



## CONTRACEPTION

Unpredictable bleeding with progestin-only contraceptives can lead to dissatisfaction and discontinuation. The authors scrutinize the reported experience with bleeding changes to help you better counsel your patients.



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**P**rogestin-only contraception—a diverse group of oral (progestin-only pills, or so-called minipills), injectable (depot medroxyprogesterone acetate), intrauterine (the levonorgestrel intrauterine system), and implantable (etonogestrel implant) methods—may offer advantages over estrogen-containing contraception:

- the flexibility of distinctive methods of delivery
- the ability to initiate the method in postpartum breastfeeding women
- enhanced safety in women who should not be exposed to exogenous estrogens.

Unpredictable bleeding is a major disadvantage of progestin-only contraception, however, and can cause women to discontinue these methods—and discontinuation without an effective backup method creates a high risk of unplanned pregnancy. The significant variability in bleeding patterns among progestin-only contraceptive methods hinders our ability to counsel patients about them.

Furthermore, the lack of uniform definitions of bleeding patterns with hormonal

contraception, including progestin-only methods, makes it difficult to counsel women accurately and compare bleeding patterns among methods.

Accurate prediction of the bleeding patterns associated with progestin-only contraception could lower the discontinuation rate. For example, studies have shown that pretreatment counseling about expected side effects increases approximately four-fold the acceptability and continuation of depot medroxyprogesterone acetate.<sup>1,2</sup>

In this Update, we review the data on bleeding patterns associated with progestin-only contraceptives, including the likelihood of **1)** amenorrhea and **2)** discontinuation due to changes in the bleeding pattern.

We also discuss what has been learned about the treatment of changes in bleeding patterns induced by progestin-only contraception.

Our goal? To summarize the findings in a comprehensive way that makes it easier for you to discuss expected bleeding patterns with your patients—so that women can choose the method of contraception that is the best fit for them.

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# Describing bleeding patterns is a challenging task

One of the difficulties of interpreting clinical data on bleeding patterns—with any type of contraception—is the lack of a universally accepted standard for collecting and reporting these data. The first suggestions for standardization were made in 1976, when Rodriguez and colleagues proposed using 90-day reference periods for analysis, as a way to minimize variability among individual menstrual cycles.<sup>3</sup>

Subsequently, the World Health Organization’s (WHO’s) Special Programme of Research, Development and Research Training in Human Reproduction developed recommendations for data collection, terminology, presentation, and data analysis when reporting vaginal bleeding during clinical trials of hormonal contraception. These recommendations became known as the WHO Belsey criteria (TABLE 1). They remain the standard.<sup>4</sup>

Under the WHO Belsey system:

- vaginal blood loss for which a woman uses sanitary protection is classified as **bleeding**
- vaginal blood loss that does not result in the use of sanitary protection is considered **spotting**.

This system also specifies indices for evaluating the bleeding pattern for each woman and reference period, including the number of bleeding-spotting days, number of bleeding-spotting episodes, lengths of bleeding-spotting episodes, and bleeding-spotting-free intervals. A bleeding-spotting episode is defined as one or more consecutive days during which blood loss (bleeding or spotting) has been recorded, each episode being bounded by bleeding-spotting-free days. The WHO Belsey criteria also identified subgroups that have “clinically important bleeding patterns” (TABLE 1).

**But not all researchers use the WHO Belsey criteria.** Many trials use, and report, their own system of analysis. Some researchers have chosen reference periods of other durations and study periods that range from 1 to 5 years. Some studies report bleeding patterns by number of days, and others report the percentage of women experiencing a given bleeding pattern during a reference period. The lack of uniformity results in data that are difficult to compare from one study to the next—and to explain to our patients.

It’s unclear whether any of our research definitions of clinically significant bleeding have ever been validated as clinically important to our patients. Multiple studies do show that changes in menstrual bleeding patterns are a significant cause of dissatisfaction with any given contraceptive method, but we don’t know if the number of days of bleeding-spotting or the predictability of this bleeding-spotting is the critical piece of information we should be relating to our patients.

In other words, do our beliefs about clinically important bleeding patterns reflect women’s beliefs?

## Implantable contraception

The etonogestrel (ENG) implant (Implanon) is the only implantable contraceptive available in the United States. This single-rod

### FAST TRACK

**Studies show that changes in menstrual bleeding patterns can cause dissatisfaction with any contraceptive method**

**TABLE 1** The WHO Belsey system of bleeding patterns

Pattern	Definition
Amenorrhea	No bleeding
Prolonged bleeding	1 or more bleeding-spotting episodes lasting longer than 14 days
Frequent bleeding	More than 5 bleeding-spotting episodes
Infrequent bleeding	1 or 2 bleeding-spotting episodes
Irregular bleeding	3 to 5 episodes with more than 3 bleeding-free intervals of 14 days or longer
Normal bleeding	None of the above are present

This system establishes criteria for defining clinically important bleeding patterns during a 90-day reference period. Adapted from: Belsey EM et al.<sup>4</sup>



**TABLE 2** What percentage of women taking progestin-only contraception report bleeding-spotting?

Study	Months					
	3	6	9	12	18	24
<b>DMPA</b>						
Sangi-Haghpeykar (1996) <sup>33</sup>	46%	43%	40%			
Cromer (1998) <sup>34</sup>	24%	10%				
<b>ENG implant</b>						
Croxatto (2000) <sup>9</sup>	40–50%					
<b>LNG-IUS</b>						
Datey (1995) <sup>32</sup>	18%	6%	3%	1%		4%
Hidalgo (2002) <sup>20</sup>		25%			8%	11%
<b>Progestin-only pill</b>						
Sheth (1982) <sup>35</sup>	21–55%*			6–42%*		

\* Percentage reporting prolonged, frequent, or irregular bleeding.  
Key: DMPA, depot medroxyprogesterone acetate; ENG implant, etonogestrel implant; LNG-IUS, levonorgestrel intrauterine system.

**FAST TRACK**

The main cause of the irregular and unpredictable bleeding seen with the ENG implant is probably progestin-related changes in the endometrium

contraceptive can be used for as long as 3 years.

Contraceptive implants, including the levonorgestrel implants once sold in the United States and still available in some parts of the world, are highly effective. The Implanon prescribing information reports a first-year failure rate of 0.38 pregnancies for every 100 woman-years of use; Hatcher and co-workers reported a failure rate of 0.<sup>5</sup> The difference is based on how the FDA defines pregnancy in contraceptive trials. In fact, the only pregnancies reported with the ENG implant happened after it was removed. Importantly, the studies evaluated by the FDA included only women not using any medications known to induce liver metabolism (the cytochrome P450 pathway) and who were between 80% and 130% of ideal body weight. The efficacy of the ENG implant for women who are taking medications that induce liver metabolism or who are greater than 130% of their ideal body weight is unknown.

The efficacy of the ENG implant is likely derived from suppression of ovulation and increased cervical mucus viscosity. Associated changes in the endometrium that occur

with this low dosage of progestin are likely the primary cause of irregular and unpredictable bleeding.

Several studies have sought to describe the bleeding patterns experienced with the ENG implant.<sup>6–8</sup> During the first 3 months, approximately 50% of all women using the ENG implant reported bleeding-spotting (TABLE 2) for 30 days, on average (TABLE 3). The number of days decreases to approximately 20 bleeding-spotting days for each 90-day reference period at 6 to 24 months, with wide variability. For example: From 3 to 6 months, women reported 22 days of bleeding-spotting (standard deviation, 20 days); from months 21 to 24, 20 days of bleeding-spotting (standard deviation, 14 days).<sup>7</sup>

After using the ENG implant for 2 years, therefore, most women can expect the number of bleeding-spotting days for every 90-day reference period to range between 6 and 34 days. These days of bleeding-spotting are often noncontinuous, however. On average, women reported three separate bleeding-spotting episodes for every 90-day reference period.<sup>7</sup>

Although individual bleeding patterns are unpredictable, women who had no bleeding, or infrequent bleeding, at the beginning of use of the ENG implant had only a “small chance” of bleeding frequently.<sup>6</sup> The most common bleeding pattern observed throughout the study was infrequent bleeding, defined as fewer than three episodes of bleeding in a 90-day reference period (excluding amenorrhea).<sup>7</sup>

**Amenorrhea may not persist.** The amenorrhea rate at 6 months of use and beyond ranges from 10% to 20% (TABLE 4, page 20). Importantly, women who are amenorrheic in one 90-day reference period are not necessarily the ones who are amenorrheic in another reference period. So, unlike what is more commonly seen with other progestin-only methods, such as injectables, amenorrhea is not sustained for most women.

This unpredictable pattern affects continuation of the ENG implant (TABLE 5, page 23). Irregular bleeding is the most common reason women cite for discontinuation, accounting for 30% to 60% of all women who

**TABLE 3** How many days of bleeding-spotting do women have when they use progestin-only contraception?

Study	Months								
	0–3	4–6	7–9	10–12	13–15	16–18	19–21	22–24	36
<b>DMPA</b>									
Belsey (1988) <sup>11</sup>	16*	9	4	3					
Hubacher (2009) <sup>31</sup>	21	18	14	10					
<b>ENG implant</b>									
Affandi (1998) <sup>6</sup>	26	19	16	16	17	18	18	18	
Zheng (1999) <sup>8</sup>	34	22			19–22				
Funk (2005) <sup>7</sup>	31	22	19	19	18	19	17	20	
<b>LNG-IUS</b>									
Datey (1995) <sup>32</sup>									
Total days of bleeding	9	7	6	5				5	5
Total days of spotting	10	5	5	4				4	4
<b>Progestin-only pill</b>									
Belsey (1988) <sup>11</sup>	15–18								

\*All values in the table represent an average number of days in a 90-day reference period.

Key: DMPA, depot medroxyprogesterone acetate; ENG implant, etonogestrel implant; LNG-IUS, levonorgestrel intrauterine system.

discontinue early.<sup>7,9</sup>

Overall, approximately 4% of ENG users discontinue the method at 1 year. Ten percent to 20% discontinue each year thereafter because of intolerance to bleeding changes.<sup>6–9</sup>

There are, however, differences in discontinuation rates across cultures. In an integrated analysis of 13 different trials that evaluated patterns of vaginal bleeding with the ENG implant where the rate of menstrual changes was similar, women from Europe and Canada were much more likely (23%) to discontinue the implant because of those changes than women from Southeast Asia and Chile were (2%).<sup>6</sup> This finding may reflect differences in cultural beliefs or disparate access to other contraceptive options.<sup>10</sup>

#### PERSPECTIVE AND GUIDANCE FOR YOUR PRACTICE

The pattern of bleeding seen with the ENG implant is like the activity of the heart in atrial fibrillation: irregularly irregular. Still, most (80%) women continue to use it beyond 1 year. In fact, the discontinuation rate for the ENG implant is less than that of depot medroxyprogesterone acetate (DMPA) and progestin-only pills.

Most ENG implant users report no diffi-

culty tolerating the associated unpredictable bleeding; it's possible that they had unpredictable bleeding at baseline, or were drawn to the improvement in their dysmenorrhea.<sup>6</sup>

Importantly, unpredictable bleeding does not affect efficacy; the ENG implant remains one of the most effective long-acting reversible contraceptives. For women who can tolerate unpredictable bleeding, the ENG implant is a highly effective contraceptive option.

#### Injectable contraception

Approved by the FDA in 1992, DMPA (Depo-Provera) has good efficacy and long-acting protection. Disadvantages include unpredictable bleeding, weight gain, acne, depression, hair loss, and the controversial issue of decreased bone loss with prolonged use.

**What are the expected changes in bleeding patterns with DMPA?** Women often have unpredictable patterns, with infrequent but prolonged bleeding-spotting episodes.<sup>11</sup> The overall incidence of irregular bleeding can be as high as 70% in the first year of use.<sup>12</sup> Irregular bleeding decreases with continued use, to as low as 10% after the first year (TABLE 2).

Although the number of bleeding-spotting days decreases over time, women have



**80% of users of the ENG implant continue to use it after 1 year, despite unpredictable bleeding**



**TABLE 4** What percentage of women taking progestin-only contraception report amenorrhea?

Study	Months				
	3	6	9	12	24
<b>DMPA</b>					
Belsey (1988) <sup>11</sup>	8%	22%	39%	45%	
Sangi-Haghpeykar (1996) <sup>33</sup>	46%	53%	59%		
Cromer (1998) <sup>34</sup>	34%	60%			
Polaneczky (1998) <sup>14</sup>	23%	40%	65%	40%	
Canto (2001) <sup>1</sup>	35%			70%	
Jain (2004) <sup>13</sup> (DMPA-SC)	26%	38%		55%	
Hubacher (2009) <sup>31</sup>	12%	25%	37%	46%	
<b>ENG implant</b>					
Affandi (1998) <sup>6</sup>	2%	19%	25%	23%	21%
Zheng (1999) <sup>8</sup>	2%	19%	10%	15%	
Croxatto (2000) <sup>9</sup>			12-20%		
Funk (2005) <sup>7</sup>	2%		14-20%		
<b>LNG-IUS</b>					
Andersson (1994) <sup>21</sup>				17%	
Hidalgo (2002) <sup>20</sup>		44%		50%	50%
<b>Progestin-only pill</b>					
Belsey (1988) <sup>11</sup>	0%	0%	0%	0%	
Sheth (1992) <sup>35</sup>	3-8%			0-2%	
Kovacs (1996) <sup>24</sup>		5-10%			

Key: DMPA, depot medroxyprogesterone acetate; ENG implant, etonogestrel implant; LNG-IUS, levonorgestrel intrauterine system.

reported as many as 10 days of irregular bleeding-spotting between 9 and 12 months of use (TABLE 3, page 19). The rates of irregular bleeding and amenorrhea are similar for the subcutaneous formulation of DMPA.<sup>13</sup>

DMPA is often used because of the high likelihood of amenorrhea. However, amenorrhea is not accomplished in most women in a short time. At 3 months of use, 10% to 45% of women report amenorrhea; after 1 year, the rate increases to 40% to 70% (TABLE 4). At 5 years, 80% of women report amenorrhea.<sup>12</sup>

**A source of frustration.** DMPA's high discontinuation rate, compared with what is seen with other contraceptives, can be frustrating for patients and clinicians. Irregular bleeding is the most common reason for discontinuation. Approximately 35% of women who start DMPA discontinue it during the first 3 months of use because of irregular bleeding

(TABLE 5, page 23). The cumulative discontinuation rate rises over time: At 1 year, 40% to 60% of women who started DMPA will have discontinued it because of changes in bleeding patterns (TABLE 5). Furthermore, 70% of women reporting DMPA discontinuation due to bleeding changes stopped the method after the first injection.<sup>14</sup>

Paul and colleagues conducted a telephone survey to determine the patterns of use and reasons for discontinuation among DMPA users.<sup>15</sup> Of 252 DMPA users surveyed, 20% cited menstrual disturbances as the reason for discontinuation. These changes were equally distributed: amenorrhea, irregular bleeding, and heavy bleeding, all 6.8%.

Of approximately 7,000 women who participated in the 2002 National Survey for Family Growth, 600 had used DMPA in the past. Thirty-four percent pointed to a dislike of changes in menstrual periods as the reason for discontinuation.<sup>16</sup>

Not surprisingly, helping your patient develop realistic expectations about bleeding patterns with DMPA can decrease the discontinuation rate. Women who received repeated, structured information about DMPA were less likely to discontinue it because of menstrual disturbances (amenorrhea and irregular and heavy bleeding) than were women in a routine counseling group (OR, 0.20; 95% CI: 0.11, 0.37).<sup>17</sup>

Other investigators have reported similar findings, with a fourfold to sixfold lower likelihood of discontinuation because of bleeding changes among women who received detailed counseling about DMPA.<sup>1,2</sup>

**PERSPECTIVE AND GUIDANCE FOR YOUR PRACTICE**

DMPA is effective and convenient, but unpredictable bleeding in the first year of use is not uncommon. The irregularity is similar to that seen with the ENG implant in the first 6 months of use. Thereafter, DMPA users are more likely to achieve and maintain amenorrhea, compared to ENG implant users.

**Intrauterine contraception**

The main mechanism of contraceptive ac-

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tion in the levonorgestrel intrauterine system (LNG-IUS) (Mirena) is significant thickening of cervical mucus, resulting in a physical barrier to sperm penetration; ovulation inhibition may also contribute. In a study of women who had been using the LNG-IUS for 4 years, 88% (15/17 cycles) were still ovulatory according to progesterone levels, but only 47% (8/17 cycles) showed normal follicular growth and rupture by ultrasonography.<sup>18</sup> The efficacy of the LNG-IUS is 99.8%.<sup>6</sup>

Advantages of the LNG-IUS include its high effectiveness; long-term action; increased rate of menstrual cycles that are shorter, lighter, and marked by less cramping as use continues; and a high likelihood of amenorrhea as duration of use lengthens.

As with other progestin-only contraceptives, the major disadvantage of the LNG-IUS is associated irregular bleeding that, as is the case with DMPA, appears to decrease with duration of use for most women.

**What are the expected changes in bleeding patterns with LNG-IUS?** Local effects of the LNG-IUS on the endometrial lining include stromal pseudodecidualization, glandular atrophy, and increased infiltration of leukocytes in the endometrium. These effects, combined with partial inhibition of ovulatory function, commonly result in irregular bleeding.

The number of days of bleeding-spotting is pronounced in the first 3 to 6 months after insertion. Approximately 18% of women reported bleeding-spotting in the first 3 months; 6% to 25%, at 6 months; and only 1% of women, approximately, at 12 months (TABLE 2, page 18).

In a survey of Finnish women who used the LNG-IUS, 45.2% reported irregular bleeding, and 18.1% reported spotting, at some point during use.<sup>19</sup> Importantly, the prevalence of bleeding-spotting does decrease with duration of use. Nevertheless, as many as 10% of women still report irregular bleeding-spotting at 2 years (TABLE 2, page 18).

As with other progestin-only contraceptives, amenorrhea rates for the LNG-IUS vary (TABLE 4, page 20). In a Brazilian study of 256 women, 44% reported amenorrhea at 6 months; 50%, at 12 and 24 months.<sup>20</sup> In a

**TABLE 5** What percentage discontinue progestin-only contraception because of a change in bleeding pattern?

Study	Months					
	3	6	9	12	24	36
<b>DMPA</b>						
Potter (1997) <sup>36</sup>				43%		
Sangi-Haghpeykar (1996) <sup>33</sup>	34.1%	58%*	78%*			
Davidson (1997) <sup>37</sup>	31%	49%*		58%		
<b>ENG implant</b>						
Croxatto (2000) <sup>9</sup>						19%
Zheng (1999) <sup>8</sup>				4%	6.1%*	8.4%*
Affandi (1998) <sup>6</sup>						23%
Funk (2005) <sup>7</sup>					13%	
<b>LNG-IUS</b>						
Datey (1995) <sup>32</sup>				13.8%		
Luukkainen (1987) <sup>38</sup>				7.5%		
Andersson (1994) <sup>21</sup>				5.8%*	8.3%*	9.6%*
<b>Progestin-only pill</b>						
Belsey (1988) <sup>39</sup>				10%		
Sheth (1982) <sup>35</sup>				25%	34.5%*	
Graham (1992) <sup>25</sup>	18%	25%	35%*			

\*Percentages are cumulative across the months studied.

Key: DMPA, depot medroxyprogesterone acetate; ENG implant, etonogestrel implant; LNG-IUS, levonorgestrel intrauterine system.

larger study of 1,821 Finnish women, however, only 17% of women reported amenorrhea at 12 months.<sup>21</sup> A survey study of approximately 16,000 Finnish women who used the LNG-IUS found that 75% reported that they “totally or occasionally missed menses” at any time during as long as 5 years of use.<sup>19</sup>

The discontinuation rate for the LNG-IUS is lower than for the ENG implant or DMPA. Still, changes in bleeding patterns are the most common reason for discontinuation. At 1 year of use, approximately 10% of women discontinue the LNG-IUS because of changes in the bleeding pattern (TABLE 5).

In the most comprehensive study of early removal of the LNG-IUS, the total discontinuation rate—for all reasons—increased to 13% at 2 years, 19% at 3 years, 25% at 4 years, and 35% at 5 years.<sup>19</sup> Women who reported excessive bleeding were almost three times more likely to discontinue the LNG-IUS early than women who did not report such a problem (RR, 2.77; 95% CI: 2.5, 3.07). Women who ex-



perience spotting are almost twice as likely to discontinue early (RR, 1.89; 95% CI: 1.75, 2.05). Others have reported the cumulative discontinuation rate to be as low as 14.4% at 5 years (when measuring discontinuation because of changes in menstrual bleeding) and as high as 35% at 5 years (when considering the total discontinuation rate for all reasons).<sup>21</sup>

Amenorrhea lowers the discontinuation rate. In one analysis, women who reported that they “totally or occasionally missed periods” were half as likely to discontinue the LNG-IUS as those who didn’t make such a report (RR, 0.46; 95% CI: 0.43, 0.50).<sup>19</sup>

**PERSPECTIVE AND GUIDANCE  
FOR YOUR PRACTICE**

Irregular bleeding is common with the LNG-IUS in the first 3 to 6 months of use, but overall discontinuation is relatively low—probably because of the high likelihood that bleeding patterns improve over time. Still, irregular bleeding remains the most common reason for discontinuation. Realistic expectations about bleeding patterns and the lower likelihood for amenorrhea, in comparison with DMPA, are important variables to discuss with women who are considering the LNG-IUS.

**Progestin-only pills**

Progestin-only pills (POPs) have a failure rate that ranges from 1.1 to 9.6 for every 100 users in the first year.<sup>22</sup> A POP is used most often by women in whom estrogen is contraindicated,

including those who are breastfeeding.<sup>23</sup>

**Disadvantages.** POPs require precise adherence and make irregular vaginal bleeding likely. Although 40% to 50% of women who take a POP have normal menstrual cycles, 40% have short, irregular cycles, and another 10% experience even more markedly irregular cycles—from spotting to amenorrhea.<sup>22</sup>

Studies that precede the WHO Belsey system showed that **1)** as many as 70% of women who use a POP reported “breakthrough bleeding-spotting” in one or more cycles and **2)** 6% to 16% have “breakthrough bleeding or inter-menstrual spotting” in all cycles (TABLES 2 AND 3, pages 18 and 19).<sup>24,25</sup>

On average, 25% of women discontinue POPs because of changes in their menstrual cycle (TABLE 5, page 23).

**PERSPECTIVE AND GUIDANCE  
FOR YOUR PRACTICE**

The mechanism that results in irregular vaginal bleeding in women taking a POP is unclear; evidence suggests that incomplete suppression of ovulation and direct endometrial effects are possible. To the frustration of patients and clinicians, it isn’t possible to predict who will have irregular bleeding—i.e., there is no association between body weight, or age, and the risk of irregular bleeding. As with other progestin-only methods, irregular bleeding is the most common reason for discontinuing POPs.<sup>26</sup> A Cochrane Review of POPs is under way.<sup>27</sup>

**FAST  
TRACK**

Forty percent of women who use a progestin-only pill have short, irregular cycles; another 10% experience even more markedly irregular cycles—from spotting to amenorrhea

## Is unpredictable bleeding with progestin-only contraceptives treatable?

**B**leeding and discontinuation rates associated with progestin-only contraceptives that are observed in clinical trials, especially rates used for FDA review and approval of a product, don’t always translate to

real-life medicine. Typically, in such trials, no treatment for irregular or unacceptable bleeding patterns is permitted: If an effective treatment is available, overall acceptability and continuation of the contraceptive could,

potentially, be boosted. This matter is most relevant with injectable, intrauterine, and implantable progestin-only methods.

**Findings of one meta-analysis.** A recent Cochrane review evaluated the literature until December 2006 on the treatment of vaginal bleeding irregularities induced by progestin-only contraceptives.<sup>28</sup> Twenty-three randomized controlled trials, encompassing 2,674 subjects, were included. Seventy percent of the trials that were included were determined to reflect a low or moderate risk of bias.

Treatment with **estrogen alone** reduced the number of days of an ongoing bleeding episode among DMPA and levonorgestrel implant (Norplant) users. Treatment often led to individuals' discontinuation in a study, however, because of gastrointestinal upset. Combined oral contraceptives can treat amenorrhea with success among DMPA users.

**Antiprogestins** such as mifepristone cause a reduction in bleeding among women using the levonorgestrel implant, but are not of benefit for ENG implant users.

Last, use of **NSAIDs** to treat irregular bleeding has shown variable efficacy. Additional small studies cited in the Cochrane Review suggest that the following treatments were more effective than placebo for terminating an episode of bleeding among women using progestin-only contraception: the anti-progestin **mifepristone** for DMPA and POP users; **mifepristone plus an estrogen** for ENG implant users; and **doxycycline** for ENG implant users.<sup>28</sup>

Overall, some women benefit from attempts at treatment. The authors of the Cochrane Review caution that their findings do not support the routine clinical use of any of the regimens included in the trials, particularly for obtaining a long-term effect.<sup>28</sup>

**Newer trials, different findings?** A more recent double-blind, randomized trial, in which the subjects were 100 Thai women, showed that irregular bleeding with DMPA ceased completely in 88% of those treated with tranexamic acid, 250 mg QID for 5 days, compared with 8% of women in whom bleeding ceased after treatment with placebo.<sup>29</sup>

Another recent randomized trial found

that mifepristone, combined with ethinyl estradiol or doxycycline, was significantly more effective than placebo in ending an episode of bleeding in ENG implant users. No improvement was seen, however, in subsequent bleeding patterns, and improvement with treatment, compared with placebo, amounted to a decrease of only about 2 days.<sup>30</sup>

Noticeably missing from the literature are large trials that evaluate the use of combined hormonal contraceptives for bleeding irregularities in women using long-acting progestin-only contraceptives. True, some women use these methods because of a contraindication to estrogen-containing methods, but, in reality, most women who use these methods do so because of their high efficacy and ease of use.

#### **PERSPECTIVE AND GUIDANCE FOR YOUR PRACTICE**

For women who use the ENG implant or LNG-IUS and have no contraindication to estrogen-containing contraceptives, we often provide a short (1 or 2 months) course of a combined hormonal contraceptive when they find bleeding irregularities bothersome.

Because the serum progestin level provided with these methods is extremely low, adding a low-dose combined oral contraceptive, contraceptive patch, or contraceptive vaginal ring is not that different than using any of the combined hormonal contraceptives. A woman will not become pregnant if she forgets to take the pill or the ring falls out because she still has the progestin-only method in place. And if the short course of a combined hormonal contraceptive helps her continue the more effective method, then the overall goal of avoiding unintended pregnancy is better accomplished.

Large trials to evaluate the use of combined hormonal methods in such circumstances would, of course, be of great benefit.

#### **Good counseling → informed choice → adherence and continuation**

With all forms of progestin-only contraception, unpredictable bleeding occurs often and is the most common reason for method discontinuation.



**Most women who use progestin-only methods do so because of efficacy and ease of use—not because of any contraindication to estrogen**

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Counseling that explicitly discusses the high likelihood of unpredictable menstrual bleeding allows women to prioritize this issue in their choice of a contraceptive.

Informed choice leads to a better continuation rate for progestin-only methods.

**Seeking understanding.** We lack full understanding of exactly what it is about changes in bleeding patterns that matter to women. Have definitions of bleeding and spotting that researchers utilize missed quality of life concerns that are more relevant to women? Are

women concerned about how many days are spent avoiding sexual activity? Do religious restrictions figure prominently for some? How dissatisfied are they with days of cramping or bloating without bleeding? What do women want to know when they consider the bleeding patterns for their contraceptive options?

The answers to these questions likely vary from patient to patient—and that observation leads us back to grasping the art of contraceptive counseling: Our counseling needs to be concise, relatable, and honest. 🗨️

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