Sexual Dysfunction - in Males and Females: Case Studies

Cheryl A. Chessick, MD

CME #226 Wednesday, 7:30-8:30 a.m. Location: Korbel Ballroom 3B

CME #227 Wednesday, 12:00-1:00 p.m. Location: Korbel Ballroom 3B

ACTIVITY DISCLAIMER

The material presented at this activity is being made available by the American Academy of Family Physicians for educational purposes only. This material is not intended to represent the only, nor necessarily best, method or procedure appropriate for the medical situations discussed but, rather, is intended to present an approach, view, statement or opinion of the faculty that may be helpful to others who face similar situations.

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The content of my material(s)/presentation(s) in this CME activity will include discussion of unapproved or investigational uses of products or devices as indicated: Management of female dysfunction: androgens, bupropion and sildenafil.

FACULTY DISCLOSURE

The AAFP has selected all faculty appearing in this program. It is the policy of the AAFP that all CME planning committees, faculty, authors, editors, and staff disclose relationships with commercial entities upon nomination or invitation of participation. Disclosure documents are reviewed for potential conflicts of interest and, if identified, they are resolved prior to confirmation of participation. Only those participants who had no conflict of interest or who agreed to an identified resolution process prior to their participation were involved in this CME activity.

Cheryl A. Chessick, MD, has disclosed a financial relationship with Wyeth as a subinvestigator for clinical trials and received research grants/support on depression. Financial relationship with Dainippon-Sumitomo Pharma America Inc. as a subinvestigator for clinical trials and received research grants/support on bipolar disorder.

Learning Objectives/ Search References

- Engage male and female patients in a discussion about their sexual health.
- Prepare a diagnostic plan and describe potential treatment options for patients with sexual dysfunction.
- Coordinate care for patients with sexual disorders who require assistance in finding counseling resources, making healthy behavior changes and/or adjusting medications that may have an effect on their sexual functioning.

– Frank, J; Mistretta, P; Will, J. Diagnosis and Treatment of Female Sexual Dysfunction. *Am Fam Physician* 2008;77(5):635-642.
– Low sex drive in women. Mayo Foundation for Medical Education and Research. December 2007.
– Female sexual dysfunction. Mayo Foundation for Medical Education and Research. April 2008.
– Men's Health. FastStats. CDC National Center for Health Statistics. May 2009.
– Erectile Dysfunction. National Kidney and Urologic Diseases Information Clearinghouse. National Institute of Diabetes and Digestive and Kidney Diseases. National Institutes of Health (NIH) Publication No. 06-3923. December 2005

Case #1 (plan on 30 minutes per case)

Sally Sue is a 24 year-old married woman who comes to you for her annual examination. She presents with feeling tired much of the day.

She is also treated by you for asthma that she has had since the age of 9. She uses an inhaler and has been generally stable for the last several years.

She makes a comment on one of the magazines you have in your waiting room about relationships. You also notice that on your office form that you have patients fill out, that she answers not sexually active.

What is it all about anyway?

Psychological-Social-Emotional

Physiological-biological: interactions of sex steroids and neurotransmitters

Cognitive thoughts-fantasies-satisfaction

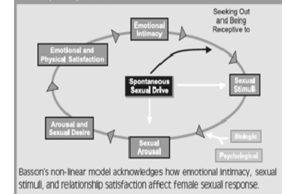
Cultural

Diagnostic and Statistical Manual of Mental Disorders. Fourth Edition, Text Revision ed. Washington, DC: American Psychiatric Association; 2000.

Point #1: Women may have a different Sexual Response than Men

Is it Masters & Jonson model, Kaplan model or the Basson model as the best personal fit?

Community Sample of 133 nurses equal proportions of endorsements



Sand M, Fisher WA. Women's endorsement of models of female sexual response: the nurses' sexuality study. J Sex Med. 2007 May;4(3):708-19; Basson R. Female sexual response: the role of drugs in the management of sexual dysfunction. Obstet Gynecol. 2001 Aug;98(2):350-3. Association of Reproductive Health-http://www.arhp.org/

Point #2 Female Sexual Dysfunction Definition and Classification

Definition:

Sexual complaint: expression of discontent related to a phase of the sexual response cycle or sexual pain

Female Sexual Dysfunction: Sexual complaint plus distress

Classification

I: Sexual desire disorders
- *Hypoactive sexual desire disorder (HSDD)
- Sexual aversion disorder

II: Sexual arousal disorder

III: Orgasmic disorder

IV: Sexual pain disorder
- Dyspareunia
- Vagismus

Diagnostic and Statistical Manual of Mental Disorders. Fourth Edition, Text Revision ed. Washington, DC: American Psychiatric Association; 2000

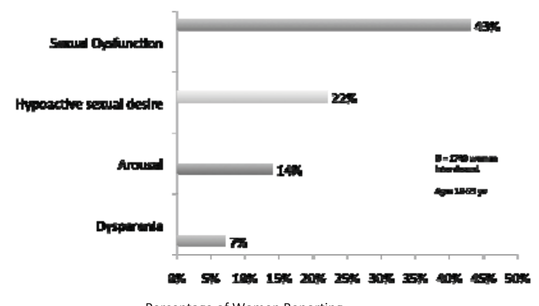
Specifiers

ONSET
- Lifelong-present since the onset of sexual functioning
- Acquired-developed after a period of normal functioning

CONTEXT
- Generalized-not limited to certain types of stimulation, situations, or partners
- Situational-limited to certain types of stimulation, situations or partners

Diagnostic and Statistical Manual of Mental Disorders. Fourth Edition, Text Revision ed. Washington, DC: American Psychiatric Association; 2000

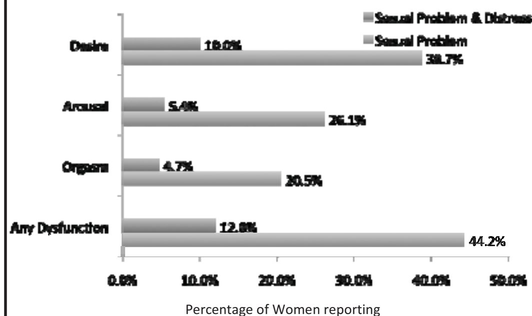
National Health and Social Life Survey



Laumann EO, Paik A, Rosen RC. Sexual dysfunction in the United States: prevalence and predictors. JAMA. 1999 Feb 10;281(6):537-44.

PRESIDE STUDY

3.7% HSDD & MDD



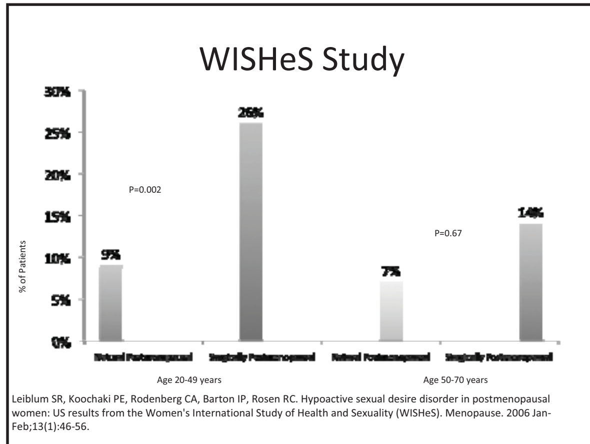
Shifren JL, Monz BU, Russo PA, Segreti A, Johannes CB. Sexual problems and distress in United States women: prevalence and correlates. Obstet Gynecol. 2008 Nov;112(5):970-8.

Correlates of Distress with HSDD: PRESIDE

1. Having a partner (OR 4.63)
2. Untreated depression > treated depression
3. Presence of anxiety
4. Greatest age < 45 years
5. White Race
6. Urinary incontinence
7. Use of hormonal contraceptives or HRT

Johannes CB, Clayton AH, Odom DM, Rosen RC, Russo PA, Shifren JL, et al. Distressing sexual problems in United States women revisited: prevalence after accounting for depression. J Clin Psychiatry. 2009 Dec;70(12):1698-706.

WISHeS Study



Leiblum SR, Koochaki PE, Rodenberg CA, Barton IP, Rosen RC. Hypoactive sexual desire disorder in postmenopausal women: US results from the Women's International Study of Health and Sexuality (WISHeS). Menopause. 2006 Jan-Feb;13(1):46-56.

Influences

Reproductive endocrinology (i.e. anything that lowers testosterone such as hyperprolactinemia, opiates, menopause)

Body image (e.g. obesity)

General health status/illness (e.g. fatigue) and co-morbidities
Medication/substance use

Psychological/relationship issues, partner availability/aging

Fears (e.g. pregnancy, infertility, STD, history of sexual abuse/trauma, cultural practices)

Meston CM. Aging and sexuality. West J Med. 1997 Oct;167(4):285-90.

FSD Can Be Associated with Medical Conditions

Condition	Sexual Function
Depression	Decreased desire
Diabetes	Impaired Arousal & orgasm
Thyroid disease	Decreased desire
Cardiovascular disease	Impaired Arousal
Neurologic diseases	Impaired arousal and orgasm
Androgen insufficiency	Decreased desire
Estrogen deficiency	Impaired arousal

Basson R. Female sexual dysfunction in hypopituitarism. Lancet. 2007 Sep 1;370(9589):737; author reply -8.
Basson R. Sexuality in chronic illness: no longer ignored. Lancet. 2007 Feb 3;369(9559):350-2.
Basson R, Schultz WW. Sexual sequelae of general medical disorders. Lancet. 2007 Feb 3;369(9559):409-24.
Bhasin S, Enzlin P, Coviello A, Basson R. Sexual dysfunction in men and women with endocrine disorders. Lancet. 2007 Feb 17;369(9561):597-611.

Pharmacotherapies and Risk of FDS

Psychotropic medications	**SSRIs/SNRIs/TCAs** **Mood Stabilizers** **Antipsychotics**	**Benzodiazepines** **Antiepileptic drugs**
Antihypertensives	Beta blockers Alpha-blockers	Diuretics
Cardiovascular agents	Lipid-lowering agents Digoxin	
Hormones	Oral Contraceptives Estrogens Progestins	Antiandrogens GnRH agonists
Others	Histamine H2 rector blockers Narcotics NSAIDs	

Basson R, Schultz WW. Sexual sequelae of general medical disorders. Lancet. 2007 Feb 3;369(9559):409-24.

Antidepressants and Indications Sexual Side Effects = *

	MDD	OCD	Panic	PTSD	GAD	Soc Anx	PMDD	Bulimia
Bupropion	x							
Citalopram*	x							
Desvenlafaxine*	x							
Duloxetine*	x				x			
Escitalopram*	x				x			
Fluoxetine*	x	x	x				x	x
Fluvoxamine*		x						
Mirtazapine	x							
Paroxetine*	x	x	x	x	x	x	x	
Sertraline*	x	x	x	x		x	x	
Venlafaxine*	x		x		x	x		

Mircromedex-
http://interest.healthcare.thomsonreuters.com/content/GAW
Micromedex, www.epocrates.com

Other Possible Causes of FSD

Substances: alcohol, illicit drugs

Psychosocial/situational factors: interpersonal relationships, body image, sexual self-esteem, prior psychosexual adjustment, partner sexual dysfunction

Socio-cultural factors

Point #3 Taking a Sexual History

1. Provider must broach the subject – like alcohol use, smoking, or vaccinations
2. Build it into routine exam
3. May use reproductive health as an intro to sexual history
4. Utilize a question to open the dialogue. Ask about every phase of the sexual response cycle or use a clinical questionnaire as diagnosis generally based on clinical exam
5. Define terms, but keep sexual activities general. Maintain cultural sensitivity (this includes sexual orientation)

Taking a Sexual History (continued)

6. Note any change in sexual function – best to track sexual functioning across lifetime of care, like vaccinations – current sexual functioning vs. sexual history
7. What to look for: complaints, changes, distress, satisfaction
8. Clarify psychosocial/situational factors: interpersonal relationships, body image, sexual self-esteem, prior psychosexual adjustment

Interactive Portion –Automated Response System

Sample Question: Who will be the Bronco's QB next season?

25%	1.	Kyle Orton
25%	2.	John Elway
25%	3.	Tim Tebow
25%	4.	Couldn't possibly care less

How would you proceed with talking to Sally about her sexual function at this point?

1. Explain that asking about sexual function is a usual part of your examination
2. Say "I notice you marked not sexually active, was there a reason for this?"
3. Say "At your last exam you marked sexually active but not this time. Is there a reason for this?"
4. "You marked not sexually active. Are you having trouble being interested in sex?"

1.	25%
2.	25%
3.	25%
4.	25%

What information do you gather at this point?

25%	1.	What concerns is she having about sexual function?
25%	2.	What changes has she noticed in her sexual function?
25%	3.	Is she distressed by her sexual function?
25%	4.	Is she satisfied with aspects of her sexual function?

Management

1. Maximize treatment of underlying conditions
2. Eliminate contributing factors: ETOH, medications, smoking, partner SD
3. Psychological interventions: couples therapy, CBT
4. Eros clitoral device approved for arousal problems
5. Only approved medication = estrogen (vaginal, oral)
6. Off-label use of androgens, bupropion, sildenafil

PLISSIT

Permission to discuss sexual issues

Limited information/education about anatomy, physiology, expectations, etc.

Specific suggestions such as practical hints, exercises, Sensate Focus

Intensive therapy requires referral

Frank JE, Mistretta P, Will J. Diagnosis and treatment of female sexual dysfunction. Am Fam Physician. 2008 Mar 1;77(5):635-42.

Decreased Sexual Desire Screener (DSDS)

1. In the past was your level of sexual desire or interest good and satisfying to you? y/n
2. Has there been a decrease in your level of sexual desire or interest? y/n
3. Are you bothered by your decreased level of sexual desire or interest? y/n
4. Would you like your level of sexual desire or interest to increase? y/n

Do you feel any of the following has contributed to your current decrease in sexual desire or interest?

5. An operation, depression, injuries, or other medical condition? y/n
6. Medication, drugs or alcohol you are currently taking? y/n
7. Pregnancy, recent childbirth, menopausal symptoms? y/n
8. Other sexual issues you may be having (pain, decreased arousal or orgasm)? y/n
9. Your partner's sexual problems? y/n
10. Dissatisfaction with your relationship or partner? y/n
11. Stress or fatigue? y/n

If the answer is no to any of 1 - 4, answer: The screener determines that you may not qualify for the diagnosis of Hypoactive Sexual Desire Disorder. You may still find value in the program as a tool to increase your understanding of sexual desire, and to improve your relationship.
If the answer is yes to all of 1 - 4, answer: The screener determines that you may qualify for the diagnosis of Hypoactive Sexual Desire Disorder. The program that is offered may be beneficial to you.
If the answer to any question 5 - 8, or 11 is yes add: You should also seek consultation with your health care provider to determine if a medical condition or problem is contributing to your current decrease in sexual desire or interest.
If the answer to question 9 is yes add: Your partner may need to seek consultation with his health care provider before starting the program.
If the answer to question 10 is yes add: You and your partner should consider professional counseling instead of or in addition to this program.

Clayton AH, Goldfischer ER, Goldstein I, Derogatis L, Lewis-D'Agostino DJ, Pyke R. Validation of the decreased sexual desire screener (DSDS): a brief diagnostic instrument for generalized acquired female hypoactive sexual desire disorder (HSDD). J Sex Med. 2009 Mar;6(3):730-8.

Based on initial answers to questions about Sally, how would you approach managing her?

25%	1. Giving her the Sexual Desire Screener?
25%	2. Verify the medications she is taking?
25%	3. Go over sexual organs on an anatomy chart?
25%	4. Give her a script for Sildenafil?

Conclusions

#1: Females may have a different response than men
*Multiple factors may affect sexual functioning

#2: Classification
*FSD affects about 12% of US women
*HSDD is the most common FSD

#3: Discussing Sexual Issues
*Brief screening tool is available for HSDD

Case #2

Danny Joe is a 48 year-old gentleman who comes to your for his annual examination. He has been married for 25 years to his high school sweet heart and they have 2 children in college.

He is a middle manager in a large corporation. He answers on your office questionnaire that he is sexually active with women only.

He has gained about 25 pounds over the last year and states that he is less active than he used to be.

How does it all work?

Desire or Libido: fantasies and desire to have sexual activity

Excitement or Erection: direct blood from the iliac artery into the corpora cavernosa to achieve penile tumescence and rigidity which is adequate for penetration

Orgasm or Ejaculation: sensation of ejaculatory inevitability followed by discharge of semen and prostatic and seminal vesicle fluid through the urethra followed by a sense of pleasure and general well-being

Resolution: muscular relaxation and general well-being

Diagnostic and Statistical Manual of Mental Disorders. Fourth Edition, Text Revision ed. Washington, DC: American Psychiatric Association; 2000.

Age-Related Erectile Changes

Increased interaction of the couple with foreplay needed to achieve a satisfactory erection

Interval range from 30 minutes in young men may be several days in older men –refractory time

Older men must maintain their focus

Guay AT, Spark RF, Bansal S, Cunningham GR, Goodman NF, Nankin HR, et al. American Association of Clinical Endocrinologists medical guidelines for clinical practice for the evaluation and treatment of male sexual dysfunction: a couple's problem--2003 update. Endocr Pract. 2003 Jan-Feb;9(1):77-95.

Classification

I: Sexual desire disorder
- Hypoactive sexual desire disorder (HSDD)
- Sexual aversion disorder

II: *Male Erectile Disorder

III: Male Orgasmic Disorder

IV: Premature Ejaculation

V: Sexual Pain Disorders
- Dyspareunia

Diagnostic and Statistical Manual of Mental Disorders. Fourth Edition, Text Revision ed. Washington, DC: American Psychiatric Association; 2000

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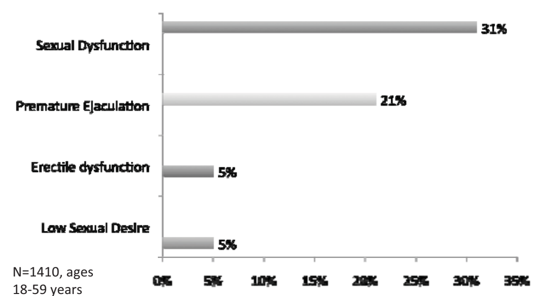
National health and Social Life Survey



N=1410, ages 18-59 years

Laumann EO, Paik A, Rosen RC. Sexual dysfunction in the United States: prevalence and predictors. JAMA. 1999 Feb 10;281(6):537-44.

Impotence

Men who experience erectile failure during attempted intercourse more than 75% of the time

Lasting 3 months

Can be normal that 25% of sexual attempts fail

Guay AT, Spark RF, Bansal S, Cunningham GR, Goodman NF, Nankin HR, et al. American Association of Clinical Endocrinologists medical guidelines for clinical practice for the evaluation and treatment of male sexual dysfunction: a couple's problem--2003 update. Endocr Pract. 2003 Jan-Feb;9(1):77-95.

Massachusetts Male Aging Study (MMAS)

1,085 men in the US over 9 years

30% change in intercourse, erection or difficulties with orgasms

10% change in desire and satisfaction

Araujo AB, Mohr BA, McKinlay JB. Changes in sexual function in middle-aged and older men: longitudinal data from the Massachusetts Male Aging Study. J Am Geriatr Soc. 2004 Sep;52(9):1502-9.

Point #1 3 Main Problems & 2 Goals

Problems:

*Erectile dysfunction (14M hits on the internet)

Ejaculatory dysfunction

Decreased libido

Goals:

Restore libido

Functional erections

Point #2: Health Professionals Follow-up Study

31,742 men age 52-90

US Study

Previous 3 months: 33% Erectile Dysfunction

Lower risk: physical activity

Higher risk: obesity, smoking, alcohol consumption, and television viewing time

Bacon CG, Mittleman MA, Kawachi I, Giovannucci E, Glasser DB, Rimm EB. Sexual function in men older than 50 years of age: results from the health professionals follow-up study. Ann Intern Med. 2003 Aug 5;139(3):161-8.

Erectile Dysfunction & Obesity

30%

Esposito K, Giugliano F, Di Palo C, Giugliano G, Marfella R, D'Andrea F, et al. Effect of lifestyle changes on erectile dysfunction in obese men: a randomized controlled trial. JAMA. 2004 Jun 23;291(24):2978-84.

Having Sex Is a Good Thing

Good to have sex at least once a week

Koskimaki J, Shiri R, Tammela T, Hakkinen J, Hakama M, Auvinen A. Regular intercourse protects against erectile dysfunction: Tampere Aging Male Urologic Study. Am J Med. 2008 Jul;121(7):592-6.

Rancho Bernardo Study

Coronary heart disease with smoking, obesity and dyslipidemia in midlife associated with later erectile dysfunction

Fung MM, Bettencourt R, Barrett-Connor E. Heart disease risk factors predict erectile dysfunction 25 years later: the Rancho Bernardo Study. J Am Coll Cardiol. 2004 Apr 21;43(8):1405-11.

Risk Factors for Erectile Dysfunction

Chronic diseases: Diabetes, Hypertension, obesity, dyslipidemia, cardiovascular disease, smoking, systemic sclerosis (scleroderma) and peronie's disease

Cardiovascular disease: erectile dysfunction may be an early warning sign of future cardiovascular events (57% in one prospective study)

Laumann EO, Paik A, Rosen RC. Sexual dysfunction in the United States: prevalence and predictors. JAMA. 1999 Feb 10;281(6):537-44; Fung MM, Bettencourt R, Barrett-Connor E. Heart disease risk factors predict erectile dysfunction 25 years later: the Rancho Bernardo Study. J Am Coll Cardiol. 2004 Apr 21;43(8):1405-11; Guay AT, Spark RF, Bansal S, Cunningham GR, Goodman NF, Nankin HR, et al. American Association of Clinical Endocrinologists medical guidelines for clinical practice for the evaluation and treatment of male sexual dysfunction: a couple's problem--2003 update. Endocr Pract. 2003 Jan-Feb;9(1):77-95; Chiurlia E, D'Amico R, Ratti C, Granata AR, Romagnoli R, Modena MG. Subclinical coronary artery atherosclerosis in patients with erectile dysfunction. J Am Coll Cardiol. 2005 Oct 18;46(8):1503-6.

Other Causes of Impotence

Nicotine, alcohol as well as recreational drugs

Psychological: Depression, stress, Performance anxiety and lack of sensate focus

Neurological causes: stroke, spinal cord or back injury, multiple sclerosis, dementia

Pelvic trauma, prostate surgery or priapism

Bicycle Riding

Hormonal Factors: Testosterone (? testing), Hyperprolactinemia, hyperthyroidsim and hypothyroidism

Guay AT, Spark RF, Bansal S, Cunningham GR, Goodman NF, Nankin HR, et al. American Association of Clinical Endocrinologists medical guidelines for clinical practice for the evaluation and treatment of male sexual dysfunction: a couple's problem--2003 update. Endocr Pract. 2003 Jan-Feb;9(1):77-95; Qaseem A, Snow V, Denberg TD, Casey DE, Jr., Forciea MA, Owens DK, et al. Hormonal Testing and Pharmacologic Treatment of Erectile Dysfunction: A Clinical Practice Guideline From the American College of Physicians. Ann Intern Med. 2009 Oct 19.

The Sexual History and PE

95% sensitive and only 50% specific (may need nocturnal penile tumescence testing)

Rapidity of onset: sudden-psychological or radical prostatectomy or genital tract trauma

Erectile reserve: nighttime erections; complete loss neurologic or vascular disease (femoral and peripheral pulses); non-sustained erection with detumescence after penetration is most commonly due to anxiety (sensate focus) or vascular steel-not enough blood flow

Assessment of interpersonal conflict

Michal V, Kramar R, Pospichal J. EXternal iliac "steal syndrome". J Cardiovasc Surg (Torino). 1978 Jul-Aug;19(4):355-7; Bol JW, Evans C, Marshall VR. Sexual dysfunction after prostatectomy. Br J Urol. 1987 Apr;59(4):319-22.

How would you approach talking to Danny?

25%	1. How many times a month do you have failed intercourse?
25%	2. How are things with your wife?
25%	3. Are you having sexual concerns?
25%	4. Sometimes when men gain more weight and are more sedentary, sexual function changes. Is that true for you?

What are the differences in your approach with Danny vs. Sally?

25%	1. None
25%	2. Assume Sally is more comfortable talking about sexual issues
25%	3. Assume Danny is more comfortable talking about sexual issues
25%	4. You will need to educate Sally more about sexual function

Point #3: Treatments

Etiology and treating underlying condition
*Phosphodiesterase-5 inhibitors
Penile self-injectable drugs
Surgical implantation of a penile prosthesis
Testosterone treatment
Weight loss and increased physical activity
Psychotherapy aimed at decreasing anxiety and depression or sexual therapy

Qaseem A, Snow V, Denberg TD, Casey DE, Jr., Forciea MA, Owens DK, et al. Hormonal Testing and Pharmacologic Treatment of Erectile Dysfunction: A Clinical Practice Guideline From the American College of Physicians. Ann Intern Med. 2009 Oct 19; Guay AT, Spark RF, Bansal S, Cunningham GR, Goodman NF, Nankin HR, et al. American Association of Clinical Endocrinologists medical guidelines for clinical practice for the evaluation and treatment of male sexual dysfunction: a couple's problem--2003 update. Endocr Pract. 2003 Jan-Feb;9(1):77-95; Montague DK, Jarow J, Broderick GA, Dmochowski RR, Heaton JP, Lue TF, et al. AUA guideline on the pharmacologic management of premature ejaculation. J Urol. 2004 Jul;172(1):290-4; Montague DK, Jarow JP, Broderick GA, Dmochowski RR, Heaton JP, Lue TF, et al. Chapter 1: The management of erectile dysfunction: an AUA update. J Urol. 2005 Jul;174(1):230-9.

Phosphodiesterase-5 Inhibitors (600,000 internet hits)

Sildenafil (Viagra)-#10 50mg $167.99

Vardenafil (Levitra)-#10 10mg $154.99

Tadalafil (Cialis)-10mg #10 $171.99

Choice: base on patient's preferences, including cost, ease of use and adverse effects

www.drugstore.com; www.needymeds.org

Ease of Use

Sildenafil take one hour before sexual intercourse; effective for wide range of erectile dysfunction; effective as early as 30 minutes and lasts about 4 hours

Dose: 50mg can go to 25mg and max is 100mg

No Black Box Warnings but many “cautions”

Side Effects: cardiovascular-lowers BP about 8mmHg but bad with nitrates (24 hours or longer with someone with renal or hepatic dysfunction)

Safe in men with stable coronary artery disease not taking nitrates (American College of Cardiology/American Heart Association)

Visual changes, hearing changes

Cytochrome P450 3A4 interactions

56% of diabetic men and 50% of those with radical prostatectomy responded

Sexual Health Inventory for Men (SHIM): ttp://www.njurology.com/_forms/shim.pdf

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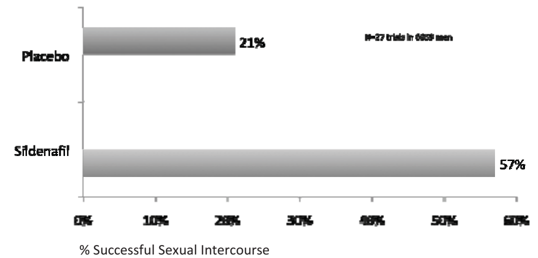
Boolell M, Allen MJ, Ballard SA, Gepi-Attee S, Muirhead GJ, Naylor AM, et al. Sildenafil: an orally active type 5 cyclic GMP-specific phosphodiesterase inhibitor for the treatment of penile erectile dysfunction. Int J Impot Res. 1996 Jun;8(2):47-52; Goldstein I, Lue TF, Padma-Nathan H, Rosen RC, Steers WD, Wicker PA. Oral sildenafil in the treatment of erectile dysfunction. Sildenafil Study Group. N Engl J Med. 1998 May 14;338(20):1397-404; Rendell MS, Rajfer J, Wicker PA, Smith MD. Sildenafil for treatment of erectile dysfunction in men with diabetes: a randomized controlled trial. Sildenafil Diabetes Study Group. JAMA. 1999 Feb 3;281(5):421-6; Schover LR, Fouladi RT, Warneke CL, Neese L, Klein EA, Zippe C, et al. The use of treatments for erectile dysfunction among survivors of prostate carcinoma. Cancer. 2002 Dec 1;95(11):2397-407; Zippe CD, Kedia AW, Kedia K, Nelson DR, Agarwal A. Treatment of erectile dysfunction after radical prostatectomy with sildenafil citrate (Viagra). Urology. 1998 Dec;52(6):963-6; Dinsmore WW, Hodges M, Hargreaves C, Osterloh IH, Smith MD, Rosen RC. Sildenafil citrate (Viagra) in erectile dysfunction: near normalization in men with broad-spectrum erectile dysfunction compared with age-matched healthy control subjects. Urology. 1999 Apr;53(4):800-5.

Sildenafil for Male Erectile Dysfunction A Systematic Meta-analysis



Fink HA, Mac Donald R, Rutks IR, Nelson DB, Wilt TJ. Sildenafil for male erectile dysfunction: a systematic review and meta-analysis. Arch Intern Med. 2002 Jun 24;162(12):1349-60.

Vardenafil

805 men ages 57-78 ED various etiologies on 5-20mg or placebo

Maintained erections 50-67% vs. 32 % on placebo

Hellstrom WJ, Gittelman M, Karlin G, Segerson T, Thibonnier M, Taylor T, et al. Sustained efficacy and tolerability of vardenafil, a highly potent selective phosphodiesterase type 5 inhibitor, in men with erectile dysfunction: results of a randomized, double-blind, 26-week placebo-controlled pivotal trial. Urology. 2003 Apr;61(4 Suppl 1):8-14.

Vardenafil (Levitra)

Similar structure, onset and duration of action and side-effect profile with sildenafil

10mg and 20mg tablets

High fat but not moderate fat meals lower vardenafil’s peak serum concentration by 18% and delay its absorption by one hour; take on empty stomach

Common similar: headache (13%), dyspepsia (10%), flushing (10%), rhinitis (5%)

Slight QT prolongation and no blue vision

Alpha blockers needs to be stable and lowest dose possible

Hellstrom WJ, Gittelman M, Karlin G, Segerson T, Thibonnier M, Taylor T, et al. Sustained efficacy and tolerability of vardenafil, a highly potent selective phosphodiesterase type 5 inhibitor, in men with erectile dysfunction: results of a randomized, double-blind, 26-week placebo-controlled pivotal trial. Urology. 2003 Apr;61(4 Suppl 1):8-14.

Tadalafil (Cialis)

10mg or 20mg but can go down to 2.5mg in those with 3A4 blocking medications

Longer action starts as early as 16 minutes and lasts up to 36 hours

Does not cause blue vision otherwise same side effect profile

Can take with food

Brock GB, McMahon CG, Chen KK, Costigan T, Shen W, Watkins V, et al. Efficacy and safety of tadalafil for the treatment of erectile dysfunction: results of integrated analyses. J Urol. 2002 Oct;168(4 Pt 1):1332-6; Govier F, Potempa AJ, Kaufman J, Denne J, Kovalenko P, Ahuja S. A multicenter, randomized, double-blind, crossover study of patient preference for tadalafil 20 mg or sildenafil citrate 50 mg during initiation of treatment for erectile dysfunction. Clin Ther. 2003 Nov;25(11):2709-23.

Tadalafil

Integrated analysis 1112 ED 2.5-20mg 75% successful vs. 32% placebo

Some data show men prefer tadalafil in one study 66.3% v. 33.7%

Instruction important for all 3

Brock GB, McMahon CG, Chen KK, Costigan T, Shen W, Watkins V, et al. Efficacy and safety of tadalafil for the treatment of erectile dysfunction: results of integrated analyses. J Urol. 2002 Oct;168(4 Pt 1):1332-6; Govier F, Potempa AJ, Kaufman J, Denne J, Kovalenko P, Ahuja S. A multicenter, randomized, double-blind, crossover study of patient preference for tadalafil 20 mg or sildenafil citrate 50 mg during initiation of treatment for erectile dysfunction. Clin Ther. 2003 Nov;25(11):2709-23.

How are you going to proceed with Danny?

25%	1.	Ask him to bring his wife in to discuss?
25%	2.	Test him for nocturnal erections?
25%	3.	Send him to an exercise trainer
25%	4.	Send him home with a script for Tadalafil

Conclusions

#1: Erectile dysfunction most common presenting complaint

#2: Important to stay fit

#3: Phosphodiesterase-5 inhibitors treatment of choice