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David L. Rowland
Valparaiso University

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The Textbook of Clinical Sexual Medicine

Editor

Waguih William IsHak



Springer

Editor

Waguih William IsHak
Cedars-Sinai Department of Psychiatry and Behavioral Neurosciences
Cedars-Sinai Medical Center
Los Angeles, CA, USA

David Geffen School of Medicine at University of California Los Angeles (UCLA)
Los Angeles, CA, USA

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Evaluation of Delayed Ejaculation

David L. Rowland

Chapter Goals In this chapter, we:

- A. Review the sexual response cycle and the role of ejaculation
- B. Define and describe delayed ejaculation (DE), and review its prevalence
- C. Include information on models of sexual arousal and orgasm
- D. Discuss physiogenic, psychorelational, and cultural risk factors for DE
- E. Provide definitional and diagnostic criteria for DE, while also giving a brief view of the lived experiences of men with delayed ejaculation
- F. Emphasize the need for taking an integrated approach in evaluation
- G. Elaborate on the steps involved in carrying out a biopsychosocial evaluation
- H. Summarize major issues and points

Introduction

Scope of the Chapter

Men may suffer from a number of possible ejaculatory difficulties, including premature ejaculation, delayed ejaculation, inhibited ejaculation, retrograde ejaculation, partial ejaculatory incompetence (diminished volume, force, or sensation), anorgasmia (when ejaculation occurs without orgasm), and painful ejaculation. This chapter focuses on one such ejaculatory problem, namely *delayed* or *inhibited ejaculation*. Many men suffering from this condition can be treated successfully and achieve or regain a satisfying sexual life.

Herein we provide information about the definition, prevalence, possible etiology, and diagnosis of this disorder. We encourage taking a holistic approach to delayed ejaculation—fully considering biological, psychological, relationship, and cultural issues—yet we also recognize that various conceptual and methodological approaches may be more suited to or preferred by some patients and health care

providers than others. Nevertheless, in order to provide an evaluation strategy that is both effective and results in patient satisfaction, a broad understanding of the problem is helpful.

Taking an integrated approach to the treatment of delayed/inhibited ejaculation requires that the clinician recognize that sexual response and dysfunction are influenced by many factors. Therefore, evaluation and, later, effective treatment will most likely involve an integrated biopsychosocial approach, one that requires the clinician to have at least a rudimentary understanding of the multiple factors that impinge on sexual problems and healthy sexual relationships.

The Sexual Response Cycle: From Desire to Arousal to Orgasm/Ejaculation

Within the framework of the sexual response cycle, orgasm (and ejaculation) in men is both a biological (reproductive) and psychological (reward) endpoint [1]. Arousability and arousal—distinct but interrelated constructs—are precursors to this endpoint. Arousability and sexual interest/desire are psychological constructs used to explain variability in the intensity and frequency of sexual response, and they might best be conceptualized as the person's readiness to respond, a condition that in men usually depends on both internal (hormonally "primed" diencephalic brain structures) and external (appropriate partner and situation) stimulus conditions. Sexual arousal or excitement—the person's actual response to the sexual stimulus conditions—represents both a subjective/cerebral state of autonomic activation and a peripheral physiological response (erection) that prepares the man for sexual activity. During sexual activity, increasing levels of sexual arousal reach a threshold that triggers the ejaculatory response, which then typically terminates the sexual episode for the male. The subjective (brain) perception of urethral distension and bladder neck closure of the emission phase of ejaculation is associated with the sensation experienced as "ejaculatory inevitability." The perception of

the striated muscle contractions responsible for semen expulsion during ejaculation, mediated through sensory neurons in the pelvic region, gives rise to the experience of orgasm.

Although ejaculation and orgasm in men are concomitant events, they are not synonymous. Ejaculation is a spinal and peripherally mediated neural response, whereas orgasm is a brain-mediated response—that is, orgasm is a centrally mediated perception of the peripheral ejaculatory response. In men, these two events, because they nearly always coincide, are often presumed to be one and the same. However, rare instances occur whereby these events become dissociated. Ejaculation may occur without the experience of orgasm, and/or orgasm may occur in the absence of ejaculatory contractions. But because such dissociations are rare, in this chapter difficulties with orgasm are dealt with as if they were difficulties with ejaculation.

Epidemiology

Nomenclature

Sometimes referred to as retarded or inhibited ejaculation, herein we categorize all situations where men have difficulty reaching orgasm/ejaculation—whether merely delayed or fully inhibited—under the nomenclature of *delayed ejaculation*, recognizing that in some circles, inhibited ejaculation refers specifically to the complete inability to ejaculate. The prevalence of inhibited ejaculation is unclear (see Sect. “Prevalence”), as there is a dearth of data defining the duration of “normal” ejaculatory latency, particularly regarding the right tail of the distribution (i.e., beyond the median latency to ejaculation). Furthermore, larger epidemiologic studies have not subdivided men into various types of delayed ejaculation—for example, the continuum (and/or overlap) from delayed to inhibited ejaculation has not been adequately delineated, nor has the prevalence of delayed vs. inhibited ejaculation been enumerated.

Prevalence

Some time ago, DE was considered to be rare, typically occurring in only about 3–5% of men [2–4]; thus it had been viewed as clinically uncommon and thus perhaps less worthy of medical attention than erectile dysfunction or premature ejaculation. However, more recent estimates based on clinical experiences suggest a higher prevalence, perhaps somewhere in the range of 5–15% [5–9].

The prevalence of DE appears to be moderately and positively related to age—not surprising in view of the fact that sexual and ejaculatory function as a whole tends to diminish

over the lifespan. For example, not only may the latency to ejaculation increase, but the force of contractions and volume of semen decreases. Part of the age effect may result from diminished sensitivity of penile receptors [10], but decline in other physiological systems probably contribute as well (e.g., decreases in autonomic function or somatic contractions of the bulbocavernosus muscle). Indeed, whether the recent uptick in prevalence is a function of an aging male population in the USA, an increased use of medications for chronic disease that dampen the ejaculatory reflex, or simply greater awareness and open discussion about sexual problems is unknown. No large-scale studies have systematically investigated how such factors as age and general health status impact men’s capacity to reach orgasm.

Lifelong vs. Acquired DE

As qualified in DSM-5, health care providers may distinguish between lifelong and acquired DE. That is, failure to ejaculate can be a lifelong (or primary) condition (e.g., congenital anorgasmia) or an acquired (secondary) condition. It can be global, occurring in every sexual encounter, or it may be intermittent and/or linked to specific situations or partners. Although normative data from large samples of DE men have not been available, a recent analysis identified 25% of a clinical sample suffering from lifelong/primary DE, with the remainder reporting an acquired/secondary problem [11]. While primary DE is frequently the treatment driver (especially for extremely religious individuals referred for fertility problems), heterosexual men may also seek treatment when distressed by their inability to achieve orgasm in response to manual, oral, or vaginal stimulation by their partner. Data available on homosexual men are limited, but distress/frustration associated with not being able to ejaculate by any desired/chosen mode of stimulation remains fairly constant across all men, regardless of sexual orientation [11].

Acquired/secondary DE occurs after some period of normal function and typically results from pathophysiological, psychological, or relationship changes. Many men with secondary DE can masturbate to orgasm but have difficulty reaching orgasm during partnered sex. Approximately 75% of one clinical sample of DE men could reach orgasm through masturbation, while the remainder either would not or could not [12]. Interestingly, correlational evidence suggests that masturbatory frequency and style may be predisposing factors for DE, since a substantial portion of men who present with coital (secondary) DE report high levels of masturbatory activity with an idiosyncratic style [13–15].

Etiology, Physiology, and Pathophysiology

Models of Sexual Arousal and Orgasm: Excitatory and Inhibitory Factors

Sexual arousal and orgasm may be viewed as a process that involves both excitation and inhibition [16–18]. In these models excitatory factors may be individual, relational, and contextual—they include both neurobiological and psychosociocultural factors (which ultimately act upon neurobiological substrates). For example, a strong endogenous drive for sexual activity, the desire and attraction to one's partner, and the value of sexual intimacy and a satisfying relationship represent relevant excitatory elements. Inhibitory factors—ones that are likely to interfere with sexual response—also include both individual and psychosociocultural components. Inhibitory factors might include specific neurobiological predispositions for anxiety, medical conditions, relationship conflict that suspends sexual advances, or cognition/assessment of risk factors resulting from infectious disease, inappropriate (and sometimes illegal) objects of desire, and so on.

Perelman's variant of the excitation-inhibition approach [11, 16], referred to as the Sexual Tipping Point Model, assumes a threshold that must be exceeded in order for ejaculation to occur, which depends on a mix of psychogenic and organic factors. According to this model, the specific threshold for the sexual response is determined by these multiple factors for any given moment or circumstance, with certain factors dominating and others receding in importance. For instance, every man, whether experiencing a "normal" ejaculatory latency, or premature or delayed ejaculation, has a multidimensional predetermined "ejaculatory tipping point." Perelman's model leads to the assumption that appropriate assessment requires an appreciation of the interdependent influence of all these factors on the endpoint dysfunction (DE) for a particular individual, at a particular moment in time.

Less directly related to orgasmic function, Barlow's model [18] focuses on performance anxiety related to male and female sexual arousal (erection in men, psychosexual arousal in women). Barlow proposed a cognitive-affective process that distinguished functional men from dysfunctional men through a series of feedback loops. According to this widely referenced model, functional men progress through a series of stages during a sexual situation that lead to stepwise increases in autonomic arousal, subsequent functional performance, and future approach toward similar situations. In contrast, dysfunctional men progress through similar stages, yet due to low expectancies, self-efficacy, perception of control, and attention on consequences of

failure rather than on erotic cues, these variant stages lead to autonomic arousal/anxiety, dysfunctional performance, and avoidance in future situations. Although this descriptive model has been used mainly to understand anxiety's role in erectile problems, general aspects of the model are also applicable to understanding anxiety's role in delayed ejaculation.

With respect to DE, the models above help identify potential areas of risk that warrant exploration in men having difficulty reaching orgasm. At the same time, the models identify potential excitatory factors that may enhance arousal and thereby counter inhibitory factors operating on the ejaculatory process. Given that successful expression of sexual response (desire, arousal, and orgasm) represents the predominance of excitatory over inhibitory factors, the health care provider might broadly frame the remediation of DE as a process that increases excitatory factors while mitigating inhibitory factors.

The Physiology of Ejaculation

The precise mechanism of ejaculation is much less firmly established than the physiology of erection, and for this reason, the physiology of ejaculatory disorders is less understood than that of ED. For conceptual convenience, normal ejaculation is identified by its two continuous phases, emission and expulsion, with each representing distinct events regulated by separate neural pathways [19]. Specifically, after a variable period of penile sensory stimulation accompanied by psychosexual arousal, a rapid, involuntary sequence of events ensues [2, 20]. The emission phase, under the control of the sympathetic nervous system, begins with closure of the bladder neck to prevent urinary contamination followed by deposition of semen from the seminal vesicles and prostate into the posterior urethra. A sensation experienced as "ejaculatory inevitability" arises from this urethral distension which, in turn, stimulates rhythmic contractions of the bulbocavernosus and ischiocavernosus muscles responsible for semen expulsion (hence, the expulsion phase)—a process under probable autonomic control but with both smooth and somatic muscle endpoints [20].

The ejaculatory reflex is mediated through the spinal control center, sometimes also referred to as the spinal ejaculation generator, spinal pattern generator, or spinal pacemaker. A combination of sensory input from the pudendal nerve (dorsal nerve of the penis) and descending cerebral pathways activates the spinal ejaculation generator, which coordinates the sympathetic, parasympathetic, and somatic motor outflow needed to induce emission and expulsion [19, 20]. As with other spinal reflex processes (e.g., urination), cerebral control is presumed to supersede spinal control of the ejaculatory response.

General Perspective Regarding Etiology

In some instances, a somatic condition may account for DE, and indeed, any procedure or disease that disrupts sympathetic or somatic innervation to the genital region has the potential to affect ejaculatory function and orgasm. Nevertheless, a sizable portion of men with DE exhibit no clear somatic factors that account for the disorder. These men neither ejaculate—or do so only with great difficulty—nor experience orgasm in response to varying forms of sexual stimulation. Men whose problem cannot be linked to a specific somatic or pathophysiological etiology are frequently assumed, though perhaps in error, to have a psychogenic etiology. Just as a pathophysiological etiology should not be assumed without a thorough medical investigation, a psychogenic etiology should not be assumed without an appropriate psychosexual history. Of course, psychological and somatic etiologies are neither independent nor mutually exclusive classifications—not only do the categories themselves overlap (e.g., is a problem of diminished sympathetic arousal a psychogenic or physiological classification?), but the causes of sexual dysfunctions often include a mix of factors involving both domains. In fact, most cases of DE are unlikely to result from a simple or single set of causal factors.

Physiological and Pathophysiological Factors

Biological/somatic risk factors may be either physiological or pathophysiological. Physiological risk factors refer to those inherent to the system—part of the person's hardwired neurophysiology. Pathophysiological risk factors, on the other hand, represent disruption of normal biological processes, and include disease, trauma, aging, medication, and other biological conditions.

No clear *physiological* factors are known to account for DE in men with a lifelong (or primary) condition. However, natural variation occurs in ejaculatory latencies among men, with some consistently falling toward the right tail of a presumably positively skewed distribution. Yet the reason why some men appear to have naturally higher thresholds and/or latencies to ejaculation than others is unknown. Multiple physiological systems ranging from lower penile sensory receptor sensitivity, to neurochemical production, utilization, and degradation in the neural reflex pathways, to the neuromuscular response involved in seminal emission and expulsion could all contribute to such individual variation, but strong evidence suggesting a significant role for any particular component or system in the ejaculatory process is lacking.

Men with DE based on a *pathophysiological* condition most likely have *acquired* (or secondary) DE, a fact that would typically emerge through a medical history and examination. Specifically, any procedure, disease, or condition

TABLE 16-1. Putative negative effects of various medications on erectile/arousal and ejaculatory function in men

Substance type	Examples	Arousal and/or erection	Orgasmic function
Antihypertensives	α - and β -blockers, sympathetic inhibitors	x	x
Antidepressants	SSRIs, MAOIs, tricyclics	x	x
Antipsychotics	Phenothiazines, thioxanthenes	x	x
Antiepileptics	Gabapentin, topiramate, etc.	x	x
Anxiolytics/tranquilizers	Benzodiazepines	x	
Hypnotics/sedatives	Barbiturates, alcohol	x	x
Muscle relaxants	GABA β receptor agonists	–	x
Cancer treatments	GRH agonists	x	–
Immunosuppressive	Sirolimus, everolimus	x	–
Antiandrogens	Finasteride, cyproterone acetate, etc.	x	x
Steroids	Prednisone	x	?
Analgesics	Opioids, methadone		x
Other	Antihistamines, pseudoephedrine, recreational	x	?

Based on data from Refs. [11, 24].

that disrupts sympathetic or somatic innervation to the genital region has the potential to affect ejaculatory function and orgasm. Thus, spinal cord injury, multiple sclerosis, pelvic-region surgery, severe diabetes, lower urinary tract symptoms (LUTS), and medications that inhibit α -adrenergic innervation of the ejaculatory system have been associated with DE [21–23]. As examples, surgical therapy for prostatic obstruction is likely to disrupt bladder neck competence during emission, and pathologic lesions of the sympathetic innervation of the coordinated ejaculatory reflex may have variable effects on the quality of ejaculation or orgasm. Furthermore, a wide range of medications are known to inhibit ejaculatory response, many of which may be prescribed as treatment for chronic or long lasting diseases (e.g., hypertension and depression). A list of common medications is provided in Table 16-1, but also included are medications that interfere with the erectile process, as DE may sometimes be secondary to problems (or worry about) maintaining an erection for sufficient duration to reach ejaculation.

As mentioned previously, most ejaculatory problems increase with aging, not only those associated with longer latencies. This increase may be due not only to an overall decrease in health and stamina, but also to increased prevalence of specific diseases. For example, the severity and frequency of lower urinary tract symptoms (LUTS) increases

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with age, yet this condition also exerts effects on ejaculatory function beyond (i.e., independent of) those of just aging [25, 26]. Diminished penile sensitivity associated with aging, diabetes, and various chronic diseases may also reduce the efficacy of penile stimulation, and when coupled with diminished stimulation from an aging partner (e.g., loss of vaginal elasticity that occurs with aging), the amount and intensity of genital stimulation may be insufficient to reach ejaculation [10, 27]. Nevertheless, reduced penile sensitivity is unlikely to be a primary cause for DE; more likely, ejaculatory latency is influenced more by central (cognitive-affective-arousal) processes than peripheral hardwiring of spinal reflexes [20].

More difficult to assess is whether the man may have lost physical stamina or endurance over the years as the result of general health issues and/or aging. Lack of stamina may result in physical and mental fatigue, distraction, less vigorous thrusting, and thus sooner abandonment of the effort. For comparison, about 125–150 calories are burned during 30 min of sexual intercourse for 155 lb man, with a typical heart rate reaching 110–120 bpm during orgasm [28]¹. Caloric use during sex is equivalent to about 30 min of leisure cycling, kayaking, low-medium impact aerobics, or brisk pace walking, although this use increases by about 15% for a man weighing 180 lbs, and 30% for a man weighing 200 lbs. Heart rate during moderate cycling may typically range from 95–120 bpm. Thus, men lacking sufficient stamina may, for example, need to devise creative ways with their partners to achieve levels of arousal sufficient for orgasm that preclude vigorous physical exertion.

From the clinician's perspective, pathophysiological and physiological factors have three important implications. First, any man having recently (or over a period of time) acquired DE should be referred for a medical exam that might include attention to the pelvic area, recent medications, or other disease states. Second, if no obvious pathophysiology is identified, then psychological and relationship factors warrant careful exploration. And third, the clinician might use the opportunity to educate the patient and his partner regarding possible inherent (and naturally occurring) biological differences in the hardwiring of ejaculatory response and latencies, thereby removing some of the burden of guilt and responsibility often associated with this sexual dysfunction.

Cultural Factors

Culturally derived expectations may contribute to DE in some men. A relationship between religious orthodoxy and DE was first proposed in Masters and Johnson's *Human*

Sexual Inadequacy [3] where the authors suggested that certain beliefs may inhibit normal ejaculatory response or limit the sexual experience necessary for developing control over ejaculation. Consistent with this notion, Perelman [8] reported that in a clinical sample of 75 DE men, about 35% scored high on religious orthodoxy. Some such men tended to have limited sexual knowledge and, perhaps due to religious strictures, had masturbated minimally or not at all. Others, similar to their less religious counterparts, had masturbated for years, but due to their particular religious upbringing or restrictive household attitudes toward sex, they had experienced guilt and anxiety about this sexual outlet, which in turn resulted in DE [8]. As religious taboos and health concerns about masturbation have waned in Western cultures over the past half century, the effects of these specific cultural factors have undoubtedly become less significant among younger men. Despite the lack of supporting data, however, one might imagine that men from cultures or developmental environments that forbid masturbation or reinforce negative attitudes about sexuality in general, and "spilling seed" in particular, might well experience problems with DE.

Psychological and Relationship Factors

Psychological and relationship factors are often involved in long or increasing ejaculatory latencies in some men. In such men, the problem may evolve gradually over a period of time—sometimes years—but not reach levels of concern until a particular need is unfulfilled (e.g., to start a family) or unless the sexual activity involves the partner.

Psychological factors may include specific emotions and cognitions tied to the evaluative/performance aspects of sex with a partner [29]. Self and perceived partner expectations can lead to "sexual performance anxiety" which may then contribute to DE. Such anxiety typically stems from the individual's lack of confidence to perform adequately, to appear and feel attractive (body image), to satisfy his partner sexually, to experience an overall sense of self-efficacy—in some respects to measure up to the "competition" [30, 31]. The impact of this anxiety on men's sexual response varies depending on the individual and the situation. But in some men, it may interfere with the ability to respond adequately and it may, as a result, generate a number of maladaptive responses (e.g., setting unrealistic expectations). With respect to DE, anxiety surrounding the difficulty of ejaculating may draw the man's attention away from erotic cues that normally serve to enhance arousal. Accordingly, Apfelbaum [32] has emphasized the need to remove the "demand" (and thus anxiety-producing) characteristics of the situation, noting that men with DE may be overly conscientious about pleasing their partner. This "ejaculatory performance"

¹For caloric expenditure: <http://www.nutristrategy.com/caloriesburned.htm>.

²For heart rate: https://www.nhlbi.nih.gov/files/docs/public/heart/phy_active.pdf.

anxiety interferes with the erotic sensations of genital stimulation, resulting in levels of sexual excitement and arousal that are insufficient for climax although more than adequate to maintain an erection.

Relationship factors may be associated with current interpersonal dynamics or with longer term relationship developmental changes. In some instances, sex with the partner may become insufficiently arousing for the man to reach ejaculation, a situation that may involve any number of factors operating individually or together. For example, some men may have a strong "autosexual" orientation that involves an idiosyncratic and vigorous masturbation style—carried out with high frequency—which does not "match" vaginal stimulation [11]. As a result, the stimulation generated from vaginal thrusting may no longer be sufficiently arousing/intense for the man to reach ejaculation or, in other words, the vagina is unable to compete with the habitual strokes and tighter grip of the moving hand. In other instances, disparity between the reality of sex with the partner and the man's sexual fantasy (whether or not conventional) used during masturbation is another potential cause of DE [11]. At a time when explicit sexual/erotic materials can be accessed easily, in complete privacy (sometimes secrecy), and at little or no cost, such disparity between expected/fantasized sex and actual sex may be increasing in frequency. These disparities may involve a number of different factors, such as the partner's attractiveness and body type (relative to that of, say, a porn star), homosexual or heterosexual attraction, and the specific sex activity performed (e.g., oral vs. anal vs. vaginal), with each having the potential to diminish arousal cues during partnered sex. In most instances, these men fail to communicate their preferences to their partners because of shame, embarrassment, or guilt. Yet such behavioral and cognitive patterns may well predispose men to experience problems reaching ejaculation—these men are simply not sufficiently aroused during coitus (as they might be during masturbation) to achieve orgasm.

The above issues suggest then that DE men may lack sufficient levels of physical and/or psychosexual arousal during coitus: their arousal response to their partner cannot match their response to self-stimulation, self-generated fantasy, and/or pornography. Support for this idea has been provided by several observations. First, psychophysiological investigation of men with DE has demonstrated that although they attain erectile responses comparable to or better than sexually functional controls during visual and penile psychosexual stimulation, they report far lower levels of psychosexual arousal [13, 33]. Apfelbaum [32] has suggested that during partnered sex the couple interprets the (DE) man's strong erectile response as erroneous evidence that he is ready for sex, highly aroused, and capable of achieving orgasm. Second, inadequate arousal may also be responsible for increased anecdotal clinical reports of DE for men using oral

medications such as PDE-5 inhibitors (e.g., Viagra) for the treatment for ED [34, 35]. While most men using PDE-5 inhibitors experience restored erections and coitus with ejaculation, others experience erection in the absence of comparable psychoemotional arousal, confusing their erect state as an indication of sexual arousal when it primarily indicated vasocongestive success [36].

As the clinician might surmise, discussions about masturbation style and frequency, attractiveness of the partner, sexual fantasies (either conventional or unconventional), and the use of pornography are extremely sensitive topics and most men would feel shame and embarrassment discussing such topics openly with the clinician (or with their partner). Such topics could only be broached after an atmosphere of openness is reinforced and a sense of trust between clinician and patient has been well established (see Sect. "Steps in the evaluation process of DE").

From the health care provider's perspective, an understanding of the man's personal experience and interpretation of his impairment is important—how it makes him feel, how it affects his thoughts and feelings, how it affects his relationship with his partner, and so on. Furthermore, evaluating both the man and his partner to determine the impact of DE on the couple's relationship may be helpful. Since effective treatment of DE usually requires the cooperation of the partner, including the partner in the evaluation process can help establish the precedent that remediation of DE will require both partners working as a team. In addition, engaging the man and his partner early in the process can help address both sexual and nonsexual relationship issues—often intertwined—which may result in more positive outcomes regarding overall sexual satisfaction than merely focusing on narrow response sets such as ejaculatory latency.

Defining and Diagnostic Criteria

Defining Delayed Ejaculation

Delayed ejaculation is listed among the sexual dysfunctions in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5: 302.74) [37]. It is characterized as a marked delay or infrequency of ejaculation occurring in about 75–100% of partnered sexual activity, accompanied by a desire *not* to delay the ejaculation—indicating that the delay is neither intentional nor wanted. In addition, the DSM-5 definition assumes that the condition is accompanied by clinically significant distress and that it has persisted for at least 6 months. The International Classification of Diseases ((ICD-10 Version 2016: www.who.int/classifications/icd/en/) [38], the standard diagnostic tool used to monitor the incidence and prevalence of diseases and other health problems, also includes a code for

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delayed ejaculation under the nomenclatures of “inhibited orgasm” and “psychogenic anorgasm;” (F52.3, Orgasmic Dysfunction: Inhibited Orgasm [male][female]), the latter suggesting a condition of orgasmic absence distinguished by its psychological origin. Neither the DSM-5 nor ICD-10 classification is fully inclusive, comprehensive, or clear in meaning. For example, DSM-5 neither temporally defines “delay” nor specifies situations of inadequate arousal or severe relationship distress in the classification. ICD-10, on the other hand, does not elaborate upon its coding categories to differentiate orgasm from ejaculation, or inhibited orgasm from psychogenic anorgasm; and it too provides no temporal parameters for “delay,” stating only that orgasm “does not occur or is markedly delayed.” To its credit, DSM-5 includes relevant qualifiers such as “acquired” or “lifelong” (see Sect. “Lifelong vs. acquired DE”), and “generalized” or “situational,” along with designation of “mild, moderate, or severe.” In addition, DSM-5 notes the importance of considering five other factors: (1) partner, (2) relationship, (3) individual vulnerability (e.g., history of abuse), psychiatric comorbidity (e.g., depression), and stressors, (4) cultural/religious influences, and (5) medical factors. The relevance of these risk/qualifying factors were discussed in detail in Sect. “Etiology, Physiology, and Pathophysiology,” of this chapter (see Table 16-2).

There are no clearly specified parameters as to when a man actually meets the conditions for DE, as operationalized criteria do not exist. Perhaps a simplified strategy is to use an approach that parallels that of another male orgasmic disorder—namely premature ejaculation—in which three criteria are considered: ejaculatory latency, self-efficacy, and level of distress or bother [1, 39]. The first criterion regarding ejaculatory latency for men with DE can be based on findings that the median ejaculation time for most men is around 6–10 min (standard deviation = \pm 3–4) [40, 41]. Therefore, those men who meet the following three criteria might be considered candidates for a DE diagnosis.

- The man takes more than 16–20 min (i.e., \geq about 2 standard deviations above the mean/median) to reach ejaculation or, alternatively, terminates intercourse due to frustration or exhaustion after prolonged stimulation;
- The man is unable to advance his ejaculatory response, that is, he is not prolonging intercourse purposefully (a measure of self-efficacy);
- The man is distressed or bothered by the situation, and/or his partner is bothered or dissatisfied by the condition.

The above characteristics, together with the fact that a man and/or his partner are sufficiently concerned or upset by the condition that they have decided to seek help for the problem, are grounds for considering a DE diagnosis.

TABLE 16-2. DSM-5 Diagnostic Criteria for Delayed Ejaculation 302.74 (F52.32)

- A. Either of the following symptoms must be experienced on almost all or all occasions (approximately 75–100%) of partnered sexual activity (in identified situational contexts or, if generalized, in all contexts), and without the individual desiring delay:
 1. Marked delay in ejaculation
 2. Marked infrequency or absence of ejaculation
- B. The symptoms in Criterion A have persisted for a minimum duration of approximately 6 months
- C. The symptoms in Criterion A cause clinically significant distress in the individual
- D. The sexual dysfunction is not better explained by a nonsexual mental disorder or as a consequence of severe relationship distress or other significant stressors and is not attributable to the effects of a substance/medication or another medical condition

Specify whether:

Lifelong: The disturbance has been present since the individual became sexually active

Acquired: The disturbance began after a period of relatively normal sexual function

Specify whether:

Generalized: Not limited to certain types of stimulation, situations, or partners

Situational: Only occurs with certain types of stimulation, situations, or partners

Specify current severity:

Mild: Evidence of mild distress over the symptoms in Criterion A

Moderate: Evidence of moderate distress over the symptoms in Criterion A

Severe: Evidence of severe or extreme distress over the symptoms in Criterion A

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The Lived Experiences of Men with Delayed Ejaculation

Delayed ejaculation has not attracted the same level of attention in the media as erectile dysfunction (ED) and premature ejaculation (PE). No FDA approved medication is available for the treatment of DE (as is the case for ED), and unlike PE, pharmaceutical companies have not vigorously studied and pursued biomedical treatments for delayed ejaculation. As a result, men whose sexual relationships are disrupted by their difficulty or inability to ejaculate remain somewhat hidden from view, receiving little or no attention from the popular press and, more disconcertingly, from close and sustained investigation by the research community [11, 42]. As a result, we know little about the etiology of DE based on large study samples—for example, whether these men have always had difficulty reaching ejaculation or whether they typically develop the problem after a period of more typical ejaculatory latencies; we have little empirically based information

regarding etiological factors for those men who have had a lifelong problem with reaching ejaculation; we have little understanding of the level of distress these men experience about their condition—for example, whether the difficulty or inability to reach orgasm results in levels of distress comparable to men experiencing erectile dysfunction [43] or premature ejaculation [44, 45]; and we have little insight into how the problem affects their sexual relationship.

On the other hand, sufficient numbers of men do seek help for DE to suggest that the inability to ejaculate imparts a number of psychobehavioral consequences, including diminished sexual satisfaction, low self-efficacy, and a lack of self-confidence [13, 16]. Furthermore, such men typically report a history of unsatisfying sexual relationships and, in some instances, a preference for masturbation over intercourse [14, 46]. In those instances where procreation and having a family are among the couple's goals of sexual intercourse, delayed and/or inhibited ejaculation may be particularly troubling and frustrating to one or both partners.

Similar to men with other types of sexual dysfunction, men with DE indicate high levels of relationship distress, sexual dissatisfaction, anxiety about their sexual performance, and general health issues—significantly higher than sexually functional men. In addition, along with other sexually dysfunctional counterparts, men with DE typically report lower frequencies of coital activity [13]. A distinguishing characteristic of men with DE—and one that has implications for treatment—is that they usually have little or no difficulty attaining or keeping their erections—in fact they are often able to sustain erections for prolonged periods of time. But despite their good erections, they report lower levels of psychosexual arousal, at least compared with sexually functional men [33].

Best Practices Regarding Diagnosis

Taking an Integrated Biopsychosocial Approach

Comprehending the array of factors that account for variation in latency to ejaculation following vaginal intromission is key to understanding any sexual problem. As with many other biobehavioral responses, variation in ejaculatory latency is under the influence of both biological and psychological-behavioral factors. One contemporary way of conceptualizing the interaction of these systems has been proposed by those who study evolutionary psychology [47]. The ejaculatory latency *range* for each individual may be predisposed or biologically set (e.g., via genetics), but the actual timing or moment of ejaculation within that range depends on a variety of contextual, psychological-behavioral, and relationship-partner variables [16, 48]. Such thinking is

clearly supported by the fact that ejaculatory latency in men with ejaculatory disorders (either premature or delayed ejaculation) is often quite different during coitus than during masturbation [49].

The most useful approach to understanding biobehavioral responses is that of integrating—rather than isolating—the biological and psychological-behavioral components, with the goal of identifying those organismic elements—peripheral and/or central—that contribute to and explain variation in the response. Undoubtedly, some components of the ejaculatory response that influence latency are hardwired and not easily modified, with individual differences accounted for by gene-regulated processes (membrane receptors; biodynamics of neurotransmitter synthesis, activation, modulation, and degradation; androgenic and estrogenic hormones, etc.). Such genetically regulated predispositions are likely to impact the typical speed and ease of ejaculation for any particular organism. Yet some aspects of the ejaculatory response are “soft wired,” that is, they are influenced by the past experiences and present contexts in which the response is occurring [48]. In the human, most such processes are central and/or cerebral and, although no less biological in nature than the hardwired system, allow for flexibility as the organism responds to the demands of the particular situation. As noted previously, the fact that men who have DE during intercourse often do not have similar problems during masturbation is strong testimony to the relevance of these contextual factors. These soft-wired biological processes give rise to subjective experiences that are then identified and studied as psychological-behavioral constructs that carry both descriptive (naming) and explanatory meaning for men and women. Thus, emotion, anxiety, motivation, arousal, and learning represent constructs—all underlain by biological events—used by biopsychosocial scientists to help explain variation in the intensity, speed, frequency, latency, and duration of a response. Such constructs—the values of which vary over time and situations—play an important role in determining ejaculatory latency. Realizing this, the clinician (and patient) is in a better position to understand DE as an endpoint/response that represents the interaction of biological, psychological, and relationship factors over the course of a man's life cycle.

Steps in the Evaluation Process of DE

The evaluation of DE consists of a number of exploratory steps designed for three overarching purposes: (1) ascertaining that the problem is best classified as delayed ejaculation; (2) broadly identifying excitatory and inhibitory factors related to sexual arousal and orgasm in the patient; and (3) systematically eliminating various risk factors in order to identify the most probable cause of the DE. An outline of this process is provided below and summarized in Table 16-3.

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TABLE 16-3. Typical steps in the evaluation of DE

Step	Goal	Information/procedure examples
Setting the tone	Establish openness and trust	Normalizing and destigmatizing the problem
Differential diagnosis	Rule out other sexual problems	Verify problem of inhibited ejaculation <ul style="list-style-type: none"> • Typical ejaculatory latency • Inability to affect ejaculatory latency • Significant distress
History and scope of the problem	Obtaining detailed parameters about development of the problem	Lifelong, acquired; onset, duration, situation, exacerbation, self-management, motivation for change;
Medical history and exam	Pathophysiological etiology	Physical exam, review of illnesses, surgeries, medications, injuries, drug use, etc. including general life stressors/transitions that are job-related, financial, family based, etc.
Psychosexual evaluation	Identify possible psychological and relationship predisposing factors	Current sexual practices and activities in contexts: <ul style="list-style-type: none"> • Predisposing religious and cultural issues, including sexual knowledge and beliefs • Masturbatory and coital activities including fantasy, use of erotic materials, etc. • Relationship parameters involving quality and intimacy, communication, partner attractiveness and dysfunction
Summary of relevant factors to review with patient (and partner)	Gain patient acceptance of the problem, its etiology, and encourage value/motivation for change	Verify and align clinical notes with patient and partner self-report and perceptions.

Setting the Tone

Most men and women have difficulty discussing sexual issues openly, and many clinicians who are not sexual specialists share a similar reluctance about discussing details of a patient's sexual problems. Therefore, one of the most important elements of the evaluation process is overcoming the potential anxiety and embarrassment associated with direct discussion of sexual details. The clinician plays the primary role in establishing an atmosphere of normalcy, trust, and openness—critically important for obtaining detailed and honest information from the patient (and his partner) about issues that are extremely private and often stigmatized when perceived as being a bit unconventional. We offer two examples of the kinds of approach that might be used to begin a conversation or respond to an inquiry—there are, of course, infinite variations that individual clinicians may find more effective.

- The clinician may, for example, take the initiative by broaching the topic, asking the patient about any recent sexual issues, while informing the patient that often a sexual problem serves as a good marker for possible other "more serious" problems. For example, erectile problems may be indicative of cardiovascular or diabetic disease, ejaculatory problems may be associated with LUTS or pelvic trauma, etc. Such a conversation can help normalize the condition and thus destigmatize the problem. The clinician may also use this conversation as an opportunity to discuss the sexual response cycle with the patient, to help pinpoint the problem, and to discuss various

preliminary steps that might be considered (see next Sect. "The differential diagnosis")

- If the patient himself raises the issue, the clinician can respond with a positive and acknowledging response, such as, "I'm glad that you brought this up, as a healthy sexual life is not only important to one's overall well-being, but issues with sexuality may indicate a possible 'more serious' problem, such as developing cardiovascular or diabetic response." The clinician can then follow the subsequent steps outlined in the first scenario designed to normalize and further reassure the patient.

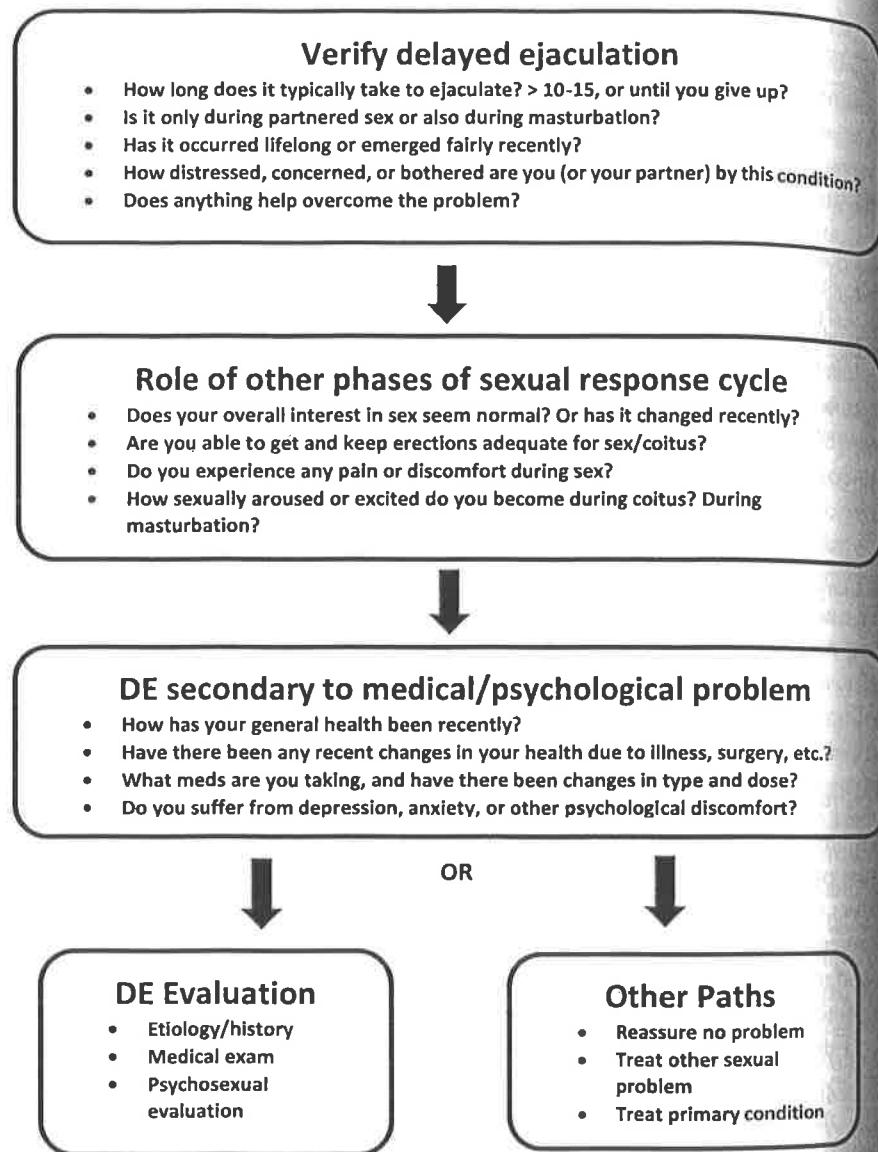
Each clinician will have his/her own style, but because this initial conversation sets the tone for future ongoing clinician-patient communication regarding DE, establishing normalcy, openness, trust, reassurance, and a sense of support at the outset is key.

The Differential Diagnosis

The differential diagnosis is intended: (1) to ascertain the problem is really one affecting the ejaculatory phase of the sexual response; and if so, (2) to help determine whether the delayed ejaculation is primary or, alternatively, secondary to some other medical, physical, or psychological factor that needs to be addressed first. A flowchart indicating steps in this process is provided in Figure 16-1.

Regarding the first purpose of the differential diagnosis, eliminating a lack of sexual desire/interest and pain as possible mediating factors is necessary. Furthermore, as noted previously, insufficient psychological-sexual arousal is often

FIGURE 16-1. Sample queries for the differential diagnosis of delayed ejaculation.



a major factor contributing to DE; neither DSM-5 nor ICD exclude men from a DE diagnosis based on insufficient arousal (as is the case for Female Orgasmic Disorder), so such men—even though technically having difficulty with the arousal rather than orgasm phase—may be considered as having DE. Even though these men may have little or no difficulty getting and sustaining an erection of significant duration for penetration and thrusting [13, 33], their level of subjective/psychosexual arousal (i.e., being “turned on”) may be insufficient to activate sympathetically mediated ejaculation.

A brief attempt to obtain information regarding the three criteria for DE discussed in the Sect. “Defining delayed ejaculation,” should also be undertaken to ensure: (1) that the latency to ejaculation is more than average, that is, more than about 15 min or of sufficient duration such that the man abandons hope of ejaculating; (2) that the patient has been unable to shorten this latency; and (3) that the man and/or his partner are distressed by the situation.

Regarding the second purpose of a differential diagnosis, if the man is having difficulty reaching orgasm, good clinical practice first necessitates treatment (to the extent that it is possible) of any medical condition to which the DE is secondary on the assumption that such treatment will likely ameliorate the DE. For example, if LUTS, or depression, or significant relationship conflict are probable etiological factors, such conditions should be discussed and first considered for remediation.

Understanding the History and Scope of the Problem

The clinician should obtain a history of the problem along with other aspects of general psychosexual functioning. For example, the following types of questions might be asked: Has the problem been lifelong? Recent? Developed over a period of time? Related to any other life events? Situation

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Table 16-4. Examples of potentially useful instruments for assessing sexual problems and relationship issues

Medical and psychological sexual assessments	
International Index of Erectile Function (IIEF)	A widely used 15-item instrument having subscales related to erectile function, orgasmic function, sexual desire, intercourse satisfaction, and overall satisfaction ([50]; http://urologyspecialists.net/print/iief.html)
Promis® (Patient Reported Outcomes Measurement Information Systems): Physical Health Measures on Sexual Function and Satisfaction	Provides validated assessment items for a range of sexual problems, including but not limited to: global satisfaction (7 items), interfering factors (10 items), orgasm (3 items), and orgasm pleasure (3 items). Promis is registered to the US Department of Health and Human Services/NIH. ([51]: link to: http://www.healthmeasures.net/explore-measurement-systems/promis/intro-to-promis ; and https://www.assessmentcenter.net/documents/Sexual%20Function%20Manual.pdf)
Sexual Health Inventory for Men (SHIM) or IIEF-5	A shortened version of the IIEF using 5-items for screening and diagnosis of erectile dysfunction (ED) and its severity in clinical practice and research. ([52]; can be found at http://rohbaltime.com/SHIM.pdf)
Male Sexual Health Questionnaire (MSHQ)	25-item questionnaire measuring erection, ejaculation, and satisfaction with a focus on ejaculatory function. Elevated cultural sensitivity compared to many other tools. (Can be found in [53])
Relational assessments	
Dyadic Adjustment Scale (DAS)	Self-report measure of relationship adjustment, and both partner's perception of satisfaction. [54] http://trieft.org/wp-content/uploads/2010/09/DAS+1.pdf
Golombok Rust Inventory of Sexual Satisfaction (GRISS)	28-item questionnaire. Assessment of sexual satisfaction and dysfunction; beneficial to identify the extent of improvement over time as the result of medication or therapy. [55] http://www.psychometrics.cam.ac.uk/productservices/psychometric-tests/GRISS
Self-Esteem and Relationship Questionnaire (SEAR)	The SEAR questionnaire possesses strong psychometric properties that support its validity and reliability for measuring sexual relationship, confidence, and self-esteem. [56] http://www.nature.com/ijjr/journal/v16/n1/fig_tab/3901095_t1.html

specific? Or more generalized? Can the man masturbate to orgasm? Has there been a noticeable increase in ejaculatory latency during masturbation? What are the patient's current sexual practices, in terms of coital and masturbation frequency, and under what conditions is the man able to ejaculate with the partner (e.g., with masturbation, with the partner's hand or mouth stimulation, in specific coital positions) and during masturbation (using erotic materials, specific fantasies, etc.). If orgasmic attainment had been possible previously, the clinician should review the life events/circumstances temporally related to orgasmic failure—events in question might include the use of pharmaceuticals, illness, life stressors and/or other psychological factors previously highlighted in the section on etiology.

Medical History

At some point toward the outset of the evaluation process, a genitourinary examination and medical history may help identify physical anomalies associated with ejaculatory dysfunction. In addition, concomitant or contributing neurologic, endocrinologic, pain, or erectile disorders can be explored and identified. Reversible urethral, prostatic, epididymal, and testicular infections need to be addressed. Particularly with secondary (acquired) DE, side effects to specific medications (Table 16-1) should be evaluated, discussed, and possibly ruled out.

Psychosexual Evaluation

A focused sexual history and psychosexual evaluation are important to a full understanding of DE, independent of whether the etiology is primarily pathophysiological or presumed

psychogenic [1]. Psychological factors (e.g., anxiety) can exacerbate somatically caused DE, just as somatic factors (e.g., aging) can exacerbate psychobehavioral DE. Although no specific format is essential, domains related to the psychological and relationship issues commonly associated with DE (identified in the previous section) require investigation, with a complete exploration identifying predisposing, precipitating, and maintaining factors for the dysfunction. Although no standardized assessment form for evaluating DE is available, a list of ancillary assessment forms that might be helpful in this evaluation is included in Table 16-4.

Psychosexual issues might fall into three general categories as noted below. Because of the extremely personal and potentially embarrassing nature of some of these issues, these are usually best explored first individually with the patient and then, with the patient's approval and clinician's encouragement, in a follow up session that includes the partner.

- Predisposing issues of religiosity, restrictive attitudes, and other cultural factors that may have played a formative role in the patient's sexual development.
- Partnered and masturbatory sexual activity, including frequency and manner of masturbation and partnered sex, use of erotic supplementary materials during self and partnered sex, use of sexual fantasies during self and partnered sex, and anxiety/pressure surrounding performance. Included is discussion of variables and situations that either improve or worsen the DE, as well as assessment of psychosexual arousal related to various types and situations of sexual activity.
- The nature of the sexual relationship, including types of sexual activities, communication about needs, attractive

value of the partner, feelings of sexual and physical intimacy, satisfaction, and so on. Important to this discussion is the potential for disparity in arousal and satisfaction during masturbation relative to partnered sex.

Since many men having sexual problems attempt their own remedies, the patient's previous approaches to improving ejaculatory response (shortening the latency) should be investigated, including the use of herbal or folk therapies, prior treatments, and home remedies (e.g., using particular cognitive or behavioral strategies).

Summary of Clinical Observations

Once the clinician has gathered and sorted through clinical notes and observations—assuming a frank and open conversation with the patient (and when possible his partner) has taken place—he/she will want to share relevant clinical assessments in a nonjudgmental manner regarding any factors that might be responsible for or contributing to the DE. It may well be that no one specific cause/etiology is readily identified, but an understanding of the biopsychosocial context of the problem can help both the patient and clinician know how best to approach the problem for eventual treatment. For example, if the problem results from a pathophysiological condition, then treatment would first need to focus on ameliorating that condition. On the other hand, if the problem results from a lack of allocated time for sex (e.g., the man believes that with more time, he would eventually ejaculate), diminished partner attraction, or decreased functioning due to aging, an approach that focuses on stimulation enhancement might be undertaken. Or if the problem results from a strong autosexual preference over partnered sex, a reorientation back to an arousing and satisfying partnered experience might be the focus. No matter the possible cause, supportive and reassuring language continues to be important. As an example, in situations where the cause may be related to a strong autosexual orientation—a potentially embarrassing situation for most men—Perelman [8] suggests using supportive language such as “the difficulty is merely a reflection of not rehearsing for the part you’re wanting to play” in sex with your partner. Such language can once again assist in minimizing the stigma associated with the problem and in engaging the patient and his partner in the therapeutic process. Important to this summary is communication to the patient (and partner) that with sufficient motivation, coaching, and partner support, many men are successful in overcoming the DE. Once this body of knowledge is complete, an appropriate treatment plan, developed in conjunction with the couple, can be implemented, as detailed in Chap. 17, Treatment of Delayed Ejaculation.

Concluding Remarks and Notes

Several final points regarding the evaluation of any sexual dysfunction, including DE, are worth noting and/or reiterating when working with men who report having difficulty reaching ejaculation.

- *Most people, especially men, have difficulty talking about their sexual problems*, so it is incumbent upon the clinician to create an atmosphere of comfort and openness. The clinician should support the patient's attempts to communicate concerns related to his sexual life.
- *The typical male patient has little or no concept of the sexual response cycle* as understood by clinicians and often noted in textbooks. The therapist should discuss the problems with the patient in familiar language while concomitantly using this conversation to specify the precise nature of the problem—for example, is the problem one of low interest or desire to have sex? Of inadequate arousal? Of the inability to keep an erection because of ejaculating too quickly?
- *Men often focus heavily on their genital response*. The clinician should broaden the conversation to include the man's individual experience of the problem, his partner's perspective, general relationship concerns, and other dimensions beyond just the physical.
- *DE may result from organogenic/somatic and psychogenic factors, or both*. Lifelong vs. acquired DE may have different origins, but the evaluation process needed to explore either of these runs, to a large extent, a similar course.
- *An understanding of the physiological, psychological, relational, and sociocultural contribution to the sexual problem is warranted*. The clinician should explore each of these domains at least briefly to determine whether deeper issues need to be addressed and/or how they contribute to the DE problem.
- *Medical issues should be investigated*. The clinician should carry out a physical exam, or if not qualified to do so, refer the patient to a physician for a check-up, with advance notation to the physician about the sexual problem. A sexual problem is sometimes a manifestation of a broader health issue.
- *Communication between sexual partners is important to sexual, partner, and relationship satisfaction*. The clinician should encourage the inclusion of the partner in conversations in the evaluation process (when the time is appropriate), so the couple is already working as a team as they strategize and select treatment options.
- *Treatment success for DE based on psycho-behavioral patterns tends to be high*. Even within the context of the evaluation process, it is important for the clinician to

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point out the potential for remediation of the problem, and reassure the patient and partner that therapy for sexual problems usually need not be extensive. Nevertheless, the clinician must, at the same time, realize that not all men or couples want to undertake the changes necessary for improving their sex life.

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