The overwhelming majority of people, including adolescents, have sexual experiences, and the range of normal sexual behaviors is large. Sexuality is culturally situated; even innate aspects of sexuality (for example, libido) are strongly influenced by social factors. Gender influences sexual behaviors and attitudes, including definitions and treatments of sexual “problems” within the reproductive health field. Surprisingly, research rarely considers how contraception affects sex for women. Some studies do explore how contraceptive methods (especially combined oral contraceptives [COCs]) influence sexual experience. During COC use, some women experience a decreased interest in sex, although whether COCs cause that decrease remains unclear. Other women experience increases in sexual desire and enjoyment while using COCs or other methods. Clients want practitioners to be more open with them about sexuality.

Sex is primary to our work—indeed, the reproductive health field would be non-existent without it. Yet many of us remain under-informed about sexual functioning, including contraception’s impact on sex, and sex’s impact on contraception. Sexual messages saturate our culture, but dialogue about sexuality remains virtually nonexistent in the exam room. Few of us feel sexually fluent, able to speak with our clients and colleagues about sex in a respectful but comfortable way.1 Continuing medical education offers few tools to improve clinicians’ sexual fluency. Even practitioners well-versed in sexuality research may become nervous speaking with clients about sex; we eagerly assume that people prefer privacy. Contraceptives are designed to be used specifically in and
for the sexual experience, yet our contraceptive research often excludes sexually relevant outcomes.

As individuals, we focus on sex’s potential for pleasure, forming relationships, and building identity. But our professional roles redirect our focus to the negative consequences of sex: the risk and threat of exposure to conception, disease, or violence. The perceived dangers of sexuality (versus its healthy pleasures) become even more pronounced in our work with adolescents. This pleasure deficit characterizes contraceptive research and development, acceptability studies, and marketing. Additionally, we maintain different standards by gender. We would find incomplete, even invalid, a study of hormonal-based contraception for men that ignored effects on erectile functioning or orgasm. Yet contraceptive methods developed for women rarely receive similar consideration regarding sexual functioning and enjoyment, whether currently on the market or in the research and development phase.

A positive and proactive approach to women’s sexuality should matter greatly to family planning practitioners and researchers. First, in a practical way, understanding the sexual context informs clinical conversations that help couples choose suitable contraceptive methods. Addressing the notion that the way sex feels matters to women could have extraordinarily positive, even revolutionary, impact on contraceptive practices; it would also acknowledge women as sexual agents rather than merely as “targets” of contraceptive programs.

Second, clients want us to care about sexuality. Most women wish to discuss sexual concerns but report that most providers neither inquire about nor follow up on sexual issues. In one study of 1,500 routine gynecologic patients, 78% said they wanted to discuss their sexual concerns, but 70% of these women reported feeling too embarrassed to bring up the topic with their physician. The overwhelming majority (89%) said they would have discussed sexual concerns had their physician initiated the topic.

A final reason to promote positive sexuality concerns a potential direct impact on unintended pregnancy and sexually transmitted infections (STIs). Cross-cultural comparisons between Western European nations and the United States indicate that greater candidness about sexuality in the former relates to an improved overall sexual experience, which may contribute to increased contraceptive use, reduced STI acquisition, and lower rates of unintended pregnancy. As family planning practitioners, we have the opportunity to be pioneers of greater sexual openness and improved sexual and reproductive health at the national level.

In this chapter, we first review epidemiological and theoretical highlights from the sexuality field. Then, we describe burgeoning research
that examines connections between women’s sexual experience and contraceptive acceptability and practices. We conclude with resources to assist practitioners in addressing sexuality during clinical encounters.

Please note three important caveats to this chapter. We do not include a comprehensive discussion of the sexual response cycle and sexual dysfunction, as authoritative guides on those topics can be found elsewhere. Second, we refer you to Chapter 5 for a discussion of sexual abstinence. In the current chapter we focus on vaginal intercourse, since this sexual behavior is most pertinent to contraception and the acquisition of STIs and is the most common sexual behavior, by far, among heterosexual couples. Finally, although the term sex can refer to many activities (both with and without a partner), here we—like our clients—generally use this term as a euphemism for vaginal intercourse.

SEXUALITY 101: SEXUAL BEHAVIOR IN SOCIAL CONTEXTS

Although sex appears to be a biological and physical activity, it is deeply set in our social and cultural context, and it becomes symbolic of the various attitudes and values to which our culture subscribes. Behaviors that we consider second nature are also social in nature. Even practices like kissing, primal to sexual expression in the West, are not uniformly practiced across cultures. Sexual normalcy varies greatly, not only across the globe but also across socio-demographic groups within our society. In this section, we review some typical sexual behavior patterns, linking them to contraceptive practice wherever possible, but we remind readers that any single sexual behavior is ensconced in multiple layers of social meaning.

Gender in particular influences virtually all aspects of sexual attitudes and experiences. Social movements in the 20th century, including the sexual revolution and the feminist movement, transitioned women and men into more egalitarian relationships and roles in virtually all spheres of our society. Women now enjoy more sexual autonomy and, arguably, more sexual satisfaction than at any other moment in U.S. history. But many women still cannot capitalize on their right to enjoyable sex. Girls are socialized to protect and preserve their sexuality; by contrast, boys learn that they have the right to pleasurable sex. Some young women report that unprotected intercourse “just happened”; preparing for sex would mean acknowledging they are sexual. In order to justify their sexual interests, women may also feel the need to be swept away by passionate, romantic feelings, a phenomenon that can also undermine successful contraceptive use. More concerning, women’s risks of sexual harm, (which include harm from STIs and unintended pregnancy as well as damage to one’s reputation, sexual manipulation and coercion, and
Statistics on sexual violence and coercion in the United States

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever raped* and/or physically assaulted by a current or former partner</td>
<td>7.5%</td>
<td>25.0%</td>
</tr>
<tr>
<td>Ever physically assaulted** by intimate partner</td>
<td>7.4%</td>
<td>22.1%</td>
</tr>
<tr>
<td>Stalked sometime during life</td>
<td>2.2%</td>
<td>8.1%</td>
</tr>
<tr>
<td>Proportion of murder victims killed by an intimate partner</td>
<td>4.0%</td>
<td>33.0%</td>
</tr>
</tbody>
</table>

* Rape was defined as penetration of vagina, anus or mouth without the victim’s consent
** Physical assault was defined as behaviors that threaten, attempt, or actually inflict physical harm.

outright assault and incest), far outweigh those faced by men (see Table 1–1). Men may also sabotage women’s contraceptive attempts, another form of sexual coercion. These gender inequalities dramatically shape women’s sexual interest, enjoyment, and motivations to use contraception.

Despite these discouraging gender disparities regarding sexual violence and coercion, we need to remember that women, too, are sexual beings who want to enjoy sex. We would be remiss to ignore how gender inequality and sexual violence drastically undermine women’s sexual health; however, we would be equally remiss to ignore the positive aspects of women’s sexual experiences and factors contributing to optimal sexual functioning. (For example, a number of women may regularly experience multiple orgasms during sexual activity—a phenomenon not generally experienced by men.) Furthermore, as practitioners, we have the opportunity to promote better sexual well-being not only as a desirable outcome in itself, but also for its connection to better contraceptive use. Preliminary research links some forms of sexual expression with other health indicators. Young women who masturbate, for example, are more likely to report consistent contraceptive use and positive communication with their partners than those who have not masturbated. In a recent nationally representative internet-based survey, women who used vibrators currently or in the past were significantly more likely to have had a gynecological exam during the past year than women who had never used vibrators. In other words, there are good clinical reasons to invest in women’s pleasure.

“TYPICAL” SEXUAL BEHAVIORS

Unfortunately, research on sexuality remains underfunded. Very few nationally representative, population-based surveys inform our knowledge of sexual behavior, and research on sexuality can be even more socially biased than other types of behavioral research. Before the recent
nationally representative sexuality study by researchers at Indiana University, the last such U.S. study, the National Health and Social Life Survey (NHSLS) of 3,400 men and women aged 18 to 59 years, was conducted in 1994 before the dawn of text messaging and Facebook, let alone sexual technologies such as Viagra or the HPV vaccine. The NHSLS found, surprisingly, that Americans reported less sex and fewer partners than widely believed. The overwhelming majority of respondents (83%) had either no partner or 1 partner in the previous year, and most people had engaged in partnered sexual activity only a few times in the last month. One half of both men and women reported 3 or fewer partners in their lifetime, and though men reported more lifetime partners, the gender difference was relatively small. Thus, at least based on NHSLS data, most Americans’ sex lives occur in the context of monogamous, long-term relationships. Vaginal intercourse occurred in nearly all adult heterosexual encounters, indicating an ongoing risk of pregnancy in most fertile couples. Unfortunately, this survey did not include adolescents, who may differ in important ways from adults.

Indiana University’s more recent National Survey of Sexual Health and Behavior (NSSHB) showed enormous variability in the sexual repertoires of U.S. adults. Adult respondents described more than 40 combinations of sexual activity at their most recent sexual event, and most respondents engaged in at least two sex acts. Although the largest proportion of adults reported vaginal intercourse in the past month, investigators noted that most Americans’ reproductive years hardly focused on vaginal intercourse alone. Sizeable proportions of 18 to 49-year-old respondents reported solo masturbation, partnered masturbation, oral sex, and anal sex. Compared to the NHSLS data, more men and women had engaged in oral sex and a significantly greater portion had engaged in anal sex—most of whom were represented in the younger cohorts. The NSSHB also found that a decreasing proportion of men reported engaged in vaginal intercourse across the life span, which may indicate growing incidence of erectile dysfunction related to cardiovascular disease or diabetes. Women also reported decreasing sexual activity across the life span, which may reflect intercourse-related pain, lower libido, or other sexual health concerns.

**Sexual frequency.** Clients sometimes worry that their personal sexual frequency is not normal. Some will be relieved to know roughly equal proportions of Americans reported sex with a partner at least twice a week, a few times a month, or only a few times a year, if at all. For example, among married couples, 13% reported having sex a few times per year, 45% reported a few times per month, and 41% reported 2 or more times per week. Among nonmarried women, 32% reported they had not had sex in the past year, 25% reported only a few times in the past year, 26% reported a few times in the past month, and 26% reported two or
more times per week. In other words, wide variation exists in sexual frequency, and frequent activity is as common as little or no sexual activity. Age can also influence sexual frequency. A 1998 study indicated that 18- to 29-year-olds have sex an average of 112 times per year, 30- to 39-year-olds an average of 86 times per year, and 40- to 49-year-olds an average of 69 times per year. Consider sexual frequency when matching clients with contraceptives. Condom use may be ideal for those with infrequent, irregular sexual activity. Adolescents and younger adults in particular may have very short sexual relationships and also benefit from reduced STI acquisition from condom use.

**Onset of sexual activity.** Adolescence brings sexual desires and experiences for most young people. The vast majority of U.S. adolescents are involved in dating relationships with at least some physical component: 85% have had a boyfriend or girlfriend, 85% to 90% have kissed someone, and 79% have engaged in “deep kissing.” The median age at first vaginal intercourse is 17.3 years for young men and 17.5 years for young women (remarkably similar to those in other industrialized countries), and 7 in 10 U.S. adolescents have had vaginal intercourse by age 19. Unfortunately, we have few reliable data on the age of first same-sex sexual experiences.

Unlike the NHSLS, the far more recent NSSHB did include adolescents. Investigators found that, at any given point in time, most U.S. adolescents were not engaging in partnered sexual behavior. Data indicated that young people who did engage in partnered sexual activity used condoms frequently. Among 14- to 17-year-olds in the survey, rates of condom use for vaginal intercourse in the last 90 day were 80% for young men and 69% for young women.5

Adolescent sexual activity is discouraged by many policy makers and professionals. Adolescents themselves, however, assign great meaning, importance, and positivity to their first intercourse experience. Moreover, most sexually active adolescents are using contraception relatively well compared with adults. In 2002, at most recent sex, 83% of teen girls and 91% of teen boys reported using contraceptives. These proportions represent a marked improvement; in 1995, only 71% of girls and 82% of boys had used a contraceptive method at last sex. That said, compared to adults, adolescents engage in shorter-term relationships that may make effective contraceptive use more challenging. Many young women discontinue their hormonal method after a breakup, for example, when they do not anticipate being reunited with their partner. For young women, highly effective, long-acting reversible contraceptives (LARC) such as implants or intrauterine contraceptive may be ideal. Clinicians should always speak with young people about condoms—not only for STI prevention, but also because condoms are overwhelmingly the method of choice for first intercourse experiences (66% of young women
and 71% of young men reported condom use at first vaginal intercourse. Water- or glycerin-based lubricants, either with or without condoms, may help overcome the discomfort and lackluster sexual satisfaction that young women in particular may experience.

**Same-gender sexual behavior.** Alternative sexual relationships and identities are an important consideration for sexual and reproductive health practitioners. National estimates of same-gender behavior are elusive, due in part to variability in which questions and which persons are asked. The NSSHB found that about 7% of adult women and 8% of men identify as gay, lesbian, or bisexual, although the proportion who had engaged in same-gender interactions at some point in their lives was much higher. In the NHSLS, 9% of men and 4% of women said they had a same-gender sexual partner at least once since puberty, but a greater proportion of women (5.5%) said they found the thought of having sex with a same-gender partner very appealing or appealing. These figures are certainly lower than those of the non-random, controversial samples of Alfred Kinsey, in which 37% of the total male population had had at least one same-gender sexual experience and 10% of males had had exclusively same-gender relationships for at least 3 years. (Kinsey never published comparable figures for women.)

Not all clients are heterosexually inclined, nor are they necessarily homosexually inclined if they do not identify as heterosexual. The sexuality field has increasingly embraced Lisa Diamond’s notion of sexual fluidity. In this model, emotional connection, rather than gender, drives relationships; women in particular may flow in and out of sexual relationships with both men and women. Young women may engage in sexual activity with other women at one point in their lives (e.g., during their university years), but chose men as their primary sexual partners at another life stage. Before making any contraceptive assumptions or recommendations, you may better serve clients by refraining from asking if they identify as heterosexual, homosexual, or some other orientation. Rather, ask about the gender(s) of the clients’ current sexual partner(s), and whether they tend to be in relationships more with men, women, or both.

**REASONS FOR WANTING—and NOT WANTING—to HAVE SEX**

Many of us assume that most people want have sex for one reason only—because it feels good. But sexual researchers have been documenting an enormous array of sexual motivations, from relationship-building to stress-relieving to identity-building. In their recent analysis of college students, Meston and Buss ranked the strength and intensity of 50 different sexual motivations (e.g., “I wanted to show my affection...”)
to the person,” “I realized I was in love,” “The person really desired me.” (The top three reasons were “I was attracted to the person,” “I wanted to experience physical pleasure,” and “It feels good.”) Of course, these motivations are likely to change over one’s relationship and life course. Another study tried to document some of the different varieties of sexual pleasures that people seek in sex, such as the pleasures of physical-erotic sensation, pleasing one’s partner, spontaneity, and close, skin-on-skin contact. In both studies, gender significantly shaped people’s sexual motivations and types of pleasure-seeking.

Research must explore how sexual motivations and pleasures influence contraceptive practices. For example, women who are highly focused on men’s pleasure are less likely to promote male condom use. If a woman has sex to test her fertility (among other reasons), the motivation to use contraception will be minimal. At the very least, practitioners should recognize that clients have a range of motivations for engaging in sexual behaviors, which may be very different from those the provider personally experiences or endorses. Similarly, patients’ sexual experiences with contraception may not match the expectations of providers. For example, a provider may insist that the woman or her partner will not notice a string from an intrauterine contraceptive during intercourse, but the woman may insist that the string is bothersome and request a change in method because of this discomfort.

There are also many reasons why people do not want to have sex. Several studies have thoroughly presented information on the dual responses of sexual excitation and sexual inhibition among women. For example, fear of pregnancy often sexually inhibits women, and sometimes their male partners as well. Focus group participants in one study indicated that fears of pregnancy had a very negative impact on sexual arousal, especially when the partner did not share this concern. Another recent study surveyed 5,609 adults about the degree to which the “risk of unwanted pregnancy” leads to loss of arousal. Just over half (53%) of women agreed that it did, although this proportion was greater among younger women and women in short-term relationships. Notably, 37% of men in this study also said that the risk of unwanted pregnancy causes them to lose their arousal. Men whose ability to be aroused is affected by the risk of pregnancy may hold a key to effective contraceptive use. Indeed, practitioners are advised to promote the sexual benefits of contraceptives to all clients. Protection from pregnancy could be promoted as a way to enhance a couple’s enjoyment of sex, especially among those whose arousal is diminished by pregnancy risk. Indeed, some women report enjoying sex more after menopause, when the threat of pregnancy is no longer a concern.

That said, some women (and men) may be sexually turned on by the idea of conceiving a baby with one’s partner, even if a child isn’t fully
Others may be afraid that they can’t get pregnant, and take deliberate risks of becoming pregnant even though they don’t currently want a child. A recent nationally representative report from the National Campaign to Prevent Teen and Unplanned Pregnancy found that an astonishing percentage of 18- to 30-year-olds expressed concern about infertility: 59% of women and 47% of men reported at least some concern, and 19% of women and 14% of men reported extreme concerns. Thus, while some might not be able to enjoy sex unless completely protected against unintended pregnancy, others may take deliberate procreative risks related to their confusion and anxiety about infertility. Discuss patients’ concerns about fertility and thoughts about having a baby with their current partners.

**Sexual Problems**

Despite our interest in promoting positive sexuality, we recognize that many clients, if they bring up sexuality at all, are most likely to bring up sexual concerns or problems. See Table 1–2 for prevalence estimates of several sexual problems from two different U.S. studies. Prevalence estimates from the nationally-representative National Health and Social Life Survey (NHSLS), presented in *JAMA* in 1999, were striking: 43% of women and 31% of men reported at least one sexual problem in the previous year. The sexual problems measured included lack of interest in sex, inability to achieve orgasm, reports of sex not being pleasurable, anxiety about performance, trouble lubricating (women only), pain during sex (women only), climaxing too early (men only), and trouble achieving or maintaining an erection (men only). Sexual problems were most common among young women, older men, and nonmarried and poorly educated respondents. Importantly, respondents did not indicate whether these problems were persistent or distressing for them. The media have widely cited the 43% and 31% figures, which may dramatically overstate the prevalence of sexual “problems” in the United States. Many NHSLS respondents rated their relationships positively: nearly half of respondents described their relationships as “extremely” emotionally and physically satisfying. The *Diagnostic and Statistical Manual of Mental Disorders, 4th Edition*, or DSM IV, stipulates a diagnosis of sexual dysfunction must include both personal distress and a disturbance in interpersonal relationships, neither of which was measured by the NHSLS. A national probability study in Britain, which compared the prevalence of short-term sexual problems with persistent problems (defined as lasting 6 months or more), found much lower rates of persistent problems than the NHSLS.

Similar patterns were found in a more recent nationally representative study of sexual problems among women, and this study ascertained if women themselves were distressed by sexual problems. Using a panel
Table 1–2 Prevalence estimates of common sexual problems in the United States

<table>
<thead>
<tr>
<th>Problem</th>
<th>NHSLS*</th>
<th>Shifren et al.**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lacks of interest in sex or low desire</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>33%</td>
<td></td>
</tr>
<tr>
<td>Women Distressed by Problem</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>39%</td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Low arousal or arousal problems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td></td>
<td>26%</td>
</tr>
<tr>
<td>Women</td>
<td></td>
<td>5%</td>
</tr>
<tr>
<td>Unable to achieve orgasm</td>
<td>8%</td>
<td>24%</td>
</tr>
<tr>
<td>Experienced pain during sex</td>
<td>3%</td>
<td>14%</td>
</tr>
<tr>
<td>Sex not pleasurable</td>
<td>8%</td>
<td>21%</td>
</tr>
<tr>
<td>Pain during sex</td>
<td>3%</td>
<td>14%</td>
</tr>
<tr>
<td>Anxious about performance</td>
<td>18%</td>
<td>12%</td>
</tr>
<tr>
<td>Climax too early</td>
<td>28%</td>
<td>10%</td>
</tr>
<tr>
<td>Trouble lubricating</td>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>Unable to keep an erection</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>Premature ejaculation</td>
<td>29%</td>
<td></td>
</tr>
</tbody>
</table>

* National Health and Social Life Survey (1994)
** Shifren et al. (2008)

Study of 31,640 women, aged 18 to 102 (mean age of 49 years), researchers assessed measures related to desire, arousal, and ability to reach orgasm; they also used the Female Sexual Distress Scale (FSDS) to determine women’s comfort or discomfort with their sexual functioning. The age-adjusted sexual problem prevalence was 42%, almost identical to the previously cited study in JAMA, and approximately half of those women (22% overall) reported sexually related personal distress. The women most likely to report distressing sexual problems were poorly educated, ranked poorly on self-assessed health, and were more likely to have depression, anxiety, thyroid conditions, and urinary incontinence. A separate analysis of these data found that among those 10,429 women who reported “low sexual desire,” fewer than 1 in 3 (27.5%), or 10% of the entire sample, reported sexual distress. These sizeable gaps between the prevalence of sexual problems and the prevalence of any distress associated with those problems are important reminders of how the nature of a sexual problem depends on whom you ask, when, and in what context.

Although they are legitimately distressing to certain individuals, reports of sexual problems must be considered within their social and cultural context. What we think of as sexually ideal for women and men...
has shifted over time, and it will continue to shift. For example, climaxing too early is considered a problem for men, but rarely for women; climaxing quickly may not have been a problem at all 150 years ago in our country, nor is it a problem in all other societies. Similarly, women’s lack of orgasm has not always been considered dysfunctional. Current social constructions of gender also shape how we think about low or high sexual desire. Today, female hypoactive sexual desire disorder (HSDD) is perceived as a problem, when decades ago, women were not expected to express or require desire.

**Sexual Desire**

Over the decades, thousands of pages have been devoted to the topic of sexual desire, including renewed interest during the last couple of years—perhaps due to popular features in the *New York Times* and the rise of investigational drugs to treat HSDD and low sexual desire in women. Researchers differ widely in their approaches to gender differences in sexual desire, with some positing biological and hormonal causes (including Masters and Johnson), others adopting evolutionary models, others social constructionist models, and others integrative approaches of the three. Still more recent research explores both biological and social aspects of the importance of being desired to women’s (but not men’s) interest in sex.

Regardless of theoretical approach, most sexologists agree the relationship between arousal and desire for women is complex. Most men experience a relatively clear and direct sequence of desire and physical arousal, with interest in sex leading to physical changes that prepare one’s body for sex (e.g., increased heart rate, respiration rate, and flow of blood to the penis). But for many women, no connection exists between physical arousal and their sexual desire, or vice versa. A woman may report that she is interested in sex, but without any physiological manifestations of such desire, or her body may indicate sexual arousal without any attendant interest in sex. For these reasons, Basson proposed that women’s sexual response is more cyclical than linear in nature. Unlike men, women may not necessarily experience desire before arousal. The incentive motivation model is similarly based on the notion that the experience of desire may follow rather than precede sexual excitement, and suggests that desire emerges following sexual arousal initiated by a sexually meaningful stimulus. Women may not be thinking about sex at all, but once they are approached and sexually stimulated by their partner, they may become aroused and desire may then result. Women with such a sexual response profile who wish to experience sexual desire more regularly may want to consider the use of vibrators or erotic media to jump-start the connection between arousal and desire.
Not just the direction of sexual response, but also the question of who has more desire, men or women, has long been central to sexuality research. As measured by frequency of fantasy, masturbation, and sexual activity, current models suggest women have lower desire for sex compared with men. However, who has more desire may be less salient than the quality and characteristics of those desires, or how physiological responses interact with social context and relationship issues to shape sexual desire in various contexts. Moreover, recent evidence suggests that women are aroused by a wider range of stimuli than are men—for example, women are aroused by pictures of women, men, and both heterosexual and same-sex couples, whereas men are most likely to be aroused by pictures of women and heterosexual couples only. From this perspective, perhaps men are simply more sexually inhibited.

Scholarship on the history of sexuality challenges the notion that men’s greater libido is an unchanging biological fact. In certain historical moments and cultural settings, society portrayed women as having greater sexual appetites than men. Women of color, historically and presently, have been depicted as more sexually animalistic than white women, and therefore have been particularly affected by this perception. Such scholarship provides further indication that sexuality, including sexual desire, is shaped by social influences, and not merely biology or hormones.

We fully support developing effective treatment approaches for women who wish to increase their libido or arousal. However, we also question why male norms define what is considered low sexual desire in our culture. Imagine a different scenario: experts were concerned about men’s pathologically high libidos, or drug and behavioral therapies were designed to help men recalibrate their desire to be more in line with women’s. Perhaps we should accept a range of sexual desires instead of pathologizing one particular variety. Doing so would certainly alleviate much of women’s distress over their sexual drive compared to men.

HOW CONTRACEPTIVES INFLUENCE SEXUALITY (AND VICE VERSA)

Given that contraception is expressly designed for sexual activity, we know astonishingly little about how contraception affects sexual functioning and enjoyment, and vice versa. Most sexual activity occurs during times when women wish to avoid pregnancy; women who wish to have only one or two children in their lifetime will need to use contraception for up to 30 years of their sexual lives. A vital area of understanding and expertise for family planning practitioners involves how women’s sex lives can be changed in both negative and positive ways by contraceptive practices.
Unfortunately, a lack of attention to pleasure and positive sexuality undermines current understandings of the interplay between sexuality and contraceptive use. Even though sexuality is a critical issue in research on the acceptability of contraception and STI prevention, few systematic studies explore current methods’ effect on women’s libido, enjoyment, lubrication, or orgasm, or how such effects shape the uptake, continuation, and consistency of use. Researchers have thoroughly explored contraceptive side effects such as weight gain and vaginal bleeding, but rarely are such side effects explored as possible sexual detractors—despite their influence on women’s experiences of their bodies, desires, and sexual selves. Moreover, though some sexual studies of individual methods exist (described below), few have examined multiple forms of contraception simultaneously, and despite exceptions, even fewer have gone beyond individual experience to examine the cultural and social dimension of contraceptives and of what makes sex enjoyable.

The inattention to how women’s contraceptive methods may affect sexuality is striking when juxtaposed with hormonal methods under development for men. Research on male-based methods is highly marked by concern for their effects on men’s sex drive, orgasmic ability, and other sexual functions, with an implicit recognition that acceptability will be limited if men’s sexual well-being is compromised. The value placed on men’s pleasure-seeking is also visible in research and programming on male condoms, the only reversible male method, other than withdrawal, currently available. Empirical literature reasonably suggests that many men do not like using condoms because they curtail sensation. Severy and Spieler have described research efforts to develop latex and nonlatex condoms that make sex more pleasurable for men. Until very recently, researchers have rarely considered the possibility that condoms may affect women’s pleasure.

Yet an emerging body of literature has begun to explore how pleasure and sexual side effects can and do influence contraceptive practices for women. For example, in a study of the features most likely to shape contraceptive method choice, women ranked “lack of interference with sexual pleasure” as a “very important” consideration as often as men did (30% of men and 28% of women). Similarly, in qualitative research on sexual pleasure and contraceptive use, the way contraceptives altered sexual aesthetics (sensation, libido, lubrication, spontaneity, and other sexual attributes) mattered strongly to both women and men and shaped both the choice of method and how they used their method. However, gender influenced these sexual aesthetics in striking ways. For example, women reported disliking male condoms because they diminished their partner’s pleasure, and thus their own. Women were often concerned about the sexual side effects of male condoms for their partners, whereas men expressed comparatively little concern about the sexual side effects of women’s methods.
CONDOMS

Research increasingly demonstrates that the ways male condoms feel sexually matter to women as well as men. A 14-country study by the Joint United Nations Programme on HIV/AIDS found that men’s most frequently reported reason for not using condoms was reduced sexual pleasure. Comparatively, in an exploratory study of 189 U.S. women, 1 in 4 (23%) who had used condoms in the past month report decreased pleasure due to this method. Moreover, studies from both the United Kingdom and the United States demonstrate that those women who felt that condoms undermined their sexual pleasure were less likely to use them than women who did not report condom-related reductions in pleasure. Furthermore, women’s attitudes on whether condoms diminish arousal may influence use patterns more than men’s attitudes do. In one recent survey of 5,600 adults in the United States and Canada, men were slightly but significantly more likely than women to report that “using condoms causes me to lose my arousal.” But women who reported condom-associated arousal loss were more likely than men to have had unprotected sex in the last 12 months. Sexual health counselors and clinicians should acknowledge the importance of how condoms feel sexually to women.

Female condoms have been more widely studied than male condoms in regard to how they affect sexual experience for women. Some women enjoy the better heat transfer facilitated by the polyurethane female condom compared with the latex of male condoms, while other women have reported clitoral stimulation from the outer ring. The greater attention paid to how female condoms affect sexual pleasure is not surprising, given that this technology originated from efforts to create female-controlled HIV prevention strategies rather than from purely family planning objectives. Microbicide development has also taken women’s sexual acceptability into consideration.

COMBINED ORAL CONTRACEPTIVES

Combined oral contraceptives (COCs) entered the cultural marketplace 50 years ago and have been hailed as a key factor in facilitating this country’s sexual revolution. Since the approval of COCs, studies have explored if, and how, COCs affect sexual desire, enjoyment and functioning. Unfortunately, the impact of COCs, if any, remains poorly understood due not only to widely variable study methodology and quality, but also to confusion regarding the pathways of action. For example, sexual effects could result from hormonally mediated physiological changes in...
women’s bodies, psychological changes (e.g., feeling more protected against pregnancy and thus less sexually inhibited, or feeling sure that the pill will lower one’s sex drive), or a combination of physiological and psychological effects. Furthermore, the majority of studies on pill use and sexuality have been cross-sectional in nature, an inherent limitation if one wants to understand the effects of the pill on sexual functioning and enjoyment over time.

Most research on COCs and sexuality examines libido. Oral contraceptives with estrogen reduce testosterone, and this change has been cited as a biological mechanism for reduced libido. A recent review assessed 30 different studies of this topic. Most studies were retrospective and uncontrolled (n=17); these showed that a majority of women reported increased libido during COC use. Four small and uncontrolled, prospective studies showed little change in libido, and four prospective and cross-sectional controlled studies showed that compared with non-users, women using COCs reported both increased and decreased libido. A prospective study following new COC users for 1 year (n=100) demonstrated that decreased sexual thoughts and decreased psychosexual arousability were strong predictors of COC discontinuation. Among those 47% who discontinued COCs over the course of the study, these sexual side effects were the strongest predictors of discontinuation. This study cannot establish the mechanisms through which COCs may have contributed to lower libido, but it does highlight the importance of lowered libido to this sample of women using hormonal contraception and its effect on discontinuation.

Five randomized, placebo-controlled studies examined libido in COC users. None met every single standard for high quality reporting of randomized clinical trials (CONSORT guidelines). Results were mixed, showing variable effects of COCs on libido. The most recent and well-conducted trial demonstrated a decrease in libido in COC users compared with placebo in a sample of women in Scotland (baseline libido was high), but not in a sample of women in the Philippines (baseline libido was low). All of these women or their partners were surgically sterile, so these results may not apply to women who use COCs for contraception.

Overall, it appears as if COC users experience positive effects, negative effects, as well as no effect on libido. Nonetheless, in a minority of women, COCs seem to be associated with diminished sexual desire. Additional well-designed studies are needed to establish the independent, causal effects of COCs themselves, if any. Future research should also explore if differences in COC hormonal composition influence sexual functioning in diverse ways. Two prospective studies found differing effects of two formulations containing different doses of estrogen and types of progestins, one with decreased sexual desire, activity, and enjoyment.
and one with improved lubrication, arousal, and dyspareunia. Such differences should be explored in a randomized trial.

It would be unwise to base our understandings of the sexual side effects of COCs on any one of the above studies alone, given differences in study design, study population, and COC composition. However, at least one consistent finding of variability emerges—women clearly vary in their sexual responses to COCs, and we understand little about the reasons for this variability. Individual women have different sexual responses and preferences, and COCs affect myriad facets of the sexual experience. For example, one recent study of condoms and hormonal methods found that while COC users were the least likely to report diminished sexual pleasure due to their contraceptive method, they also reported greater dissatisfaction with their sexual interest and had significantly lower sexual satisfaction levels than did other women, even when controlling for age, relationship length, and other factors. Further research on this topic is certainly needed. We remain unsure of the precise mechanism through which COCs may affect libido. In a minority of women, COCs seem to be associated with a reduction in sexual interest. That said, since many women may experience reductions in desire regardless of their contraceptive method, providers should explore all possible reasons for problems with libido.

**Other Hormonal Methods**

Few data describe how use of rings, patches, injectables, and implants affects women’s sexual functioning. Potential mechanisms for COC-mediated sexual effects (i.e., physiological and psychological) could be similar for newer hormonal methods that also combine estrogen and progestin. The ring is unique as the only hormonal vaginal contraceptive method. Data from clinical trials show that most couples find it comfortable during sexual activity, and for those who do not, the ring can be removed and replaced a few hours later without risking pregnancy. Some women may be hesitant to place a ring in their vagina due to concerns about correct placement or discomfort. Once placed, however, even women who do not use tampons or masturbate find the ring comfortable. A study of Chinese women using four different forms of contraception (COCs, injectables, intrauterine contraception, and female sterilization) found that injectables were not related to sexual functioning or overall quality of life.

Several studies have compared combined hormonal methods in regard to their effect on sexual functioning. Two small randomized studies that compared sexual functioning in ring versus COC users found improvements in sexual desire and satisfaction in ring users but not COC users. In another recent study, COC users were random-
ized to either ring or patch use, and the Female Sexual Function Index, or FSFI, which includes domains on desire, arousal, lubrication, orgasm, satisfaction, and pain, was measured at baseline and after 3 months. Patch users experienced slight increases in overall FSFI scores. Contrary to prior literature and the study hypotheses, contraceptive ring users experienced modest decreases in FSFI scores, especially relating to arousal, lubrication, and pain.\textsuperscript{110} Notably, despite sexual functioning changes, ring users in this study were much more satisfied with their method than patch users, indicating that sexual effects constitute only one part of overall acceptability.

Combined hormonal methods could improve sexual functioning via noncontraceptive health effects. As Davis and Castaño point out,\textsuperscript{99} hormonal methods that inhibit ovulation can improve painful gynecologic conditions (e.g., endometriosis, dysmenorrhea, and ovarian cysts) as well as acne. Decreased pain and improved physical appearance could certainly improve sexual functioning, although these positive effects remain unstudied. Severy and Spieler have also suggested that contact between the penis, the ring, and the vagina or cervix may serve as a sexual stimulus to some couples.\textsuperscript{83}

Changes in bleeding patterns due to any contraceptive method can also affect women’s sexual expression, either positively (i.e., with a decrease in bleeding) or negatively (with an increase). For both personal and cultural reasons (e.g., religious proscriptions), some women avoid vaginal intercourse and to a lesser extent other genital contact when they are bleeding or spotting.\textsuperscript{111} Such changes may reduce interest in sex and contribute to method discontinuation. And many women lose their arousal when the risk of pregnancy is present,\textsuperscript{49} especially when partners are not equally committed to pregnancy prevention.\textsuperscript{48} The excellent efficacy offered by implants in particular may very well lead to improvements in sexual confidence and disinhibition for many women, although few empirical data exist to prove this assertion.

**Intrauterine Contraception**

The high efficacy of intrauterine contraception (IUC, though often referred to as IUD, for intrauterine device) is also likely to influence sexual enjoyment, but few large studies document this or other sexual changes with IUC. A small randomized study found that, compared to other IUC users and women who used no contraception, Mirena users reported significant increases in sexual desire and arousal as well as significant decreases in pain during intercourse (dyspareunia).\textsuperscript{112} Other studies have found no sexual changes, positive or negative, with IUC use. A prospective study in Spain found that sexual desire did not change with either use of COCs or IUCs, although it did diminish with age.\textsuperscript{113} And a Chi-
nese study found that IUC had no overall impact on sexual function. Neither study specified the types of IUC studied.\textsuperscript{107} Finally, studies have demonstrated no change in lubrication during use of the levonorgestrel-releasing IUC.\textsuperscript{114}

**STERILIZATION**

Surprisingly few studies assess the sexual acceptability of female and male sterilization, despite sterilization’s rank as the second most commonly used contraceptive method in the United States. The bulk of studies on the sexual acceptability of vasectomy were conducted several decades ago, with most studies showing high sexual satisfaction among both sterilized men and their partners,\textsuperscript{115, 116} but with others raising questions about the possible adverse sexual\textsuperscript{117} and psychological\textsuperscript{118} effects on men. A 2010 population-based study in Australia (N=3,390) found that sexual problems were equally common in men who had had a vasectomy and those who had not.\textsuperscript{119} Men with a vasectomy (34%) were just as likely as other men (33%) to be extremely satisfied sexually; however, those with a vasectomy were slightly but significantly more satisfied with their relationships overall (48% vs. 43%).

Two informative studies of tubal ligation were conducted recently. In one large U.S. study, over 80% of the 4,576 women participants reported no consistent change in either sexual interest or pleasure after interval tubal sterilization.\textsuperscript{120} Among the minority of respondents who did report consistent change, positive changes in sexual interest or pleasure were reported 10 to 15 times as often as negative effects. The women most likely to report negative changes were those who experienced poststerilization regret or postprocedure bleeding problems.

A more recent study of tubal ligation among a cohort of Australian women (N=447) found a similar relationship, and also highlighted a number of possible sexual benefits to sterilization—perhaps due to its wider measurement range of sexual effects.\textsuperscript{121} Having a tubal ligation was not associated with any specific sexual problem, such as physical pain during sex or an inability to reach orgasm. In fact, sterilized women were significantly less likely than nonsterilized women to lack interest in having sex, to take “too long” to reach orgasm, to experience vaginal dryness during sex, and to find sex unpleasurable. Sterilized women were also more likely to experience extremely high levels of sexual satisfaction, relationship satisfaction, and sexual pleasure.

These two studies are reassuring for clinicians who provide sterilization. Overall, most women experience sexual benefits after tubal ligation. Sexual problems are uncommon and may be related to regret; women need to be sure they want permanent contraception before undergoing sterilization. Clinicians and counselors can highlight the possible sexual
benefits of sterilization to their clients who are otherwise good candidates for this method.

**Withdrawal**

Clinicians and clients alike tend not to think of withdrawal as a contraceptive method. However, researchers suspect that far more people are using withdrawal than captured by nationally representative datasets such as the National Survey of Family Growth (NSFG). Furthermore, the typical use failure rate for withdrawal (22%) is comparable to the typical use failure rate for male condoms (18%). Most couples probably use withdrawal in conjunction with other coitus-dependent methods. In keeping with the family planning field’s general dismissal of this method, no studies to our knowledge have assessed the sexual effects of withdrawal among actual users. However, preliminary qualitative data indicate that some couples prefer withdrawal to condoms because it is easier to transition between various sexual activities (e.g., oral sex, vaginal sex, and back to oral) without having to apply or remove a condom or because of the taste of latex. Other ethnographic work from both Italy and Turkey demonstrates how, in certain cultural locations and moments, “pulling out” successfully becomes an important badge of masculinity. Recognize that some clients may be using withdrawal even if not reporting it, and offer information about the method.

**Summary**

On the one hand, the above review has underscored a dearth of literature and lack of attention to women’s sexuality in the majority of contraceptive research. More research on the sexual acceptability of contraceptive methods is clearly needed, with equal concern for women’s and men’s sexual functioning for new and existing methods. On the other hand, we have highlighted the growing number of research studies that do consider sexual aspects of various contraceptive methods for women. We strongly encourage practitioners to familiarize themselves with existing literature and help clients find a good fit with their sexual preferences and contraceptive method.

We would applaud more research of the sexual acceptability of IUCs and hormonal methods, but we also hope for a more innovative approach that taps into the sexual-improvement potential in contraceptive marketing and counseling. What if clinicians and contraceptive marketers were to tout the potential sexual benefits of methods? Existing contraceptive advertisements often portray women as empowered medical consumers but not as sexual agents. Ads promote convenience, efficacy, and noncontraceptive benefits (e.g., menstrual timing and regula-
tion, acne improvement), but not their potential catalysis of pleasurable, worry-free sex. Sexual and reproductive health clients could be well served by investigations of the feasibility and benefits of eroticizing of contraceptives. This trend can be seen globally in pleasure-centered sexual health promotion efforts, including the eroticization of safer-sex campaigns (see also www.thepleasureproject.org). The contraceptive field should follow suit.

**TOOLS & FURTHER RESOURCES**

**HOW CLINICIANS CAN HELP THEIR CLIENTS LEAD HEALTHY AND SATISFYING SEX LIVES**

Include sexuality in discussions about contraception. Consider the sexual effects of methods, both positive and negative, when recommending them to clients. Identify sexual problems and explore whether sexual side effects led to discontinuation of methods in the past. Some clinicians may be reluctant to bring up sexual health if they feel unprepared to adequately handle patient concerns. An open conversation to identify problems may in itself naturally provide education and simple suggestions that help.

Clinicians who are not experts in sexual medicine can help women who experience sexual problems or dysfunction. Treatment begins with an open, non-judgmental conversation. One sex therapy approach used by many nontherapist clinicians is called PLISSIT, which represents the four basic forms for sex therapy: permission, limited information, specific suggestions, and intensive therapy (explored more below). The PLISSIT model gives patients permission to discuss the problem, validates their concerns as legitimate, and provides limited information and suggestions. The following simple educational interventions may be very helpful: normalizing sexual frequency, understanding a mismatch between the partners’ libidos, suggesting use of lubricants, or explaining anatomy and relevant sexual responses. Primary care providers can use published algorithms for screening and treatment of sexual problems (for example, algorithms for Screening and Treating FSD, www.sexualhealthfundamentals.org). Women who need more in-depth counseling for treatment can be referred to a qualified sex therapist; such therapists can be located via the American Association of Sexuality Educators (www.aasect.org). No FDA-approved medications are currently available for the treatment of sexual problems in women, although some are under investigation.

Clients report that practitioners rarely ask them about sex, despite the evidence suggesting that discussions about positive sexual experiences and satisfaction (and not merely sexual risk) yield significant benefits.
Some sexual health advocates have suggested medical schools should revamp their training in sexuality. In the meantime, Table 1–3 contains some helpful questions to get you started. The Association of Reproductive Health Professionals (ARHP) has also created a series of resources on “sexual health fundamentals for patient care” (www.sexualhealthfundamentals.org), including guidelines on talking with patients about sexuality and sexual health (www.arhp.org/Publications-and-Resources/Clinical-Fact-Sheets/SHF-Talking).

To learn more about talking about with clients about sexual problems and solutions, refer to the following resources:

- The PLISSIT model, first developed in 1976 by psychologist Jack Annon. The acronym PLISSIT represents the four basic forms of sex therapy: Permission, Limited Information, Specific Suggestions, and Intensive Therapy. The model, which suggests that most people with sexual problems do not need an intensive course of therapy, has been used by many clinicians over the years.
- Sandra Leiblum’s Principles and practice of sex therapy. 4th edition.
- Maurice and Bowman’s Sexual medicine in primary care.
- Kinseberg et al.’s “Books helpful to patients with sexual and marital problems.”

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<tr>
<th>Table 1–3 Questions clinicians may wish to ask clients about sexuality*</th>
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<td>1. Sexual health is important to overall health; therefore, I always ask patients about it. Is it okay with you if I ask you a few questions about sexual matters now?</td>
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<td>2. Have you been sexually involved with anyone in the past 6 months? If yes: With men, women, or both?</td>
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<td>3. What kinds of things should I know about your sexual relationship or your sexual preferences so that I can provide the best care for you?</td>
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<td>4. On a scale of 1 to 10, with 10 being the best, how might you rank your sex life right now? What do you think would have to change to bring it up to a 10?</td>
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<td>5. How satisfied are you with your and your partner’s sexual functioning?</td>
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<td>6. Has there been any change in your or your partner’s sexual desire or the frequency of sexual activity?</td>
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<td>7. Is your current contraceptive method meeting your sexual needs? If not, why not?</td>
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<tr>
<td>8. Would you say that your current contraceptive method has improved your sex life, detracted from your sex life, or both or neither? How so?</td>
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<tr>
<td>9. What sexual concerns do you or your partner(s) have, if any?</td>
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* Some of these questions are taken from Nusbaum and Hamilton (2002).
To locate a trained, qualified sex therapist:

- American Association of Sexuality Educators Counselors and Therapists (www.aasect.org)

Other sex-positive educational and erotic resources:

- www.thepleasureproject.org
- www.goodvibrations.com
- www.evesgarden.com

REFERENCES


LATE REFERENCES