Addiction has been defined as a condition in which a behavior that can function both to produce pleasure and to reduce painful affects is used in a pattern that is characterized by 2 key features:

- Recurrent failure to control the behavior
- Continuation of the behavior despite significant harmful consequences

Sexual addiction is a condition in which some form of sexual behavior relates to and affects a person's life in such a manner as to accord with the definition of addiction. This article reviews recent developments in the diagnosis and management of sexual addiction. For more fundamental and extensive background information about sexual addiction, see the Box, “Sources for Further Information About Sexual Addiction.”

**Diagnostic criteria**

At this time there are no formally accepted diagnostic criteria for sexual addiction by the American Psychiatric Association. However, provisional diagnostic criteria for sexual addiction that follow DSM format have been derived from DSM-IV-TR criteria for substance dependence—the paradigmatic addictive disorder. The terms “substance” and “substance use” have been replaced by “sexual behavior,” and “characteristic withdrawal syndrome for the substance” has been replaced with a general definition of withdrawal that is applicable to all categories of behavior. Sexual addiction is a maladaptive pattern of sexual behavior that leads to clinically significant impairment or distress, as manifested by at least 3 of the following that occur at any time in the same 12-month period:\(^3\):
1. Markedly increased amount or intensity of the sexual behavior to achieve the desired effect or markedly diminished effect with continued involvement in the sexual behavior at the same level of intensity.

2. Characteristic psychophysiological withdrawal syndrome of physiologically described changes and/or psychologically described changes on discontinuation of the sexual behavior or engaging in the same (or a closely related) sexual behavior to relieve or avoid withdrawal symptoms.

3. The sexual behavior is often engaged in over a longer period, in greater quantity, or at a higher level of intensity than was intended.

4. There is a persistent desire, and efforts to cut down or control the sexual behavior are not successful.

5. A great deal of time is spent on activities necessary to prepare for the sexual behavior, to engage in the behavior, or to recover from its effects.

6. Important social, occupational, or recreational activities are given up or reduced because of the sexual behavior.

7. The sexual behavior continues despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the behavior.

These diagnostic criteria are not the final word on recognizing sexual addiction. They are provisional and may need to be revised in light of further developments in research or theory. At the very least, they provide a starting point for research. The research function of diagnostic criteria is critically important, particularly for newly recognized conditions. The inclusion of a condition in the next DSM depends on scientific research that documents its legitimacy. But a condition can be researched only if clear and relevant diagnostic criteria enable researchers to recognize it. Multiple varieties of diagnostic criteria limit the generalizability of research results and undermine claims that the condition is a valid diagnostic entity.

Significantly, no form of sexual behavior in itself constitutes sexual addiction. Whether a pattern of sexual behavior qualifies as sexual addiction is determined not by the type of behavior, its object, its frequency, or its social acceptability, but by how the behavior relates to and affects a person’s life. Any sexual behavior has the potential to be engaged in addictively, but it constitutes an addictive disorder only to the extent that it occurs in a pattern that meets the diagnostic criteria or accords with the definition. It is also worth noting that while sexual addiction and paraphilia overlap to some extent, they are not identical. Some sex addicts are not paraphiliacs, and some paraphiliacs are not sex addicts. A similar distinction obtains between sex addict and sex offender, where the area of
overlap is considerably smaller. The key features that distinguish sexual addiction from other patterns of sexual behavior are:

- The inability to control the sexual behavior reliably.
- Continuation of the sexual behavior despite significant harmful consequences.

A few clinical examples illustrate the considerations that are involved in making a diagnosis of sexual addiction.

**CASE VIGNETTES**

Stan is an entrepreneur and politician in his middle 50s. He has always identified himself as heterosexual, and he embraces a religious belief system that condemns homosexuality as sin. However, since his early 20s, he has felt irresistibly drawn to gay bars where he is likely to find female impersonators. For varying periods (sometimes weeks and sometimes only minutes), Stan is able to resist such urges, but eventually, he succumbs.

He enjoys sex with his wife, but the sexual attraction, arousal, and gratification that he experiences with female impersonators is of a higher order of magnitude. Because he believes that his career depends on his public image, and also because he is ashamed of this behavior, he often travels to other cities or even other states to find female impersonators. His typical pattern is to pick up a female impersonator at a bar and bring him to a motel.

Once, in another state, he went home with a female impersonator. This man had a housemate who dealt drugs and procured adolescent prostitutes. Stan had the misfortune of arriving just an hour before a planned police raid. He was unwittingly caught in the company of heavy drugs, automatic weapons, and minors who were engaged in sexual acts with adults. By the time bail was posted, the news of Stan’s arrest had already been picked up by the local news media.

Steve is a software developer in his 40s who is being treated for depression, anxiety, and marital difficulties. Sex is one of the sources of tension in his marriage. He wants to have sex with his wife every day, sometimes 2 or 3 times a day, and he becomes upset when she does not comply. When his wife declines to have sex with him, he feels desperate and fears that she does not love him, that he is not good enough for her, and he becomes upset. To prepare to leave her on these occasions, he usually withdraws and immerses himself in work. He rarely masturbates, and he does not seek sex elsewhere. When his wife’s lupus flared up, Steve cared for her sensitively, and she expressed her appreciation and gratitude. At such times, he felt needed and valued, and he rarely thought of sex. Steve’s desire for sex occasionally offends his wife, who feels that he would rather have sex than talk with her; and sometimes, when she complies with Steve’s requests for sex, she resents him. Further inquiry does not reveal other harmful consequences from Steve’s sexual behavior, nor does it suggest any difficulty in controlling his sexual behavior.

Jolene is an emergency room nurse in her early 30s who is “in love” with 2 men with whom she is sexually involved. She also loves her husband Ed and cannot stand the thought of leaving him. She trusts Ed and feels that he understands her. Ed knows of Jolene’s recurrent pattern of intense infatuation with a new man, resisting and then giving in to overpowering sexual attraction, and then becoming bored. When Jolene is not sexually involved with at least 1 man outside her marriage, she feels desperate, panicky, and empty. Typically, she begins a new involvement as soon as she senses that she is getting bored with her current extramarital affair.

She notes that she has tried to stop the pattern many times. Jolene recounts that her behavior has cost her 2 marriages, her kids, her place in medical school, and a lot of time, and she has gone through emotional hell. She has tried meditation, counseling, and women’s support groups, and she has joined a fundamentalist church. She had even taken excessive doses of medroxyprogesterone to decrease her sex drive, until a near-fatal pulmonary embolus developed.

She became involved with Ed while she was still married to her second husband, and she lives in constant fear that Ed, too, will get fed up with her and throw her out. Now one of her lovers is talking about killing himself if Jolene does not marry him, and the other is talking about confronting Ed. Jolene feels overwhelmed, and she is experiencing symptoms of major depression and panic disorder.

Dale, a dealer of fine art, began psychoanalysis to help him get past his lifelong depression and his inability to sustain an intimate relationship. Ever since he quit drinking 6 years ago, he has been desperately lonely. Consciouslly, he wants nothing more than to find a partner, someone with whom he can share his life. However, he is anxious in social interactions and fears that he will be unable to hold up his end of a conversation and would then be humiliated.
Dale avoids situations in which conversation is likely and instead goes to parks or adult theaters where he can meet other men for anonymous sex. After these sexual encounters, he often feels dirty and disgusted with himself. He has also been beaten several times and robbed twice, and he suspects that he has contracted HIV infection. But when he is alone, or even when he anticipates being alone—when driving home or after an evening activity, for example—he experiences an intense anxiety that feels like he is “coming apart.” Dale cannot tolerate this feeling, and sexual activity relieves it.

Masturbating to pornography at home takes the edge off his anxiety and usually enables him to sleep, but he is increasingly finding that it does not work as well as it once did. On numerous occasions, he has tried to get involved in cultural or religious activities where he is more likely to meet educated, stable, gay men; however, he soon finds himself back at a park or a theater.

Charla, a hairstylist and fashion model in her 20s, agrees to accompany her boyfriend, Mike, to a session with his psychotherapist. Mike is upset that Charla has been having sex with other men, and he thinks that she might be a sex addict. Charla says that she had told Mike shortly after they met that sex was part of her career, and that if he did not think he could stand it, they should not get involved.

Having sex with wealthy and powerful men has advanced her success as a model, she explains, and brings her money and expensive gifts. She acknowledges that what she is doing is akin to prostitution, but it is clean and legal and she is in charge. She states that she certainly does not “do it for the sex.” She is not orgasmic with these men. She likens having sex to cutting hair: her rewards are the finished product, a satisfied customer, and a nice tip. She also enjoys her sense of control over these wealthy and powerful men.

Charla states that she has never engaged in more sexual behavior than she intended, and she has never tried or wanted to decrease her sexual behavior. She also denies experiencing any kind of withdrawal symptoms or desire to engage in substitute behavior when she is not sexually active. She recognizes that her sexual behavior bothers Mike but believes this is Mike’s problem. She makes 10 times as much money as her father ever did, and she is not about to give that up because Mike’s fragile male ego cannot deal with it. Mike acknowledges that she seems to be in control of her sexual behavior and that he is not aware of any problems that result from her sexual behavior—other than its effect on him.

In the first vignette, Stan meets criteria 4, 5, and 7 of the diagnostic criteria for sexual addiction, and perhaps also criterion 6. The third example, Jolene, meets criteria 4, 5, 6, 7, and probably 2. In the fourth vignette, Dale seems to meet all of the criteria except 3. The second example, Steve, might meet criterion 5, but he does not seem to meet any of the other criteria. Charla, the fifth example, probably meets criterion 5. She might or might not meet criterion 6, depending on the importance (to her) of the activities with Mike that she gives up to have sex with other men.

According to the diagnostic criteria, Stan, Dale, and Jolene merit diagnoses of sexual addiction. Steve and Charla do not. An informal assessment based on the definition of sexual addiction reaches the same conclusions. Stan, Jolene, and Dale demonstrate patterns of sexual behavior that are characterized by recurrent failure to control their sexual behavior, which they continue despite significant harmful consequences. Steve and Charla do not.

Screening instruments

A number of inventories or questionnaires have been developed for use as instruments to screen for sexual addiction or sexual compulsivity: the Sexual Addiction Screening Test, the Sexual Compulsivity Scale, the Sexual Dependency Inventory-Revised, the Sex Addicts Anonymous Questionnaire, and the Compulsive Sexual Behavior Inventory. Each of these questionnaires has high test-retest reliability, high internal consistency, modest criterion validity, and modest construct (convergent and divergent) validity.

In the absence of a standard set of diagnostic criteria, however, the significance of a report of criterion validity or construct validity is hard to evaluate. Moreover, most of the inventories include a significant number of questions that are not diagnostically relevant (ie, they do not yield information about whether diagnostic criteria are or are not met). Among these instruments, the one that is most likely to be useful for gauging the presence of sexual addiction is the Sexual Compulsivity Scale. It addresses both of the key features of addiction—impaired control and harmful consequences—and every question is relevant for assessing these features. In general, yes/no questionnaires of this kind can be helpful when used for screening and self-assessment. But for diagnostic evaluation, they cannot substitute for face-to-face interviews that use open-ended questions.
The addictive process
The most comprehensive and exciting new developments that concern sexual addiction have occurred in the neurobiological understanding of the addictive process, the underlying biopsychological process that all addictive disorders share. The addictive process can be understood to involve impairments in 3 interrelated functional systems: motivation-reward, affect regulation, and behavioral inhibition. An impaired motivation-reward system exposes addicts to unsatisfied states of irritable tension, emptiness, and restless anhedonia.

In the context of impaired motivation-reward function, behaviors that are associated with activation of the reward system are more strongly reinforced (via both positive and negative reinforcement) than they otherwise would have been. Impaired affect regulation renders addicts chronically vulnerable to painful affects and emotional instability.

In the context of impaired affect regulation, behaviors that are associated with escape from or avoidance of painful affects are more strongly reinforced (via negative reinforcement) than they otherwise would have been. Impaired behavioral inhibition increases the likelihood that urges for some form of reinforcement (negative, positive, or both) in the short term will override consideration of longer-term consequences, both negative and positive.

When motivation-reward and affect regulation are impaired, impaired behavioral inhibition means that urges to engage in behaviors that are associated with both (a) activation of the reward system, and (b) escape from or avoidance of painful affects, are extraordinarily difficult to resist, despite the harmful consequences that they might entail. Neuroscience research during the past decade has expanded and deepened our understanding of the neurochemistry, neuroanatomy, and developmental neurobiology of all 3 components of the addictive process.\(^9\)

While this body of research does not mention sexual addiction, its relevance for sexual addiction is considerable. It illuminates a neurobiological process that underlies addictive patterns of behavior; that is not specific to drugs but can involve any behavior that is associated with activation of the brain reward system; and that develops through the interaction of genetic, prenatal, neonatal, and childhood influences on motivation-reward, affect regulation, and behavioral inhibition functions, and not as a result of exposure to a psychoactive substance or behavior.

Many arguments against the concept of sexual addiction were grounded in a drug-oriented neurobiology of addiction that is being supplanted by a brain-oriented neurobiology of addiction. The latter readily accommodates the addictive use of sexual behavior, much as it accommodates the addictive use of food or eating: a naturally rewarding behavior that is part of normal life but that can come to be used in self-harming ways when motivation-reward, affect regulation, and behavioral inhibition functions are impaired.

Treatment
Little research on the management of sexual addiction has been published. Most of the treatment-related articles published during the past decade are case reports: 2 on psychodynamic psychotherapy, 1 on eye movement desensitization and reprocessing, and 4 on pharmacotherapy.\(^10\)-\(^16\) One double-blind, placebo-controlled study and 3 case series, 1 on pharmacotherapy and 2 on inpatient treatment programs, have also been published.\(^17\)-\(^20\)

Psychotherapy case reports seem to be most meaningful when they focus on describing the process and conveying understanding.

A case report by Chirban\(^10\) in which he used an integrative treatment that was centered in psychodynamic therapy with cognitive-behavioral modalities performs both functions well, and it illustrates how diverse modalities of treatment can be provided together as a flexible and coherent system. A notable feature of the pharmacotherapy case reports is that all of the patients were treated with 2 or more medications concurrently, including 1 stabilizer and 1 antidepressant.\(^13\)-\(^16\) The treatment that is described in the pharmacotherapy case series also involves prescription of 2 medications concurrently.\(^18\) However, in this study, a psychostimulant was added to the antidepressant.

The double-blind, placebo-controlled study found that in sex addicts, citalopram reduced the frequency of symptomatic sexual urges, masturbation, and use of pornography, but it had no significant effect on partnered sexual behaviors.\(^17\) The large number of positive findings is encouraging, but confidence in drawing conclusions is limited by the paucity of controlled studies.

A comprehensive critical review of treatment for paraphilias also is instructive, despite the substantial areas of the categories sexual addiction and paraphilia that do not overlap.\(^21\) Three of the review’s conclusions seem to be particularly relevant:

1. Treatment programs that were most effective at reducing recidivism were predominantly cognitive-behavioral. Programs that did not employ a cognitive-behavioral approach to treatment...
were ineffective. The conclusion is based on the results of 112 studies with almost 23,000 convicted sex offenders—a group that at first glance might not seem to be ideal for cognitive-behavioral treatment.

2. Treatment effectiveness was greater for individual treatment (odds ratio, 2.88) than for group treatment (odds ratio, 1.71).

3. Attainment of treatment goals with sex offenders is highly dependent on process issues. More specifically, the therapist’s genuine expression of personal qualities—such as empathy, warmth, directiveness, and encouragement—is predictive of the clients’ attainment of the goals of treatment. A proviso is that unless the expression of these qualities is authentic, treatment is unlikely to be successful.

Two kinds of pharmacological treatment may be used to treat addiction: endocrinological agents and affect-regulating agents. Endocrinological agents decrease the intensity of the sexual drive; thus, the person is more in control and less likely to act on paraphilic interests. These agents do not change the direction of the sexual interest, however. Their primary therapeutic function is to reduce sex drive to manageable levels in those individuals whose ability to control their behavioral impulses is so impaired as to put them at risk either to injure themselves or others, or to render them unresponsive to psychological interventions.

Endocrinological agents can lower the risk of problematic sexual behavior during the interval between the initiation of treatment and the consolidation of the changes that affect-regulating agents, behavior modification, group therapy, or psychotherapy can induce. Those currently in use include anti-androgenic agents and gonadotropin-releasing hormone (GnRH) agonists. However, of the 2 anti-androgenic agents, one is fraught with unpleasant or dangerous adverse effects, and the other is not commercially available in the United States.

Analogues of GnRH have been developed that have higher potency and longer duration of action than does naturally occurring GnRH. Triptorelin is injected once a month, and leuprolide is injected once every 3 months. Initial administration of these agents raises serum testosterone levels. However, continuous administration produces down-regulation of GnRH receptors on the pituitary gonadotropes, which leads to a decrease in secretion of leutinizing hormone and follicle-stimulating hormone, and a consequent decrease in the synthesis of testosterone.

Several reports of uncontrolled, open-label trials of GnRH agonists in the treatment of paraphilias and hypersexual disorders have all demonstrated significant positive effects. The main adverse effects were erectile dysfunction, hot flashes, and a decrease in bone density. These results suggest that GnRH agonists could prove to be a more effective, safer, and less noxious alternative to the direct anti-androgenic agents.

A number of case reports and open-label studies have provided evidence for the efficacy of affect-regulating agents (primarily antidepressants) in the treatment of paraphilias and nonparaphilic sexual addictions, even in patients who did not have a major affective disorder. While symptoms of paraphilic and nonparaphilic sexual addiction improved with antidepressant treatment in the absence of major depression, some studies found that paraphilic patients with comorbid depression showed a concurrent decrease in paraphilic behavior when their depressive symptoms improved.

Agents that have been found to be effective include fluoxetine, sertraline, citalopram, paroxetine, fluvoxamine, venlafaxine, nefazodone, imipramine, desipramine, clomipramine, lithium, carbamazepine, topiramate, lamotrigine, divalproex, risperidone, bupropion, gabapentin, and divalproex or lamotrigine can be helpful for sexual addiction symptoms that arise in the context of atypical manic-depressive conditions or “emotionally unstable character disorders,” and that gabapentin can alleviate accompanying irritability and feelings of being overwhelmed.

Electroconvulsive therapy has also been shown to be effective. Most of these studies reported a positive response rate in the range of 50% to 90%. Antidepressants, especially the serotonin reuptake inhibitors (SRIs), can produce diminished libido, but a number of the studies noted that antidepressants reduced the drive for symptomatic sexual behavior without decreasing the drive for healthy sexual behavior.

Augmentation of a 5-hydroxytryptamine reuptake inhibitor with bupropion or with a psychostimulant can further reduce sexual fantasies, urges, and behavior, particularly when concurrent depressive symptoms have not responded adequately to the SRI or when symptoms of attention-deficit disorder are present. I also have found that divalproex or lamotrigine can be helpful for sexual addiction symptoms that arise in the context of atypical manic-depressive conditions or “emotionally unstable character disorders,” and that gabapentin can alleviate accompanying irritability and feelings of being overwhelmed.

Psychiatric pharmacotherapy is direct intervention to enhance emotional and behavioral self-regulation; it also addresses other symptoms of comorbid psychiatric disorders. In sexual
addiction, craving and urges to act out are expressions of dysregulated emotional states, and such urges are more likely to be acted out when behavioral regulation is impaired. Consequently, enhancement of affect regulation tends to diminish the frequency and intensity of addictive urges, while enhanced behavioral regulation reduces the likelihood that urges will lead to acting out. A number of studies have indicated that antidepressant medications, particularly the SRIs, can reduce the frequency of addictive sexual behavior and the intensity of urges to engage in addictive sexual behavior, even when the patient does not have major depression. As may be imagined, the boundary between psychiatric pharmacotherapy and affect-regulating agents is indistinct and has to do more with the symptoms that the agents are intended to target than with the nature of the agents themselves.

References:

Drugs Mentioned in This Article
Bupropion (Wellbutrin, Zyban)
Buspirone (BuSpar)
Carbamazepine (Carbatrol, Tegretol, others)
Citalopram (Celexa)
Clomipramine (Anafranil)
Desipramine (Norpramin; Pertofrane)
Divalproex (Epival, Depakote)
Fluoxetine (Prozac, Sarafem, Symbax)
Fluvoxamine (Luvox)
Gabapentin (Neurontin)
Imipramine (Tofranil)
Lamotrigine (Lamictal)
Leuprolide (Lupron, others)
Lithium (Eskalith, Lithane, Lithobid)
Medroxyprogesterone (Depo-Provera)
Nefazodone (Serzone)
Paroxetine (Paxil)
Risperidone (Risperdal)
Sertraline (Zoloft)
Topiramate (Topamax)
Triptorelin (Trelstar)
Venlafaxine (Effexor)

References


Sources for Further Information About Sexual Addiction


Links:

[1] [http://www.psychiatrictimes.com/addiction](http://www.psychiatrictimes.com/addiction)
[7] [http://www.psychiatrictimes.com/authors/aviel-goodman-md](http://www.psychiatrictimes.com/authors/aviel-goodman-md)