بسمه تعالی

بیمار آقای 55 ساله که با شکایت اختلالت جنسی به درمانگاه پزشکی خانواده مراجعه کرده است.از 4 ماه قبل دچار کاهش میل جنسی و اختلال نعوظ شده است.به دلیل مشکلات شغلی در این مدت دچار اضطراب و افسردگی شده و تحت درمان با فلوکستین می باشد.سابقه ابتلا به دیابت از 10 سال قبل می دهد.به توصیه دوستانش تریاک مصرف کرده که تاثیر نداشته است.یک دارو از تبلیغات ماهواره با قیمت بالا خریداری کرده که مقداری در ابتدا تاثیر داشته اما به تدریج آن هم اثر خود را از دست داده است.

متاهل می باشد و دارای 2 فرزند است.روابط جنسی خارج از خانواده نداشته است.

متفورمین 500 میلی گرم روزانه 2 عدد و فلوکستین 20 میلی گرم روزانه 2 عدد مصرف می کند.

از 10سال قبل سیگار مصرف میکند.مصرف تریاک هم دارد.

W=90KG , L=172 CM ,BMI=30.50

معاینه قلب و ریه نرمال می باشد.شکم نرم است تندرنس ندارد.معاینه بیضه ها واریکوسل گرید 2 دارد.

BP=140/95,RR=16,T=36.5,PR=78

• در آزمایشات انجام شده:

• CBC
HB=14,MCV=88,BUN=12,CR=0.7,FBS=130,A1C=8,TG=220,CH=230,HDL=30,LDL=15
TSH=2.5,TESTOSTRON=2.3,PROLACTIN=10,PSA=2.3

• Problem list

• -آقای 55 ساله متاهل دارای 2 فرزند و یک همسر

• -مشکل کاهش میل جنسی و اختلال نعوظ از 4 ماه قبل

- اضطراب و افسردگی به دلیل مشکلات کاری و وضع مالی پیدا کرده است.

• -دیابت و افسردگی دارد و تحت درمان با متفورمین و فلوکستین می باشد

Treatment of male sexual dysfunction

استاد راهنما:

آقای دکتر طاوسیان-متخصص اورولوژی عضو هییت علمی گروه اورولوژی دانشگاه تهران

ارایه دهنده:

دکتر اسمی

دستیار سال اول پزشکی خانواده

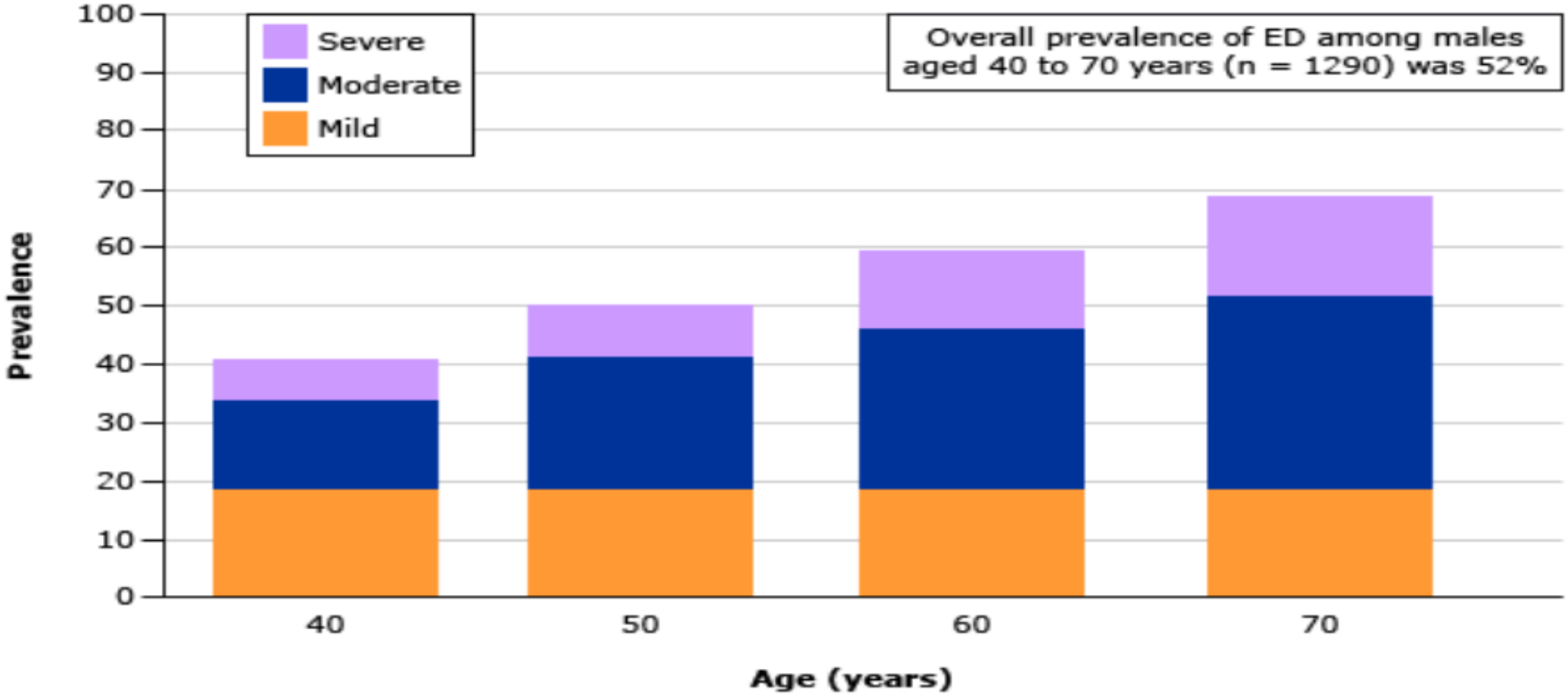
Treatment of male sexual dysfunction

- INTRODUCTION
- Three of the most common male sexual dysfunctions are decreased libido, erectile dysfunction (ED), and ejaculatory dysfunction (including premature ejaculation [PE] in men ages 18 to 59 years).

- ED is common in men with systemic disorders such as hypertension, ischemic heart disease, and diabetes mellitus, and its prevalence increases with age

- GENERAL PRINCIPLES
- sustain penile erections and treating premature ejaculation (PE)
- .

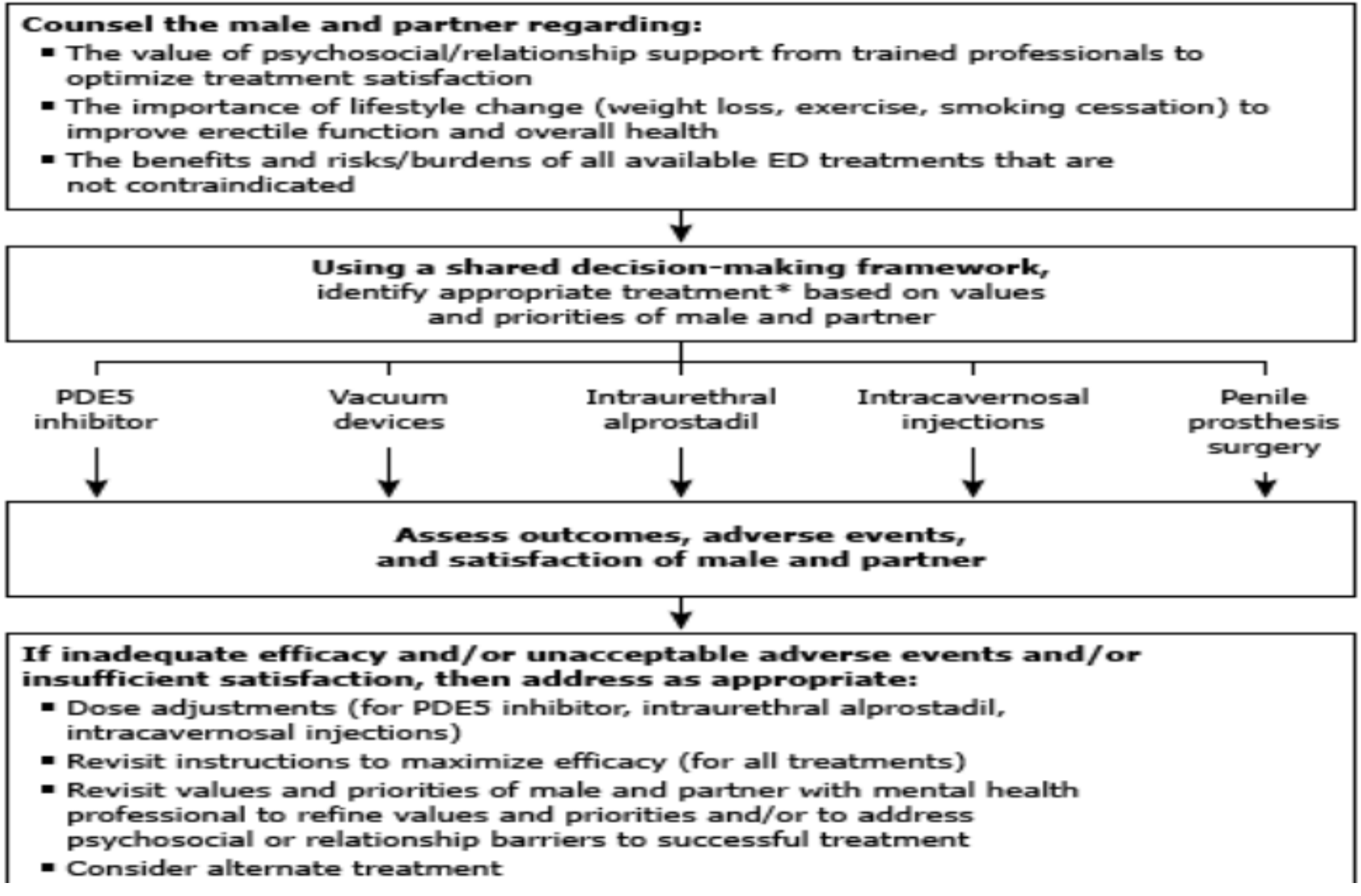
Prevalence and severity of ED in the Massachusetts Male Aging Study (MMAS)



Etiologies of erectile dysfunction [1-3]

Vascular	Cardiovascular disease, hypertension, diabetes mellitus, hyperlipidemia, smoking, major surgery (radical prostatectomy) or radiotherapy (pelvis or retroperitoneum)
Neurologic	Spinal cord and brain injuries, Parkinson disease, Alzheimer disease, multiple sclerosis, stroke, major surgery (radical prostatectomy) or radiotherapy of the prostate
Local penile (cavernous) factors	Peyronie's disease, cavernous fibrosis, penile fracture
Hormonal	Hypogonadism, hyperprolactinemia, hyper- and hypothyroidism, hyper- and hypocortisolism
Drug induced	Antihypertensives, antidepressants, antipsychotics, antiandrogens, recreational drugs, alcohol
Psychogenic	Performance-related anxiety, traumatic past experiences, relationship problems, anxiety, depression, stress

Approach to the management of the patient with erectile dysfunction



- DECREASED LIBIDO
- Psychological , Low testosterone, Medications, use opioids , Partner interactions.
- ERECTILE DYSFUNCTION
- Identify etiology(including drugs such as antidepressants or antihypertensive agent)
- Cardiovascular risk factors
- Initiating medical therapy
- Men with hypogonadism
- Treatment if PDE5 inhibitors are ineffective
- Surgery
- Men with depression or anxiety
- Men with cardiovascular disease or risks
- Lifestyle changes
- weight loss, physical activity

Cardiovascular risk stratification in males with erectile dysfunction [1,2]

Low-risk category	Intermediate-risk category	High-risk category
Asymptomatic, < 3 risk factors for CAD (excluding sex)	≥ 3 risk factors for CAD (excluding sex)	High-risk arrhythmias
	Mild or moderate, stable angina	Unstable or refractory angina
	Previous (> 6 to 8 week) or recent (2 to 6 week) MI	Recent (< 2 week) MI
LVD/CHF (NYHA class I or II)	LVD/CHF (NYHA class III)	LVD/CHF (NYHA class IV)
Post-successful coronary revascularization	Noncardiac sequelae of atherosclerotic disease (eg, stroke, peripheral vascular disease)	Hypertrophic obstructive and other cardiomyopathies
Controlled hypertension		Uncontrolled hypertension
Mild valvular disease		Moderate-to-severe valvular disease

- phosphodiesterase-5 inhibitors
- Sildenafil, vardenafil, tadalafil, and avanafil

- • For initial therapy of ED, we recommend the PDE٥ inhibitors because of their efficacy, ease of use, and favorable side-effect profile.

• sildenafil should be taken orally on an empty stomach approximately one hour before a planned sexual encounter (٥٠mg)

- • Vardenafil is also effective for men with ED due to diabetes mellitus or nerve-sparing radical prostatectomy(١٠and ٢٠mg dose), rapid onset of action and is effective when taken in the fed state

Oral treatments for male sexual dysfunction

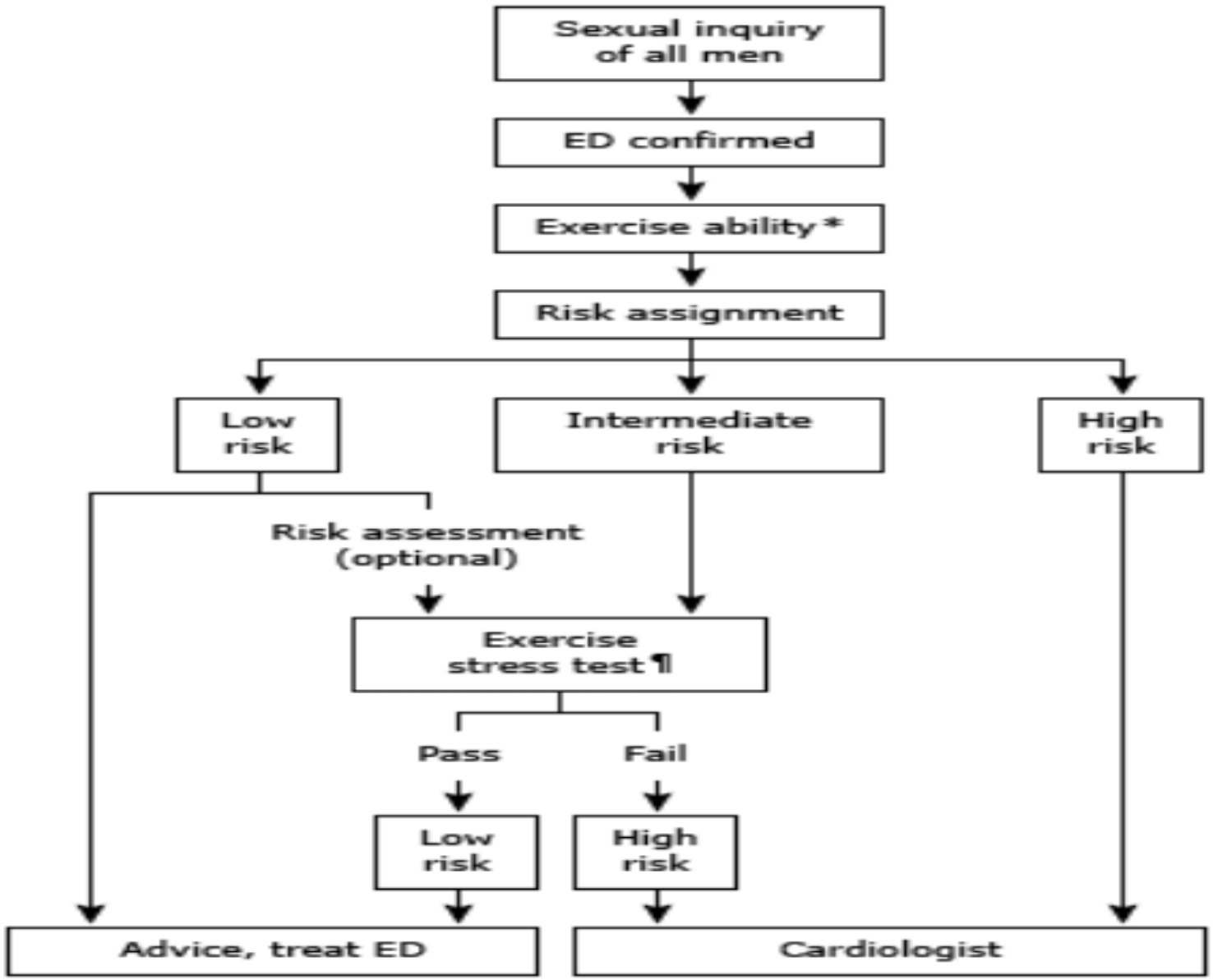
Medication	Mechanism and clinical use	Adverse effects and precautions	Drug interactions*	Usual dosing¶
Phosphodiesterase type 5 (PDE5) inhibitors				
Sildenafil	Inhibits enzyme phosphodiesterase 5, allowing cyclic GMP to accumulate within penis. Effective for as-needed treatment of organic, psychogenic, or mixed type ED.	Applies to **all** PDE5 inhibitors: ▪ Headaches, dyspepsia, vasodilation, diarrhea, rhinitis, epistaxis, blue tinge to vision, other visual disturbances. ▪ **Contraindicated if using nitrates or riociguat**Δ due to risk of severe hypotension and syncope. ▪ Co-administration with alpha-1 blockers may cause symptomatic hypotension. If co-administered, we suggest first stabilizing patient on alpha-1 blocker dose prior to starting PDE5 inhibitor at a reduced dose. Tamsulosin and silodosin may be better tolerated than other alpha-1 blockers. ▪ Safety is uncertain in patients with severe renal or hepatic impairment, coagulopathy, hypotension, unstable or advanced cardiovascular disease, or retinal disorders◊.	Sildenafil is metabolized by CYP3A4. Strong inhibitors of CYP3A4 (eg, protease inhibitors§, systemic-azole antifungals, certain macrolide antibiotics) elevate sildenafil concentrations. Inducers of CYP3A4 may reduce sildenafil concentrations. A list of CYP3A4 inhibitors and inducers is provided in a separate table*. We suggest avoidance of large amounts of grapefruit and its juice (a CYP3A4 inhibitor) and alcohol which may enhance hypotensive effect. Use with nitrates or guanylate cyclase stimulators (eg, riociguat) is contraindicated (refer to adverse effects/precautions in this table and accompanying text)	Taken one hour before sex and effective up to four hours. Dose: 50 to 100 mg on empty stomach. Administration with a high-fat meal may delay absorption. A reduced dose of 25 mg is recommended if coadministered with a strong inhibitor of CYP3A4 or an alpha-1 blocker and in patients with renal impairment (Crcl < 30 mL/minute) or moderate hepatic impairment¶. Applies to **all** PDE5 inhibitors: Stimulation needed for erection.
Vardenafil	Same as sildenafil.	Similar efficacy, adverse effects, and precautions to sildenafil, EXCEPT visual color distortions reported much less frequently◊. Use not recommended in hemodialysis or severe hepatic impairment.	Same as sildenafil.	Similar onset and duration of action as sildenafil. Dose: 10 to 20 mg on empty stomach about 60 minutes before sexual activity. Patients ≥ 65 years old: 5 mg initially. Orally disintegrating tablet (ODT): 10 mg on empty stomach (no titration). Administration with a high-fat meal may delay absorption.

					A reduced dose of 2.5 or 5 mg is recommended if coadministered with a strong inhibitor of CYP3A4 or an alpha-1 blocker, respectively*. Dose adjustment for moderate hepatic impairment needed[¶].
	Tadalafil	Similar onset of action as sildenafil. Duration of action up to 36 hours. Effective for as-needed or daily treatment of organic, psychogenic, or mixed type ED.	Similar efficacy, side effects, and precautions to sildenafil, EXCEPT visual color distortions reported much less frequently[◊]. Daily use not recommended in severe renal or hepatic impairment.	Same as sildenafil.	Tadalafil has a much longer duration of action than sildenafil. Dose for as-needed treatment: 10 to 20 mg about 60 minutes before sexual activity. 10 mg not more than once every 72 hours is recommended if coadministered with a strong inhibitor of CYP3A4. Dose adjustment for renal or hepatic impairment is necessary when used as-needed[¶]. **or** Daily treatment: 2.5 to 5 mg once
	Avanafil	Onset of action of 15 to 30 minutes is more rapid than sildenafil.	Similar efficacy, adverse effects, and precautions to sildenafil, EXCEPT visual color distortions reported much less frequently[◊]. Use not recommended in severe renal or hepatic impairment.	Same as sildenafil, EXCEPT use of avanafil with medications that are strong inhibitors of CYP3A4 is not recommended. A list of strong inhibitors of CYP3A4 (to be **avoided** with avanafil) is provided separately*. Grapefruit and grapefruit juice should be avoided within 24 hours of use.	100 to 200 mg as early as 15 minutes before sexual activity. Administration with a high-fa meal may delay absorption. A reduced dose of 50 mg is recommended i coadministered with an alpha-1 blocker or moderate inhibitor o CYP3A4*. 50 mg dose should be taken about 30 minutes before sexua activity.

- • Tadalafil has a different chemical structure, longer duration of action (2.5 , 5mg)
-
- • Daily tadalafil may be particularly effective in men with "complete" ED
-
  • Daily dosing of tadalafil should not be prescribed in men with a creatinine clearance <٣٠mL/min
-
  • Daily tadalafil also has been approved for treatment of lower urinary tract symptoms (LUTS) due to benign prostatic hyperplasia (BPH)

• Avanafil is the only PDE ٥inhibitor approved for -١٥ minute onset of action and absorption is not significantly impacted by food

Estimate of CV risk with sexual activity: Princeton III Consensus recommendations



Clinical clues to causes of erectile dysfunction

Finding	Cause
Rapid onset	Psychogenic
	Genitourinary trauma (eg, radical prostatectomy)
Nonsustained erection	Anxiety
	Venous leak
Depression or use of certain drugs	Depression
	Drug induced
Complete loss of nocturnal erections	Vascular disease
	Neurologic disease

Adverse effects and precautions

Cardiovascular

Common side effect

Visual effects (Blue vision)

More serious eye effects

Men with retinitis pigmentosa

Hearing loss

Role of testosterone

an important regulator of sexual desire and sexual function in men.

Other issues

Men with diabetes - Recreational use-Dietary supplements and counterfeit medications

Vacuum-assisted erection devices

applied for a maximum of 30 minutes

create erections in as many as 60 to 70 percent of patient

Penile self-injection

Intracavernosal injection therapy with alprostadil (prostaglandin E1) and papaverine

Intraurethral alprostadil

Surgical options

Penile revascularization

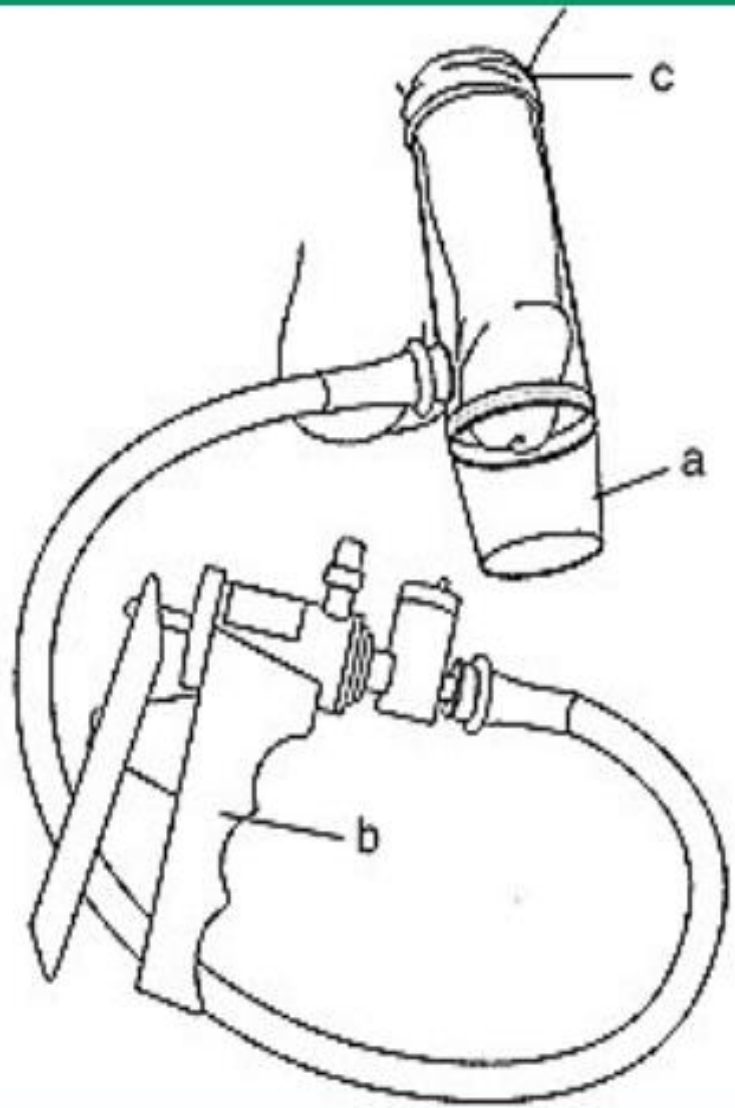
Therapies for psychogenic ED

Psychotherapy-Yohimbine

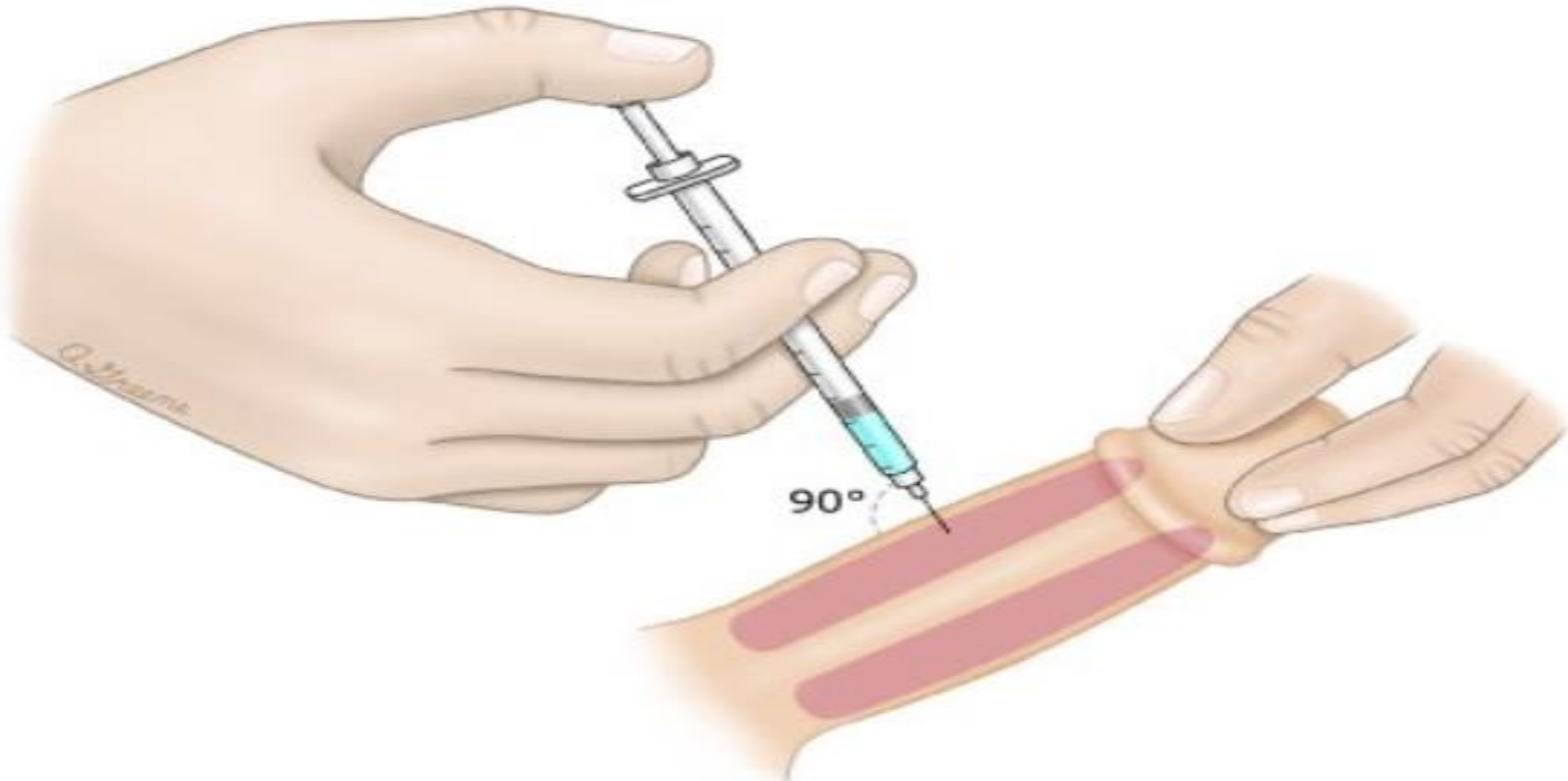
Regerative and restorative therapies

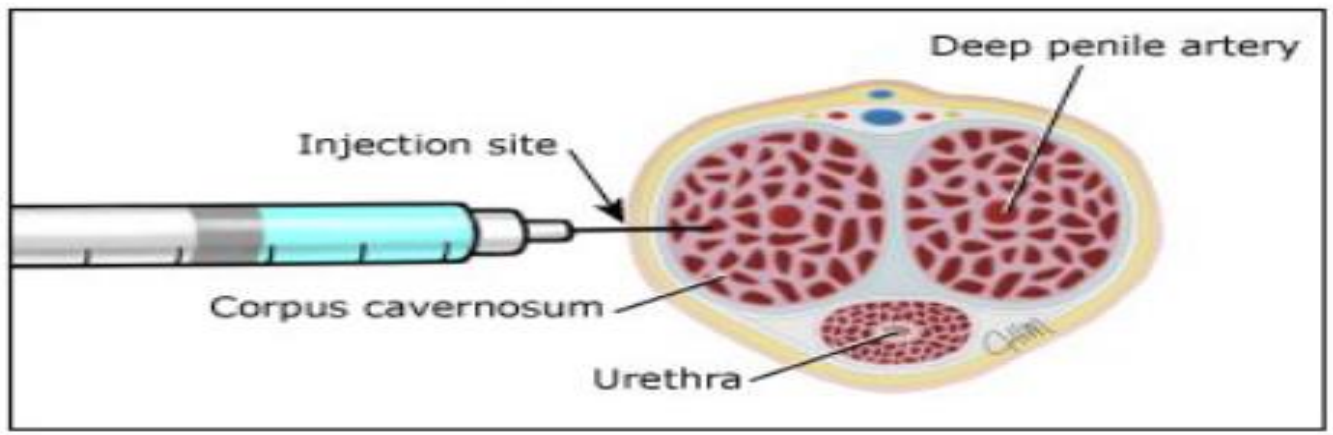
Stem cell therapy -low-intensity shock therapy (LIST)-Hyperbaric oxygen therapy-Platelet-rich plasma (PRP)

Vacuum constrictor device



Method of administering intrapenile injection





EJACULATORY DISORDERS

Premature ejaculation –

(1) brief ejaculatory latency

(2) loss of control

(3) psychological distress in the patient and/or partner.

We consider SSRIs to be first-line treatment.

clomipramine (12.5 to 50 mg/day) to be second-line therapy.

Phosphodiesterase (PDE) inhibitors

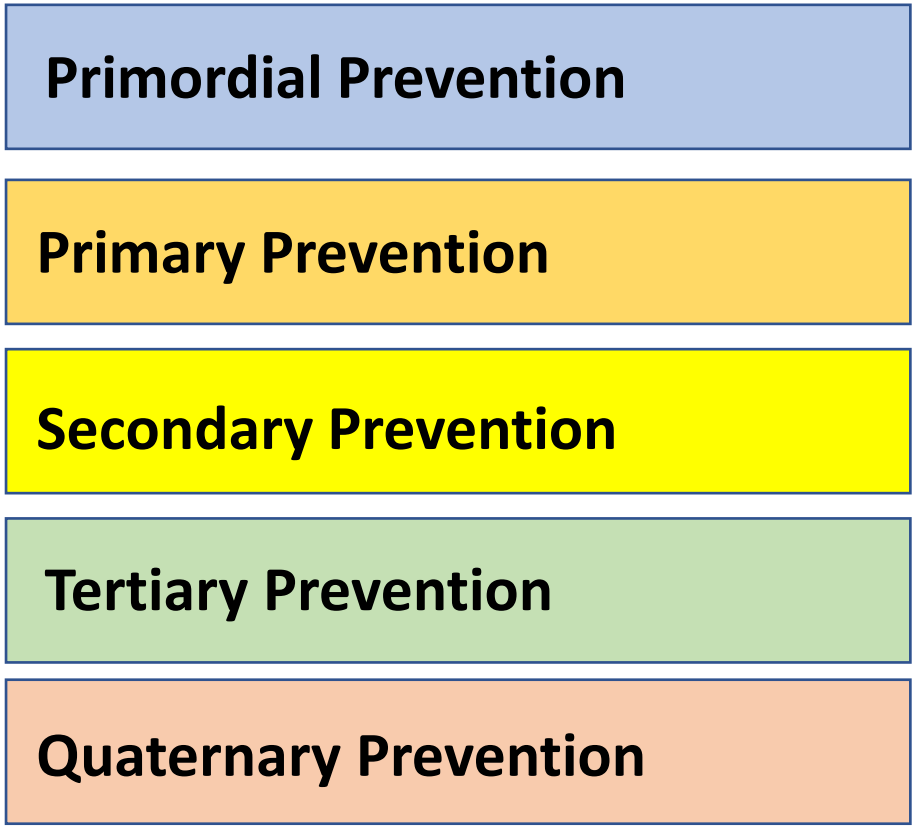
Tramadol

Topical anesthetics

Behavioral and psychological therapies

Combined pharmacologic and behavioral treatment

- SUMMARY AND RECOMMENDATIONS
- Erectile dysfunction
- Identify cardiovascular risk factors
- Use of PDE5 inhibitors
- Use with nitrates
- Other treatment options
- Vacuum device
- Penile prosthesis
- Testosterone therapy
- Men with psychogenic ED
- Men with PE


Primordial Prevention
Primary Prevention
Secondary Prevention
Tertiary Prevention
Quaternary Prevention

Primordial Prevention

- ۱- اقدام در خصوص ترویج سبک زندگی سالم
- ۲- آموزش در خصوص تشکیل پرونده الکترونیک سلامت جهت تمامی آحاد جمعیت کشور و ارزش و اهمیت انجام مراقبتهای لازم در هر گروه سنی
- ۳- آموزش های لازم در سطح ملی برای آشنایی با علایم بیماری ریسک فاکتورها
- ۴-برگزاری جلسات هماهنگی در سطح کابینه دولت و وزارت بهداشت جهت تامین شرایط لازم برای سلامت مردان

Primary Prevention

۱- انجام مراقبتهای دوره ای در هرگروه سنی حسب مورد
۲- شناسایی افراد پر خطر و در معرض ریسک جهت توصیه های لازم بهداشتی در خصوص کنترل وزن انجام فعالیت بدنی و سبک زندگی سالم و ترک سیگار و الکل درمان بیماریهای همراهی که امکان و ریسک ایجاد موارد مثبت را میکند.آموزش در خصوص مضرات مصرف مواد مخدر و اثرات نامطلوبی که به تدریج بر قوای جنسی مردان خوهند گذاشت.

۳- آموزش سبک زندگی سالم و افزایش فعالیت بدنی حداقل ۳۰ دقیقه در روز

۴-دعوت از آقایان جهت انجام مشاوره های روانشناختی در مراکز بهداشت توسط کارشناسان بهداشت روان و ارجاع به روانپزشک در صورت لازم و پیگیری درمان بیماریهایی مانند افسردگی و اضطراب به صورت صحیح.

۵-آموزش عمومی در خصوص داروها و محصولاتی که در بازار یا رسانه ها تحت عناوین مختلف برای درمان اختلالات جنسی تبلیغ می شوند.

Secondary Prevention

1- بیماریابی بموقع در جمعیت در معرض ریسک و انجام اقدامات تستهای بیمار یابی و تشخیصی

۲- غربالگری کوموربیدتی های زمینه ای

۳-برقراری ارتباط موثر با جمعیت تحت پوشش جهت شناسایی بیماریهای جنسی.

۴-تسلط به تکنیکهای مصاحبه های روانشناختی و آموزش آن به پزشکان و مراقبان سلامت جهت کشف به موقع اختلالات.

Tertiary Prevention

- 1- درمان بموقع و مقتضی براساس آخرین و جدیدترین مطالعات
- 2- درمان کوموربیدیتی های همراه واقدامات پیشگیرانه جهت کنترل بیماری
- 3-مراقبت و مونیتورینگ بموقع بیماران
- 4-ارجاع بیماران به مراکز ترک اعتیاد جهت درمان مناسب و قطعی
- 5-کشف و شناسایی مراکز و سایتهایی که وسایل و داروهای مربوط به اختلالات جنسی را خارج از ضوابط وزارت بهداشت و به قصد سود جویی عرضه می کنند.

Quaternary Prevention

- 1- مونیتورینگ و فالواپ بموقع بیماران و ارایه خدمات درمانی مقتضی
- 2- عدم انجام اقدامات پاراکلینیکی و دارویی که تاثیر خاصی بر پیش آگهی و عوارض بیماری ندارد
- 3-درخواست آزمایش و یا تجویز لوازم کمک کننده به درمان بیماران بر اساس منابع علمی
- 4-بررسی عوارض داروهای تجویزی به بیماران و پیگیری منظم آنها