SEXUAL DYSFUNCTIONS

Definition

- According to (ICD-10), **sexual dysfunction** refers to a person's inability to “participate in a sexual relationship as he or she would wish.”
- The dysfunction is expressed as a lack of desire or of pleasure or as a physiological inability to begin, maintain, or complete sexual interaction.
- Sexual dysfunctions are diagnosed only when they are a major part of the clinical picture.

Introduction

- **Sexual dysfunctions** can be lifelong or acquired, generalized or situational, and due to psychological factors, physiological factors, or combined factors.
- A sexual disorder can be symptomatic of biological problems, intrapsychic conflicts, interpersonal difficulties, cultural influences, or a combination of these factors.
- Sexual function can be affected by stress of any kind, by emotional disorders, and by a lack of sexual knowledge.

Classification

- Seven major categories of sexual dysfunction are listed in DSM-IV-TR:

1. sexual desire disorders
2. sexual arousal disorders
3. orgasm disorders
4. sexual pain disorders
5. sexual dysfunction due to a general medical condition
6. **substance-induced sexual dysfunction**
7. **sexual dysfunction & sexual disorder not otherwise specified**

Substance-Induced Sexual Dysfunction

- The diagnosis substance-induced sexual dysfunction is used when evidence from the
- History,
- Physical examination,
- Laboratory findings indicates substance intoxication or withdrawal when dysfunction follows the use of prescribed medication.
- Distressing sexual dysfunction occurs within a month of significant substance intoxication or withdrawal.

Substance-Induced Sexual Dysfunction

- Specified substances include
- Alcohol
- Amphetamines or related substances
- Cocaine
- Opioids
- Nicotine
- Sedatives
- Hypnotics or anxiolytics
- Other or unknown substances.

Substance-Induced Sexual Dysfunction

- In small doses, many substances enhance sexual performance by decreasing inhibition or anxiety or by temporarily elevating mood.

- Continuous use impairs erectile, orgasmic, and ejaculatory capacities.

- The abuse of sedatives, anxiolytics, and, particularly, opioids nearly always depresses desire.

Substance-Induced Sexual Dysfunction

- Alcohol may foster the initiation of sexual activity by removing inhibitions, but it impairs performance.

- Cocaine and amphetamines produce similar effects.

- Although no direct evidence indicates that sexual drive is enhanced by stimulants, the user initially has a feeling of increased energy and may become sexually active.

- Ultimately, **dysfunction** occurs.

Substance-Induced Sexual Dysfunction

- Men usually go through two stages:

1. Prolonged erection without ejaculation.
2. A gradual loss of erectile capacity.

- Recovering substance-dependent patients may need therapy to regain sexual function.
- Many substance abusers have always had difficulty with intimate interactions.
- Others have missed the experience that would have enabled them to learn social and sexual skills because they spent their crucial developmental years under the influence of some substance.

Pharmacological Agents Implicated in Sex Dysfunction

- Many pharmacological agents used in psychiatry, have been associated with an effect on sexuality.
- In men, effects include decreased sex drive, erectile failure, decreased volume of ejaculate, and delayed or retrograde ejaculation.
- In women, decreased sex drive, decreased vaginal lubrication, inhibited or delayed orgasm, and decreased or absent vaginal contractions may occur.
- Drugs may also enhance the sexual response and increase the sex drive, but this effect is less common than inhibiting effects.

Antipsychotic Drugs

- Antipsychotic drugs that elevate serum prolactin, block dopamine, and block adrenergic and cholinergic receptors are frequently accompanied by adverse sex effects. Chlorpromazine, thioridazine, trifluoperazin and haloperidol are potent anticholinergic agents that **impair erection** and **ejaculation** in men and **inhibit vaginal lubrication** and **orgasm** in women.

Antipsychotic Drugs

- Thioridazine has a particular adverse effect of causing **retrograde ejaculation** in which the seminal fluid backs up into the bladder.
- Patients still have a pleasurable sensation of orgasm, but it is dry.
- When urinating after orgasm, the urine may be milky white because it contains the ejaculate.
- The condition is startling but harmless and may occur in up to **50 percent** of patients taking the drug.
- Rare cases of priapism have been reported with antipsychotics.
- Second-generation antipsychotic drugs, such as quetiapine have a lower incidence of sexual side effects, perhaps due to their prolactin-sparing effects.

Selective Serotonin Reuptake Inhibitors

- The most commonly prescribed group of antidepressants are the SSRIs.
- Adverse sexual effects may occur with this group of drugs because of increased serotonin concentration.
- A lowering of the sex drive and difficulty reaching orgasm occur in both sexes.
- Of the SSRIs, the most frequent sexual adverse effects are seen with paroxetine, next with fluoxetine and the least with sertraline.

Serotonin–norepinephrine reuptake inhibitors

- SNRIs like Desvenlafaxine, Duloxetine, Venlafaxine changes in sexual function, such as
- reduced sexual desire
- difficulty reaching orgasm
- the inability to maintain an erection (erectile dysfunction)

Heterocyclic Antidepressants

- The tricyclic and tetracyclic antidepressants have anticholinergic effects that interfere with erection and delay ejaculation.
- Because the anticholinergic effects vary among the cyclic antidepressants, those with the fewest side effects (e.g., desipramine) produce the fewest sexual side effects.

Heterocyclic Antidepressants

- The effects of the heterocyclic drugs in women have not been studied sufficiently.
- However, few women seem to complain of any effects.
- **Selegiline** is a selective monoamine oxidase type B (MAO_B) inhibitor reported to increase sex drive, possibly by dopaminergic activity and increased production of norepinephrine.
- Some men report a pleasurable increased sensitivity of the glans with this class of drugs that does not interfere with erection, although it delays ejaculation.

Heterocyclic Antidepressants

- In some cases, however, the **tricyclic drug** causes a painful ejaculation, perhaps as the result of interference with seminal propulsion caused by interference with urethral, prostatic, vas, and epididymal smooth muscle contractions.
- **Clomipramine** has been reported to increase sex drive in some individuals.

Monoamine Oxidase Inhibitors

- MAOIs produce impaired erection, delayed or retrograde ejaculation, vaginal dryness, and inhibited orgasm.
- **Tranylcypromine** has a paradoxical sexually stimulating effect in some individuals, possibly as a result of its amphetamine-like properties.

General Effects of Antidepressants

- Because depression is associated with a decreased libido, varying levels of sexual dysfunction and anhedonia are part of the disease process.
- This phenomenon makes assessment of dysfunction as a result of sexual side effects difficult in patients taking the drugs.
- Some patients report improved sexual function as their depression improves with antidepressant medication.
- In many cases, antidepressants without associated side effects of sexual dysfunction are substituted, such as **bupropion, trazodone, nefazodone or mirtazapine, buspirone.**

Lithium

- Lithium regulates mood and, in the manic state, may reduce hypersexuality, possibly via dopamine antagonism. Some patients have reported impaired erection.

Psychostimulants

- Psychostimulants are sometimes used in the treatment of depression and include such drugs as amphetamine and methylphenidate, which raise plasma concentrations of norepinephrine and dopamine.
- Libido is increased however, with prolonged use, men may experience a loss of desire and erections.
- One study found that **ephedrine sulfate** facilitated arousal in functional women.

α-Adrenergic and β-Adrenergic Receptor Antagonists

- Adrenergic receptor antagonists are used to treat hypertension, angina, and certain cardiac arrhythmias.
- They diminish tonic sympathetic nerve outflow from vasomotor centers in the brain.
- As a result, they can cause impotence, decrease the volume of ejaculate, and produce retrograde ejaculation.
- Changes in libido have been reported in both sexes.
- Drug that delays or interferes with ejaculation (such as **fluoxetine**) might be used to treat premature ejaculation.

Anticholinergics

- The anticholinergics block cholinergic receptors and include such drugs as **amantadine** and **benzatropine**. They can produce dryness of the mucous membranes (including those of the vagina) and erectile dysfunction.

Antihistamines

- Drugs such as diphenhydramine (Benadryl) have anticholinergic activity and are mildly hypnotic. As a result, they may inhibit sexual function.

- Cyproheptadine, has potent activity as a serotonin antagonist.

- It is used to block the serotonergic adverse sexual effects produced by SSRIs, such as delayed orgasm and erectile dysfunction.

Antianxiety Agents

- The major class of antianxiety drugs is the benzodiazepines (e.g., diazepam).
- They act on the γ-aminobutyric (GABA) receptors, which are believed to be involved in cognition, memory, and motor control.
- Because they decrease plasma epinephrine concentration, they diminish anxiety, thus improving sexual function in individuals inhibited by anxiety.

Alcohol

- Alcohol suppresses CNS activity generally and, hence, can produce erectile disorders in men.
- Alcohol has a direct gonadal effect that decreases testosterone concentrations in men; paradoxically, it can produce a slight increase in testosterone concentrations in women.
- This may account for increased libido in women after drinking small amounts of alcohol.
- Long-term use of alcohol reduces the ability of the liver to metabolize estrogenic compounds; in men, this produces signs of feminization (e.g., gynecomastia as a result of testicular atrophy).

Opioids

- Opioids such as heroin have such adverse sexual effects as erectile failure and decreased libido.
- Altered consciousness may enhance the sexual experience in occasional users.

Cannabis

- The altered state of consciousness produced by cannabis may enhance sexual pleasure for some individuals. Its prolonged use depresses testosterone concentrations.

Hallucinogens

- The hallucinogens include lysergic acid diethylamide (LSD), phencyclidine (PCP), psilocybin (from some mushrooms), and mescaline (from peyote cactus).
- In addition to inducing hallucinations, these drugs cause loss of contact with reality and an expanding and heightening of consciousness.
- Some users report that the sexual experience is similarly enhamced.
- Others experience anxiety, delirium, or psychosis, which clearly interferes with sexual function.

Barbiturates and Similarly Acting Drugs

- Barbiturates are sedative hypnotics that may enhance sexual responsiveness in persons who are sexually unresponsive because of anxiety.
- They have no direct effect on the sex organs, but they do alter consciousness, which some individuals find pleasurable.
- They are subject to abuse and may be fatal when combined with alcohol or other CNS depressants. Methaqualone acquired a reputation as a sexual enhancer that had no biological basis in fact.

Sexual Dysfunction and Sexual Disorder Not Otherwise Specified

1. Other Specified Sexual Dysfunction

- Diagnoses in this category include dysfunctions that distress the patient but do not meet the criteria for the disorders discussed above.
- An example would be sexual aversion, in which the patients cannot enjoy the sex act because of a phobic aversion to touching the genitalia.

2. Unspecified Sexual Dysfunction

- This category covers other sexual dysfunctions, that do not fall under the diagnoses discussed above, but that cause distress and interference with sexual connection and pleasure.

Compulsive Sexual Behavior

- The concept of compulsive sexual behavior or sex addiction, was developed in the 1980s to describe persons who compulsively seek out sexual experiences and whose behavior becomes impaired if they cannot gratify their sexual impulses.
- The concept of sex addiction is derived from the model of addiction to drugs such as heroin or addiction to behavioral patterns such as gambling.
- Addiction implies psychological dependence, physical dependence, and a withdrawal symptom if the substance (e.g., the drug) is unavailable or the behavior (e.g., gambling) is frustrated.

Signs of Sexual Addiction or Compulsive Sexual Behavior

1. Out-of-control behavior
2. Severe adverse consequences (medical, legal, interpersonal) due to sexual behavior
3. Persistent pursuit of self-destructive or high-risk sexual behavior
4. Repeated attempts to limit or stop sexual behavior
5. Sexual obsession and fantasy as a primary coping mechanism
6. Need for increasing amounts of sexual activity
7. Severe mood changes related to sexual activity (e.g., depression, euphoria)
8. Inordinate amount of time spent in obtaining sex, being sexual, or recovering from sexual experience
9. Interference of sexual behavior in social, occupational, or recreational activities

- DSM-5 does not use the terms **sex addiction** or **compulsive sexual behavior**, nor is this disorder universally recognized or accepted.

- Nevertheless, the person whose entire life revolves around sex-seeking behavior and activities, who spends an excessive amount of time in such behavior, and who often tries to stop such behavior but cannot do so is well known to clinicians.

- Such persons show repeated and increasingly frequent attempts to have a sexual experience, and deprivation evokes symptoms of distress.

Persistent Genital Arousal Disorder

- Previously been called persistent sexual arousal syndrome.
- It has been diagnosed in women who complain of a continual feeling of sexual arousal which is uncomfortable, demands release and interferes with life pleasures and activities.
- These women masturbate frequently, sometimes incessantly, because climax provides relief.
- The relief is temporary and the sense of arousal returns rapidly and remains.

Postcoital Dysphoria

- Postcoital dysphoria is not listed in DSM-IV-TR. It occurs during the resolution phase of sexual activity, when individuals normally experience a sense of general well-being and muscular and psychological relaxation.
- Some individuals, however, experience postcoital dysphoria after an otherwise satisfactory sexual experience, they become depressed, tense, anxious, and irritable and show psychomotor agitation.
- They often want to get away from the partner and may become verbally or even physically abusive.
- The incidence of the disorder is unknown, but it is more common in men than in women.

Postcoital Dysphoria

- It may occur in adulterous sex and with prostitutes, when there is a profound fear of intimacy.
- It may happen when individuals cannot experience sex without consequent strong feelings of guilt.
- The fear of sexually transmitted disease causes some persons to experience postcoital dysphoria.
- Treatment requires insight-oriented psychotherapy to help patients understand the unconscious antecedents to their behavior and attitudes.

Unconsummated Marriage

- Couple involved in an unconsummated marriage have never had coitus and are typically uninformed and inhibited about sexuality.
- Their feelings of guilt, shame, or inadequacy are increased by their problems, and they experience conflict between their need to seek help and their need to conceal their difficulty.
- Couples present with the problem after having been married several months or several years.
- Masters and Johnson reported an unconsummated marriage of 17 years' duration.

Body Image Problems

- Some individuals are ashamed of their bodies and experience feelings of inadequacy related to self-imposed standards of masculinity or femininity.
- They may insist on sex only during total darkness, not allow certain body parts to be seen or touched, or seek unnecessary operative procedures to deal with their imagined inadequacies.
- Body dysmorphic disorder should be ruled out.

Don Juanism

- Some men who appear to be hypersexual, as shown by their need to have many sexual encounters or conquests, use their sexual activities to mask deep feelings of inferiority.

- Some have unconscious homosexual impulses, which they deny by compulsive sexual contacts with women.

- After having sex, most Don Juans are no longer interested in the woman. The condition is also referred to as satyriasis or as a form of sex addiction.

Nymphomania

- Nymphomania signifies excessive or pathological desire for coitus in a woman.
- There have been few scientific studies of the condition.
- Those patients who have been studied usually have had one or more sexual disorders, usually including female orgasmic disorder.
- The woman often has an intense fear of loss of love.
- She attempts to satisfy her dependency needs rather than to gratify her sexual impulses through her actions.
- It is sometimes classified as a form of sex addiction.

Fantasies

- Other atypical disorders are found in individuals who have one or more sexual fantasies about which they obsess, feel guilty, or are otherwise dysphoric.

- Common sexual fantasies are given in the next slide

MALE	FEMALE
Replacement of established partner	Replacement of established partner
Forced sexual encounters with women	Forced sexual encounters with men
Observing sexual activity	Observing sexual activity
Sexual encounters with men	Idyllic encounters with unknown men
Group sex	Sexual encounters with women
Homosexual	Forced sexual encounters with women
Images of male anatomy	Idyllic encounters with established partner
Forced sexual encounters with men	Sexual encounters with men
Sexual encounters with women	Memories of past sexual experiences
Idyllic encounters with unknown men	Sadistic imagery
Group sex	

Postcoital Headache

- Postcoital headache is one that occurs immediately after coitus and may last for several hours.
- It is usually described as throbbing and is localized in the occipital or frontal area.
- The cause is unknown but may be vascular, due to muscle contraction (tension), or psychogenic.
- Coitus may precipitate migraine or cluster headaches in predisposed persons.

Orgasmic Anhedonia

- Orgasmic anhedonia is a condition in which the person had no physical sensation of orgasm, even though the physiological component (e.g., ejaculation) remains intact.
- Medical causes, such as sacral and cephalic lesions that interfere with afferent pathways from the genitalia to the cortex, must be ruled out.
- Psychic causes usually relate to extreme guilt about experiencing sexual pleasure—these feelings produce a type of dissociative response that isolates the affective component of the orgasmic experience from consciousness.

Female Premature Orgasm

- Data on female premature orgasm are lacking.
- No separate category for premature orgasm in women is included in DSM-5.
- However, in one study, 10 percent of women felt they reached orgasm too quickly.

Masturbatory Pain

- Some individuals may experience pain during masturbation.
- Organic causes should always be ruled out.
- A small vaginal tear or early Peyronie's disease may produce a painful sensation.
- The condition should be differentiated from compulsive masturbation.
- People may masturbate to the extent that they do physical damage to their genitals and eventually experience pain during subsequent masturbatory acts.

Treatment of sexual disorders

1. Non pharmacological therapy

2. Pharmacotherapy

3. Mechanical Treatment Approaches

4. Surgical Treatment

Non pharmacological therapy

- **Dual-Sex Therapy:**

- The theoretical basis of the dual-sex therapy approach is the concept of the marital unit or dyad as the object of therapy.
- The method of dual-sex therapy was originated and developed by Masters and Johnson.
- Both individuals are involved in a relationship in which there is sexual distress so both must participate in the therapy program.
- Improved communication in sexual and nonsexual areas is a specific goal of treatment.

- **Behavioral Exercises:**

- Treatment is short term and behaviorally oriented.
- Specific exercises are prescribed to help the couple with their particular problem.
- Sexual dysfunction often involves a fear of inadequate performance thus, couples are specifically prohibited from any sexual play other than that prescribed by the therapist.
- Initially, intercourse is interdicted, and couples learn to give and receive bodily pleasure without the pressure of performance.
- Beginning exercises usually focus on heightening sensory awareness to touch, sight, sound, and smell.

- **Hypnotherapy:**

- Hypnotherapists focus specifically on the anxiety-producing symptom—that is, the particular sexual dysfunction.
- Successful use of hypnosis helps the patient gain control over the symptom that has been lowering self-esteem and disrupting psychological homeostasis.
- The nonhypnotic sessions also permit the clinician to take a careful psychiatric history and do a mental status examination before beginning hypnotherapy.
- Treatment focuses on symptom removal and attitude alteration.
- Patients are instructed in developing alternative means of dealing with the anxiety-provoking situation (i.e., the sexual encounter).

- **Behavior Therapy:**

- Behavior therapists assume that sexual dysfunction is learned, maladaptive behavior.
- Behavioral approaches were initially designed to treat phobias.
- In cases of sexual dysfunction, the therapist sees the patient as phobic of sexual interaction.
- The patient first deals with the least anxiety-producing situation in fantasy and progresses by steps to the most anxiety-producing situation.
- Behavior therapy techniques have been particularly effective in treating women with severe inhibition of excitement and orgasm when such feelings were accompanied by strong feelings of anxiety, anger, or disgust.

➢ The Stop - Start Technique

- In 1956 James Semans was the first researcher to introduce a behavioral technique - the "stop-start" technique.
- It's a method which involves repeatedly stimulating a man's penis until he has almost reached the point of ejaculatory inevitability, then pausing until his arousal has diminished, and then repeating the sequence until the man has learned to control his ejaculation voluntarily.

➢ The Squeeze Technique

- Stop-start exercises were further developed in the 1970s by the famous American sex therapist couple, **William Masters and Virginia Johnson**, with the squeeze technique.
- The squeeze technique is a firm squeeze to the end of the penis when it is fully erect and on the verge of ejaculation that results in some loss of sensitivity of the glans penis & delayed the ejaculation.
- They also claimed a 97+% success rate in remission of premature ejaculation by this technique.

➢ Group Therapy:

- The therapy group provides a strong support system for patients who feel ashamed, anxious, or guilty about a particular sexual problem.
- It is a useful forum in which to counteract sexual myths, correct misconceptions, and provide accurate information regarding sexual anatomy, physiology, and varieties of behavior.
- Members are encouraged to talk about their experiences with their partners.
- Groups have also been effective when composed of sexually dysfunctional married couples.

- **Integrated Sex Therapy:**
- One of the most effective treatment modalities is the use of sex therapy integrated with supportive, psychodynamic, or insight-orientated psychotherapy.
- This type of therapy is appropriate for patients with hypoactive desire disorders.
- Insight-oriented therapy helps them deal with problems in their interpersonal relationships or intrapsychic conflicts that frequently are at the root of the problem.
- The combined approach of individual and sex therapy is used by the general psychiatrist, who carefully judges the optimal timing of sex therapy and the ability of the patients to tolerate the directive approach that focuses on their sexual difficulties.

Pharmacotherapy

- A variety of drugs have been explored in the treatment of sexual dysfunction.
- The major new medications are **nitric oxide enhancers (phospodiesterase type 5 inhibitors)PDE5-i** such as **sildenafil, tadalafil, vardenafil.**
- Oral prostaglandin
- Alprostadil, an injectable phentolamine.
- A transurethral alprostadil.
- All used in the treatment of erectile disorder.

- **Nitric Oxide Enhancers:**

- Nitric oxide enhancers facilitate the inflow of blood to the penis necessary for an erection.
- The physiological mechanism of penile erection involves release of nitric oxide in the corpus cavernosum during sexual stimulation.
- Sildenafil augments the natural process involved in gaining and maintaining an erection during sexual stimulation.
- The drug takes effect approximately 1 hour after ingestion, and its effect can last up to 4 hours.
- Sildenafil has **no effect** in the absence of sexual stimulation.

- The most common adverse events associated with sildenafil are headaches, flushing, and dyspepsia.
- Some sildenafil users see things in a blue tint for several hours after taking the medication.
- More serious visual side effect is the loss of visual acuity and nonarteritic anterior ischemic optic neuropathy.
- It should be use cautiously in Cardiac patients.
- Two other nitric oxide enhancers similar to sildenafil—**vardenafil** and **tadalafil** have been developed.

- **Tadalafil** has an effective therapeutic window of 36 hours compared to sildenafil and vardenafil, which are effective for approximately 4 hours.

- 2.5-5 mg daily dose of tadalafil has been proposed & was recently approved for treating erectile dysfunction.

- In 2007 the European Commission approved low- dose tadalafil to be used as once-daily therapy for erectile dysfunction.

➢ Oral prostaglandin:

- Oral phentolamine has proved effective as a potency enhancer in men with minimal erectile dysfunction.

- It may prove useful for men with cardiac problems, as sildenafil is contraindicated for men using organic nitrates.

- It is not currently approved by the FDA.

- **Apomorphine** is also being tested as an oral remedy for erectile dysfunction.

- **Injectable phentolamine:**

- Injectable and transurethral alprostadil act locally on the penis and can produce erections in the absence of sexual stimulation.
- Alprostadil contains a naturally occurring form of prostaglandin E (vasodilating agent).
- The drug causes direct smooth muscle relaxation of penile vessels and erectile tissue.
- This reaction lowers the vascular resistance of the corpus and significantly increases blood flow to the penis.

➢ Injectable phentolamine:

- The firm erection produced within 2 to 3 minutes by increased blood flow may last as long as 1 hour.
- Treatment consists of the patient's self-injection of alprostadil into the corpus before coitus.
- This technique is easily taught and relatively painless.
- Infrequent adverse effects include penile bruising and changes in liver function test results, which are readily reversible when a man stops the injections.
- Can also cause priapism and sclerosis of the small veins of the penis.
- Alprostadil is a useful treatment for patients in whom nitric oxide enhancers are contraindicated.
- It is also of use in patients who do not tolerate the side effects of other drugs.

- **Antidepressants:**
- The side effects of antidepressants, particularly the SSRIs, which include delayed orgasm, have been used to prolong the sexual response in patients with premature ejaculation.
- Daily treatment is recommended.
- The SSRIs vary in their ability to delay ejaculation with paroxetine (20 to 40 mg) being the most effective, followed by
- clomipramine (10 to 50 mg),
- sertraline (50 to 100 mg),
- fluoxetine (20 to 40 mg),
- citalopram (20 to 40 mg),
- escitalopram (10 to 20 mg).

- Long-term adverse effects of daily SSRI use include **weight gain** with its associated risk for **type 2 diabetes mellitus.**
- **Dapoxetine** is a new, short acting SSRI specifically developed to treat premature ejaculation **without** erectile dysfunction.
- It is often used in conjunction with sildenafil type drugs.
- Other on demand treatments for premature ejaculation include topical anesthetics such as **lidocaine** or **prilocaine** cream or spray, which is applied to the glans of the penis.

➢ Other Pharmacological Agents:

- Intravenous methohexital sodium has been used in desensitization therapy.
- The use of antidepressants has been advocated in the treatment of patients who are phobic of sex and in those with a posttraumatic stress disorder (PTSD) after rape.
- Bromocriptine, a dopamine agonist, may improve sexual function impaired by hyperprolactinemia.
- Yohimbine is an α-adrenergic receptor antagonist that may cause dilation of the penile artery and improve erections.

- Ginseng has been reported to have androgenic effects.
- One report described the case of a mother who ingested large amounts of ginseng during her pregnancy, resulting in androgenization of the neonate, who was born with pubic hair and enlarged testes.
- Other drugs that have been used by women to alleviate arousal dysfunction include oral phentolamine, topical prostaglandin E, oral oxytocin, ginkgo biloba, and various psychostimulants, including caffeine.
- Many of these drugs have not been approved for treatment of female sexual dysfunction and must be prescribed with caution.

- Dopaminergic agents have been reported to increase libido and improve sex function.
- Those drugs include **L-dopa**, a dopamine precursor, and **bromocriptine**, a dopamine agonist.
- The antidepressant **bupropion** has dopaminergic effects and has increased sex drive in some patients.
- **Selegiline**, an MAOI, is selective for MAO_B and is dopaminergic.
- It improves sexual functioning in older persons.

- **Hormone Therapy:**
- Androgens increase the sex drive in women and in men with low testosterone concentrations.
- In men, prolonged use of androgens may produce hypertension and prostatic enlargement.
- Testosterone is most effective when given parenterally.
- Effective transdermal preparations are available.
- Oral preparations are associated with increased risk of hepatotoxicity.
- Luteinizing hormone-releasing hormone (LHRH), stimulates the release of luteinizing hormone, which increases testosterone secretion in both sexes.

- Gonadotrophin-releasing hormone (GnRH) is used as an inhalant in Europe.
- It stimulates desire and increases potency.
- An excess of GnRH suppresses estrogen and testosterone thus, the therapeutic use of GnRH is limited by a narrow therapeutic window.
- Women who use estrogens for replacement therapy or for contraception may report **decreased libido**.
- In such cases, a combined preparation of estrogen and testosterone has been used effectively.
- Estrogen itself prevents thinning of the vaginal mucous membrane and facilitates lubrication.

➢ **Pheromones:**

- Pheromones are sexual scents that are found in animals and may be present in humans.
- They produce dramatic sex-seeking behavioral patterns in animals (e.g., male deer following female deer in estrus, mounting behavior in primates).
- Human pheromones are believed to be short-acting fatty acids present in vaginal secretions and male sweat.
- In one study, women were consistently more attracted to items impregnated with a chemical derived from male sweat (α-androstenol) than to control items.

- **Antiandrogens and Antiestrogens:**

- Estrogen and progesterone are antiandrogens that have been used to treat compulsive sexual behavior in men, usually in sex offenders.
- Medroxyprogesterone acetate (Depo-Provera), used primarily as a contraceptive in women, inhibits the secretion of gonadotrophin.
- It is used in men with compulsive sexual behavior to reduce libido by lowering testosterone levels.
- **Cyproterone acetate** is a strong antiandrogen used in Europe to treat sex offenders.
- At dosages of 100 to 200 mg a day, the sex drive disappears within 2 weeks.

Mechanical Treatment Approaches

- **Steal Syndrome:**

- In male patients with arteriosclerosis (especially of the distal aorta, known as Leriche's syndrome), the erection may be lost during active pelvic thrusting.
- The need for increased blood in the gluteal muscles and others served by the ilial or hypogastric arteries takes blood away (steals) from the pudendal artery and, thus, interferes with penile blood flow.
- Relief may be obtained by decreasing pelvic thrusting, which is also aided by the woman-superior coital position.

- **Vacuum Pump:**

- Vacuum pumps are mechanical devices that patients without vascular disease can use to obtain erections.
- The blood drawn into the penis after the creation of the vacuum is kept there by a ring placed around the base of the penis.
- This device has no adverse effects, but it is cumbersome, and partners must be willing to accept its use.
- Some women complain that the penis is redder and cooler than when erection is produced by natural circumstances, and they find the process and the result objectionable.

Surgical Treatment

- **Male Prostheses:**

- Surgical treatment is infrequently advocated, but improved penile prosthetic devices are available for men with inadequate erectile response who are resistant to other treatment methods or who have medically caused deficiencies.
- There are **two** main types of prosthesis:

1. A semirigid rod prosthesis that produces a permanent erection that can be positioned close to the body for concealment and an inflatable type that is implanted with its own reservoir and pump for inflation and deflation.

2. The latter type is designed to mimic normal physiological functioning.

- Placing a penile prosthesis in a man who has lost the ability to ejaculate or to have an orgasm as a result of medical causes will not restore those functions.
- Men with prosthetic devices have generally reported satisfaction with their subsequent sexual functioning, but their wives report much less satisfaction.

- Presurgical counseling is strongly recommended so that the couple has a realistic expectation of what the prosthesis can do for their sex lives.

- Postsurgical counseling may also be necessary to help the couple adapt to their rediscovered ability to have intercourse.

- Prosthetic devices have been associated with severe adverse effects, including perforation, infection, urinary retention, and persistent pain.

- **Female Procedures:**
- Surgical approaches to female dysfunctions include hymenectomy in the case of dyspareunia in an unconsummated marriage.

- Vaginoplasty in multiparous women complaining of lessened vaginal sensations, or freeing clitoral adhesions in women with inhibited excitement.

- Such surgical treatments have not been carefully studied and should be considered cautiously.

Conclusion

- Masters and Johnson first reported positive results for their behavioral treatment approach in 1970.
- The most difficult treatment cases involve couples with severe marital discord. Cases involving problems of fear of intimacy, excessive dependency, or excessive hostility are also complex.
- Patients phobic of sex also present treatment difficulties, as do patients diagnosed with lifelong dysfunctions.

Conclusion

- Desire disorders are particularly difficult to treat.
- They require longer, more intensive therapy than some other disorders, and their outcomes are very variable.
- In general, methods that have proved effective singly or in combination include training in behavioral sexual skills, systematic desensitization, directive marital counseling, traditional psychodynamic approaches, group therapy, and pharmacotherapy.
- A multimodal regimen and an eclectic approach are frequently necessary to treat sexual disorders.

References

- Kaplan & Sadock's Comprehensive Textbook of Psychiatry.
- Diagnostic and Statistical Manual of Mental Disorders. 5th Edition.

THANK YOU