeed. Teaching girls about menstruation as part of adolescent and reproductive health education in school has succeeded in Zimbabwe. Among urban and rural secondary-school girls and boys who were part of a health education program, knowledge of the correct meaning of menstruation and of hygienic practices during menstruation rose from about 80% before the program to 98% after. Among girls in their first year of secondary education, those in the program were twice as likely to know that ovulation generally occurs in the middle of the menstrual cycle as their counterparts who were not in the program. Also, both boys' and girls' attitudes towards menstruation improved. After the lessons more of the students understood that menstruation is not an illness, not dirty, and not a punishment of women (89). School-based programs are conducted in other countries,

too; the program in Zimbabwe is among the best documented (42, 46, 54).

Community-based education efforts can reach adolescents who are not in school as well as parents—important since most girls learn about menstruation from their mothers and other family members (1, 11, 26, 42, 93). The *Adolescent Girls Initiative for Their Reproductive Health* project in Nepal has had particular success in educating girls not enrolled in school and in reaching parents (see Spotlight, p. 18). Another creative program is carried out by the communication organization Vikalpdesign in Udaipur, India. Community educators use three-dimensional media to teach rural girls ages 10 to 19 about puberty, menstruation, and hygiene during menstrual bleeding. A *Mahawari Chaka*, or menstruation wheel (see picture, below, left) helps explain the phases of menstruation. Paper patterns are used to teach girls how to make washable menstrual pads (see photo, previous page), and paper dolls show girls how to wear the pads (51, 95).



The Champa Kit, Stories of Yoni, and Know Yourself communication materials provide creative and interactive approaches to educate girls about puberty and menstruation. © 2004, Thoughtshop Foundation; Johns Hopkins' CCP.

Left: The Mahawari Chaka (or menstruation wheel), a handmade education tool, helps educators explain the various stages of the menstrual cycle to adolescent girls in India. © Lakshmi Murthy/Vikalpdesign

SPOTLIGHT

Nepal's *A GIFT for RH* Project Teaches Girls, Changes Attitudes



CEDPA's ongoing non-formal education program in rural Nepal brings adolescent girls and their mothers together to discuss a range of reproductive health issues such as menstruation and puberty. Ensuring that mothers have correct knowledge about menstruation is important since most girls learn about the topic from them.

Photo: © 2005 Manju Kumar Shrestha, *The Centre for Development and Population Activities (CEDPA)*

In Nepal the project *Adolescent Girls Initiate for Their Reproductive Health*, known as *A GIFT for RH*, improved girls' knowledge of menstruation and puberty and increased discussions between girls and their families on reproductive health issues. The project was implemented by the Centre for Development and Population Activities (CEDPA) along with local nongovernmental partners.

The project taught a nine-month education course about reproductive health to illiterate girls ages 10 to 19 who lived in remote regions and had never attended school. Classes were held in available community spaces such as community centers and health posts. Nearly 1,000 girls participated. The program taught girls about the changes that occur to their bodies during adolescence, including menstruation, and also provided literacy training with reproductive health materials.

After completing the course, the girls, sometimes with their mothers, participated in monthly discussion groups for one year. These discussion groups focused on preparing adolescent girls to talk with their families about reproductive health and on making and acting on informed decisions about their reproductive health and marriage.

An evaluation between March 2003 and June 2004 found that:

- **Girls' knowledge improved.** The percentage of girls who knew that menstruation is a physical change of puberty increased from 19% before the health education program to 70% after among girls ages 10 to 14 and from 57% to 83%

among girls 15 to 19. The percentage of girls who could not correctly identify any physical changes that occur during puberty dropped from 60% to 4% among 10- to 14-year-olds and from 27% to less than 1% among 15- to 19-year-olds. The percentage of girls who did not know why menstruation occurs dropped from 78% to 22%. Among girls who had started menstruating by the time of the evaluation, the percentage who had learned about menstruation beforehand increased from 45% to 73%.

- **Girls talked more with their mothers.** As a result of the project, women and girls talked more about menstruation. Over 99% of girls were willing to discuss menstruation and other reproductive health matters with parents and others after the program, compared with 54% before.

Also, as before the project, mothers, friends, and sisters, in that order, continued to be the main sources of information about menstruation for adolescent girls. After the program, however, the percentage of girls naming their mothers as a source of information had risen from 61% to 72%; friends, from 26% to 49%; and sisters, from 22% to 44%. More than one-fourth of the girls said that they learned about menstruation from the project leaders.

- **Parental attitudes improved.** In focus-group discussions after the project ended, parents recognized that their daughters had learned more about reproductive health. One father commented, "Girls of this community have gained a lot of information about reproductive health such as maintaining proper hygiene during menstruation, taking care during pregnancy, and going to health post during illness."
- **In some areas, girls were no longer segregated.** Focus-group discussions after the program also revealed that some adolescent girls in the Baglung district reported that they were no longer segregated by their families during monthly bleeding. It is a common practice in some parts of Nepal for girls to be isolated while menstruating and forced to sleep in the cattle shed for many days each month. Girls who have participated in CEDPA programs are currently advocating lessening these taboos in their community.

Building on the success of *A GIFT for RH* project, in 2004 CEDPA and its partners launched the *Building Demand for Reproductive Health (BuD for RH)* project among adolescents in conflict-affected districts of Nepal. In addition to reaching adolescent girls not enrolled in school, the *BuD for RH* project reached girls and boys enrolled in school. More than 3,000 adolescents participated. Before and after evaluation found that the project successfully improved adolescents' knowledge, attitudes, and behaviors on reproductive health, including puberty. Additional analysis is underway to explore girls' concerns about menstrual taboos in their communities.

For more information on these programs, contact CEDPA at 1133 21st Street, NW, Suite 800, Washington, DC 20036, USA
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Sources: CEDPA 2002 (25), 2004 (26), and 2006 (27)

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