

Male Sexual Function Dysfunction and Management



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Men and Sex



**Women need a reason to have sex;
men just need a place.**

Master of its own mind

- ❑ The penis does not obey the order of its master, who tries to erect or shrink it at will, whereas instead the penis erects freely while its master is asleep
- ❑ The penis must be said to have its own mind

Leonardo Da Vinci

Male sexual function

- ❑ Libido
- ❑ Arousal
- ❑ Erection
- ❑ Climax
- ❑ Ejaculation

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Libido

- ❑ Sexual desire or libido may be defined as a person's interest in initiating or having sexual intimacy
- ❑ Testosterone is the most commonly studied hormone involved with sexuality. It plays a key role in sexual arousal in males, with strong effects on central arousal mechanisms and libido

Male sexual function

- Libido
- **Arousal**
- Erection
- Climax
- Ejaculation

Arousal

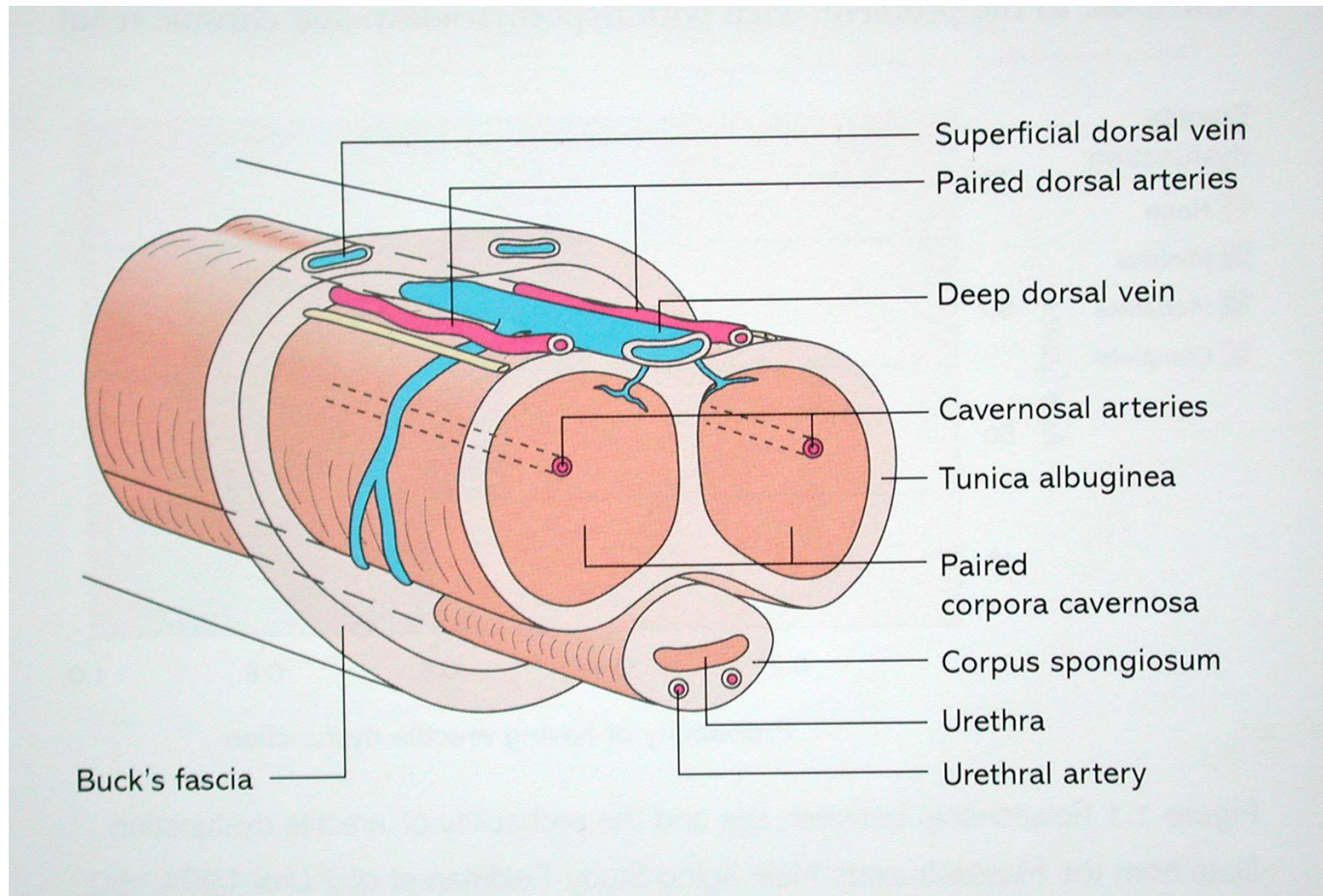
- ❑ Sex is all in the head
- ❑ Brain controls most of the phases of receiving and analysing, arousal stimuli
- ❑ Physiological responses also initiated by central mechanisms



Male sexual function

- Libido
- Arousal
- **Erection**
- Climax
- Ejaculation

Anatomy and Physiology of erection

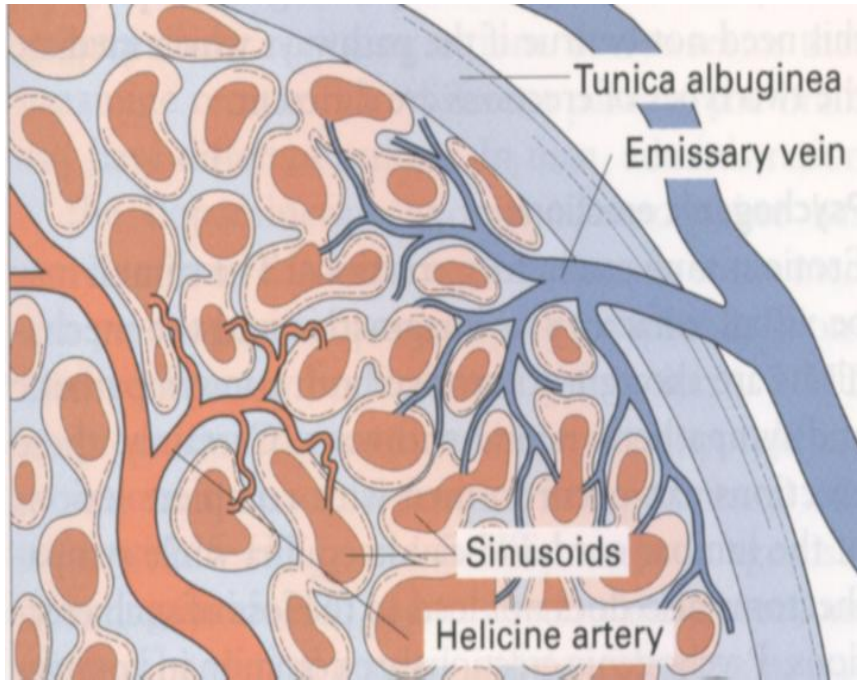


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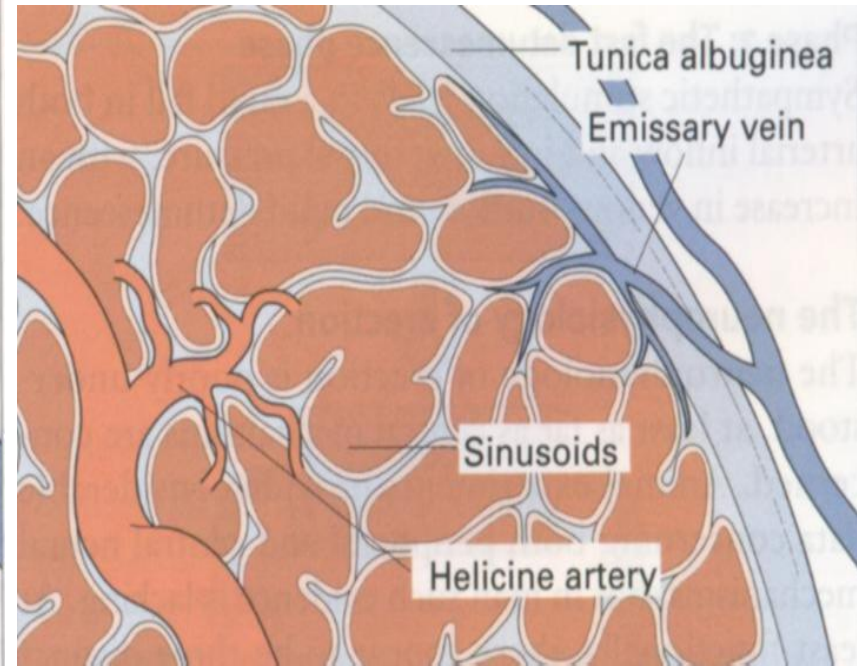
Mechanism of Erection

- ❑ Increased **arterial inflow** to penis
- ❑ **Filling of sinusoids** of the corpora cavernosa, aided by relaxation of cavernosal smooth muscle (CSM)
- ❑ Passive **occlusion** of the **venous plexus** provides increased resistance to outflow and aids rigidity

Mechanism of erection

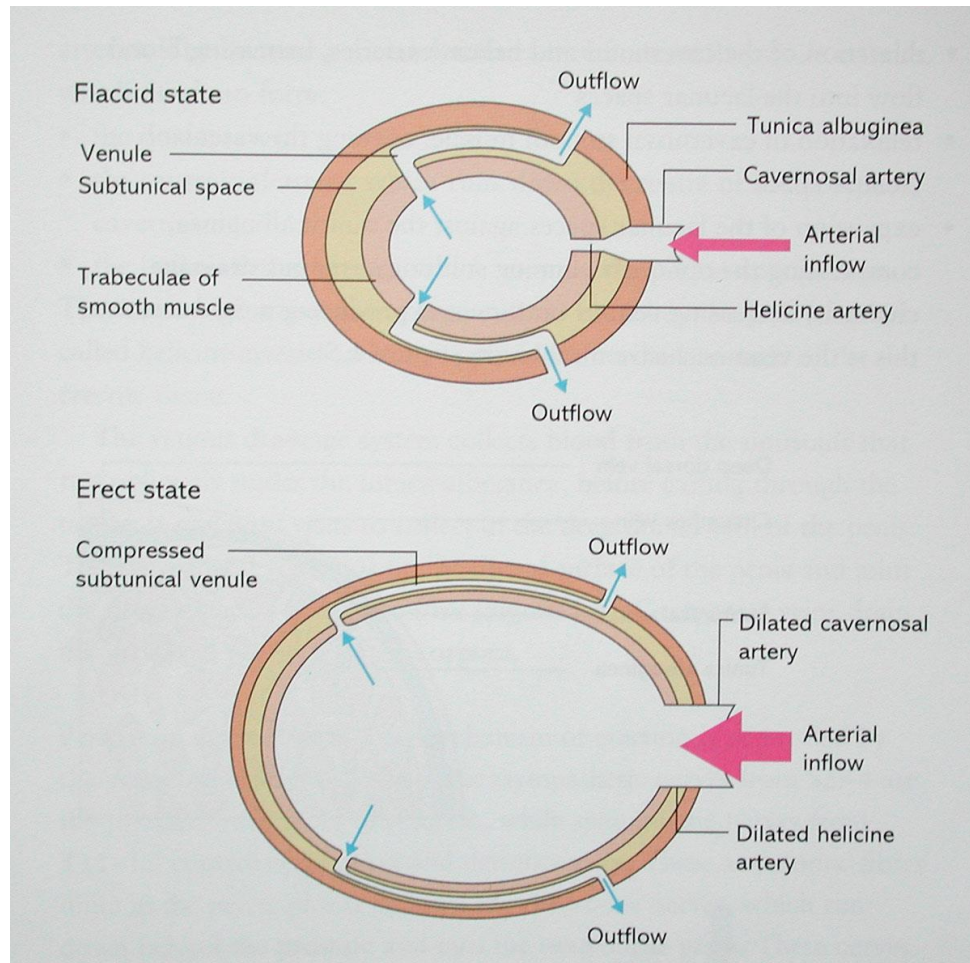


Flaccid



Erect

Veno-occlusive Mechanism



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Anatomy and Physiology of erection

- ❑ Parasympathetic nerves S2-4 mediate erection
- ❑ Sympathetic nerves T11-L2 control ejaculation and detumescence
- ❑ NANC pathway through release of NO
- ❑ Final step- Cavernosal Smooth muscle relaxation
 - Nitric oxide diffuses into cavernosal smooth muscle cells, activates Guanylate cyclase converts GTP to cGMP resulting in smooth muscle relaxation.

Endoth. Parasymp. Nerve Endings Sympth.

eNOS nNOS NO VIP, ACh, CGRP NE

CSM Membrane

Guanylate Cyclase Adenylate Cyclase

GTP 3'5'cGMP 3'5'cAMP ATP

Sildenafil → PDE-5

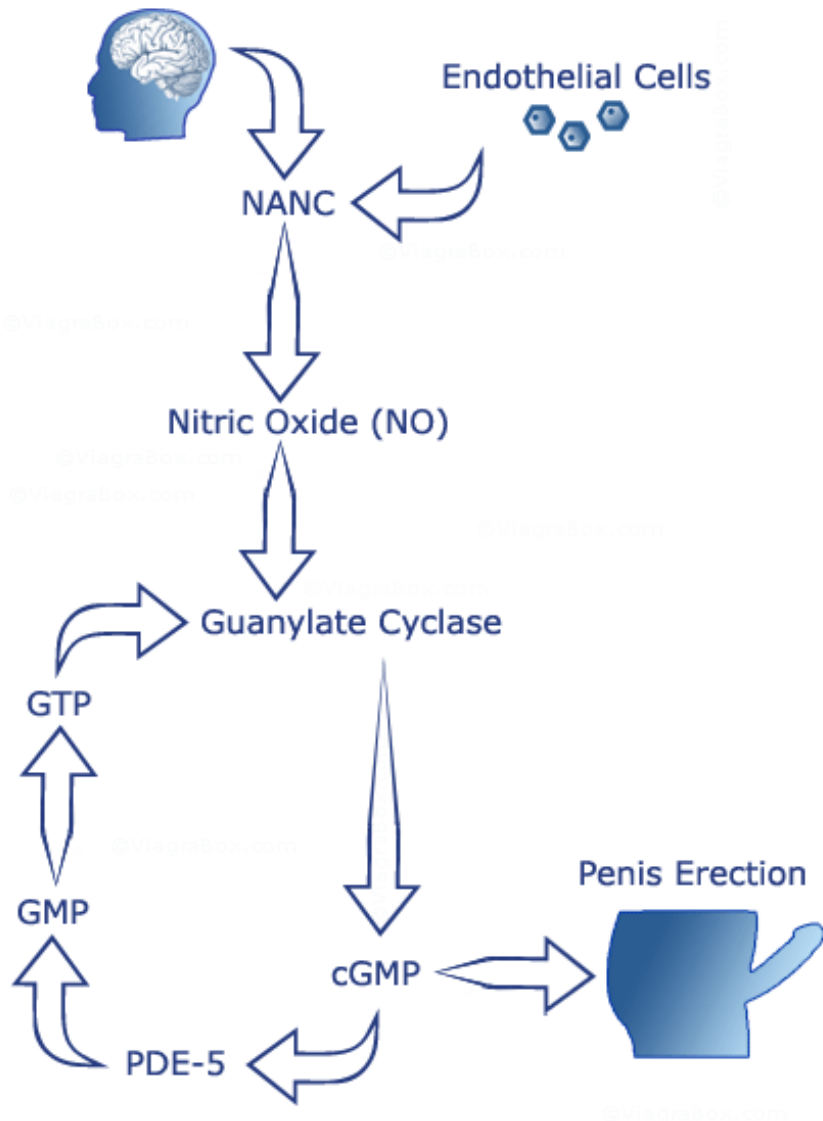
PDE-3,4

5'GMP

↓ intracellular Ca⁺⁺ ⇒ CSM Relaxation

5'AMP

CSM Contraction



- Nitric oxide diffuses into cavernosal smooth muscle cells, activates Guanylate cyclase converts GTP to cGMP resulting in smooth muscle relaxation.
- Effect of cGMP stopped by Phosphodiesterase type 5 which exists primarily in corpora cavernosa

Male sexual function

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Neurotransmitters facilitating orgasm and ejaculation

- ❑ Climax and Ejaculation is facilitated by
 - Rise in dopamine
 - Inhibition of serotonin

Ejaculation

- ❑ Ejaculation is a complex process controlled by a spinal reflex triggered by tactile stimulation of mechanoreceptors within the penis.
- ❑ Sympathetic efferent fibers (T10-L3) trigger the two phases of ejaculation—1) emission and 2) expulsion—through contraction of the penile musculature.

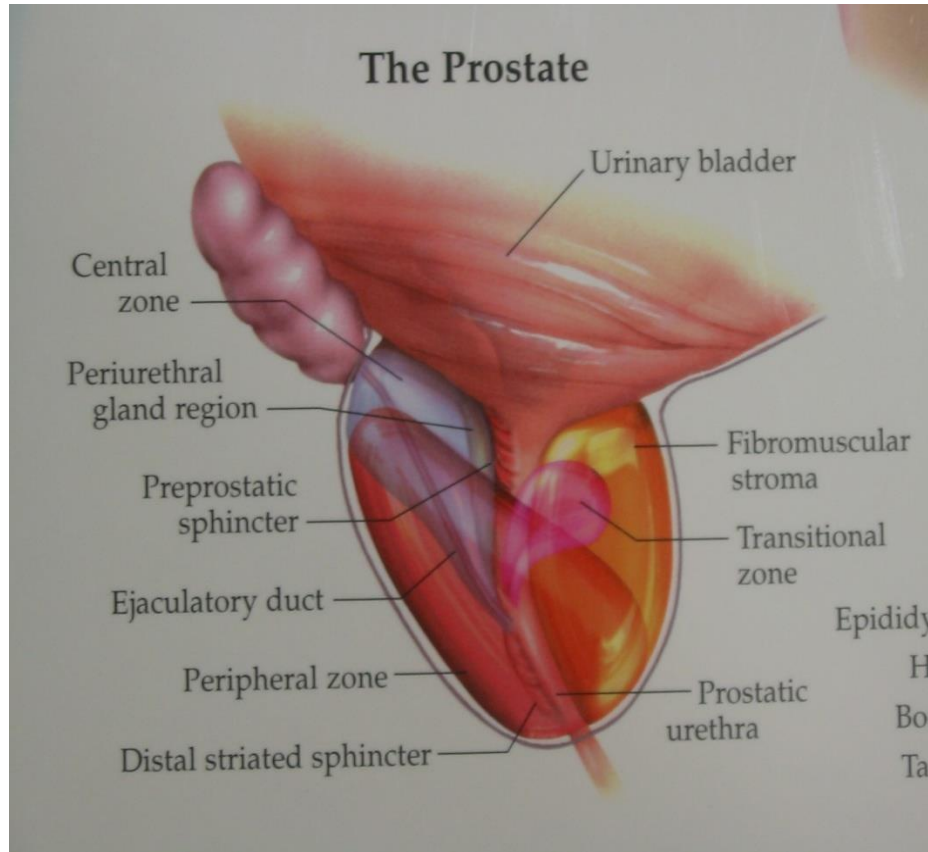
Closure of bladder neck

- ❑ During the expulsive phase, it is necessary that the bladder neck (internal urethral sphincter) be closed to prevent the reflux of semen into the bladder as the urethral pressure increases
- ❑ Closure of the bladder neck is also under sympathetic control

Phases of ejaculation

- ❑ Climax – reaching orgasm
- ❑ Three phases of ejaculation
- ❑ Phase - 1 : Emission
- ❑ Phase - 2 : Bladder neck closure
- ❑ Phase – 3 : Antegrade propulsion

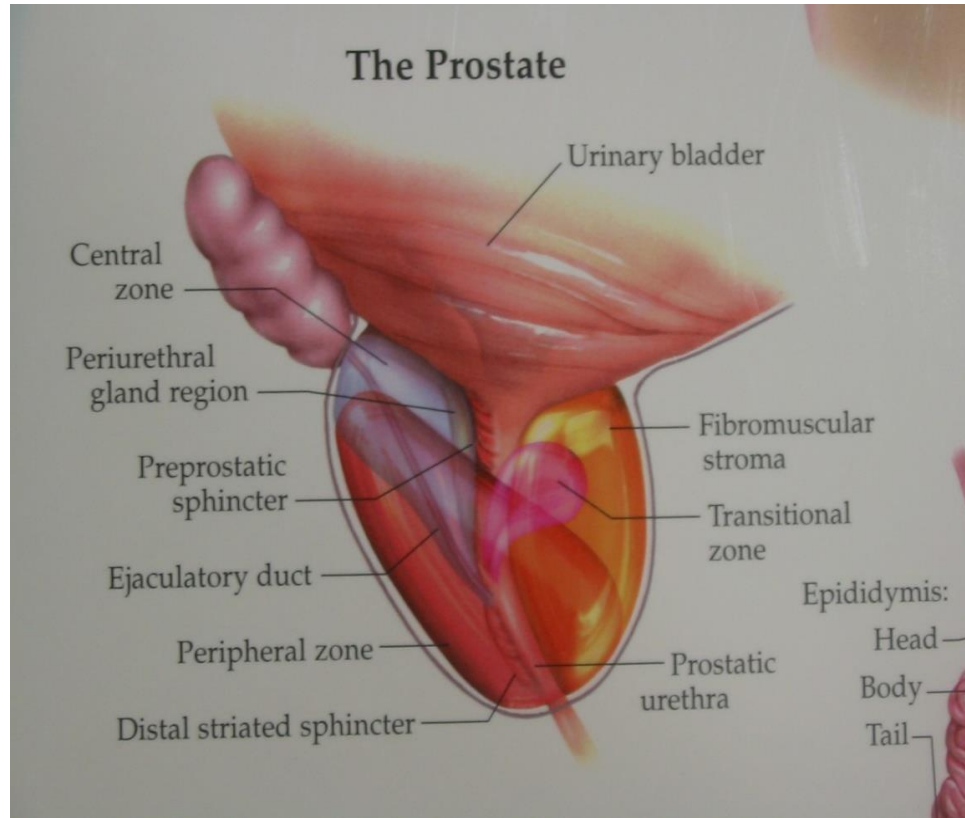
Three Phases of Ejaculation



Phase 1: Emission

S.V. and vas contract depositing sperm in post urethra

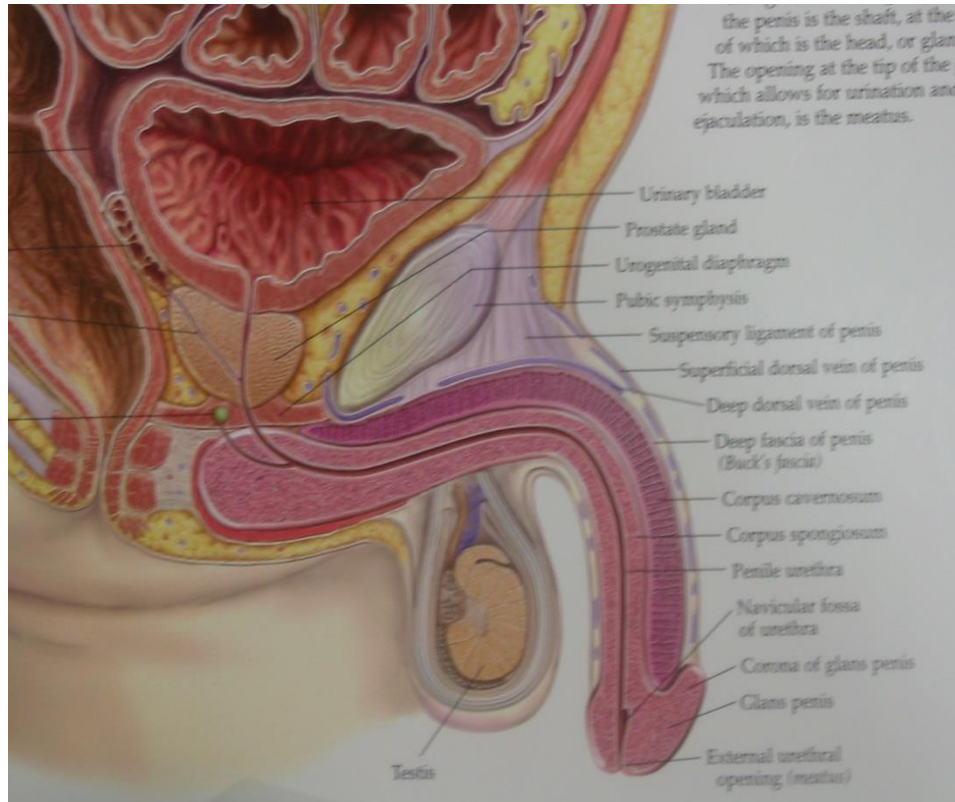
Three Phases of Ejaculation



Phase 2: Closure of bladder neck

Prevents retrograde ejaculation

Three Phases of Ejaculation



Phase 3: Antegrade propulsion

By rhythmic contraction of BCM

Male sexual function

- ❑ Decreased libido
- ❑ Lack of Arousal
- ❑ Erectile dysfunction
- ❑ Failure to climax
- ❑ Ejaculatory disturbance
- ❑ Priapism

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Sexual History

Libido

“Do you feel the desire for sex”

Distinguish low libido v/s ED

Current frequency of IC

Low libido secondary to ED?

? Masturbation

Libido –Global rather than situational

Libido disorder

- ❑ Depression
- ❑ Work pressures & fatigue
- ❑ Marital stress
- ❑ Low testosterone
- ❑ Hyperprolactinemia

Sexual History

Arousal

- ❑ “Do you find your partner physically attractive?”
- ❑ Other partners
- ❑ Sexual orientation
 - “Fantasy during masturbation”
 - “Childhood encounters?”
 - Fetish
 - Paraphilia
- ❑ Low Arousal maybe situational not necessarily global

What is Erectile Dysfunction

- ❑ Synonym: Impotence
- ❑ Inability to attain and maintain an erection sufficient for satisfactory sexual performance

Epidemiology

- ❑ Incidence and prevalence is high worldwide
- ❑ Effects up to 52% of men (40-70yrs)



Risk factors

- ❑ Sedentary lifestyle
- ❑ Obesity
- ❑ Smoking
- ❑ Hypercholesterolaemia
- ❑ Diabetes mellitus
- ❑ Hypertension
- ❑ Metabolic syndrome

Tobacco and ED

WARNING: TOBACCO USE CAN MAKE YOU IMPOTENT

Cigarettes may cause sexual impotence due to decreased blood flow to the penis. This can prevent you from having an erection.

Health Canada



Psychogenic

Organic

- ❑ Vasculogenic
- ❑ Neurogenic
- ❑ Hormonal
- ❑ Anatomical
- ❑ Drugs

| History suggesting psychogenic cause | History suggesting organic cause |
|--|---|
| <ul style="list-style-type: none">• Sudden onset• Early collapse of erection• Self stimulated or waking erections• Premature ejaculation or inability to ejaculate• Problems/change in relationship• Major life event• Psychological problem | <ul style="list-style-type: none">• Gradual onset• Normal ejaculation• Normal libido• Medical risk factor• Trauma/surgery/radiotherapy to pelvis• Current medication• Lifestyle |

Psychogenic Causes

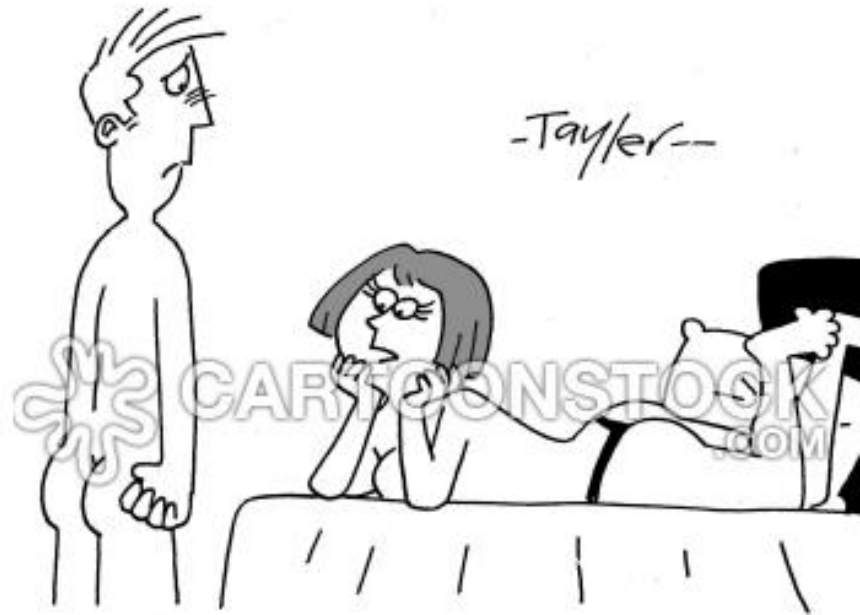
- ❑ General (disorders of intimacy, lack of arousability)
- ❑ Situational (partner, performance, stress)
- ❑ Psychiatric illness (Anxiety states, depression, psychosis, alcoholism)

Neurogenic causes of ED

- ❑ Lesions of medial preoptic nucleus, paraventricular nucleus, hippocampus
- ❑ Spinal trauma
- ❑ Myelodysplasia (spina bifida)
- ❑ Pelvic surgery/radiotherapy
- ❑ Multiple sclerosis
- ❑ Intervertebral disc lesion
- ❑ Peripheral neuropathies
 - Alcohol
 - Diabetes
 - HIV

Hormonal causes

- ❑ Hypogonadism
- ❑ Hyperprolactinaemia
- ❑ Thyroid disease
- ❑ Cushing's disease



" ! GUESS I MUST BE THE EARLY BIRD "

Drugs

- ❑ Antihypertensives (Beta blockers, Diuretics)
- ❑ Antidepressants (Tricyclic and SSRIs)
- ❑ Antipsychotics (Phenothiazines, Risperidone)
- ❑ Anticonvulsants (Phenytoin, Carbamazepine)
- ❑ Antihistamines
- ❑ H2 antagonists (Cimetidine, Ranitidine)
- ❑ Recreational drugs (Inc tobacco and Alcohol)

Assessment of the patient with E.D.

- ❑ Careful History
- ❑ Examination
- ❑ Further investigations

Points to note in the initial history

- ❑ Duration: insidious or acute onset
- ❑ Absence of erections or diminished quality
- ❑ Penetrative SI possible? Able to masturbate? Early morning erections?
- ❑ Libido normal, or decreased
- ❑ Pain or curvature of erection (?Peyronie's disease)
- ❑ Related psychosocial factors

Taking a history

- ❑ Take an understanding approach
- ❑ Sexual history – International Index of Erectile Function questionnaire (IIEF)
- ❑ Current and Past sexual partners
- ❑ Current emotional state
- ❑ Erectile symptoms (onset and duration)
- ❑ Previous problems, advice and treatments
- ❑ Quality of erections (erotic and morning)
- ❑ Arousal, ejaculation and orgasm difficulties
- ❑ General medical/past medical history and medications

Evaluation of E.D.

- ❑ Pragmatic approach best, based upon available treatments
- ❑ Sildenafil office test (S.O.T)
- ❑ Diagnostic intracavernosal injection (ICIVAD)
- ❑ Normal erection suggests normal vascular dynamics, and precludes further investigation
- ❑ Poor, or absent, erectile response may be followed by investigations in certain circumstances

Lab evaluation

- ❑ FBS/PPBS
- ❑ Lipid profile
- ❑ Serum Prolactin/TSH
- ❑ Urinalysis

Role of Hormone evaluation

- ❑ Testosterone affects secondary sex characteristics; effects on erections unclear - If libido is reduced, testosterone should be measured
- ❑ Testosterone declines with ageing, importance in ageing man with ED

Cardiac evaluation

- ❑ ED often the first indicator of significant cardiac disease
- ❑ Marker of vascular endothelial disease especially if organic in nature
- ❑ Not mandatory for use of medical therapy

Other tests

- ❑ Penile doppler
- ❑ Rigiscan(NPT)
- ❑ MR angiography
- ❑ Penile biothesiometry
- ❑ Dynamic infusion cavernosometry
- ❑ Corpus cavernosometry

Quick diagnosis of ED

- ❑ History and physical exam
- ❑ Sugar and lipid profile
- ❑ SOT
- ❑ If fails, ICIVAD
- ❑ If fails, further evaluation

Myths surrounding E.D.

- ❑ “Nothing can be done”
- ❑ “It’s to be expected at my age, isn’t it?”
- ❑ “Do you think it’s all in my mind doctor?”



Use it or lose it!

More erections = increased normoxia

Increased PGE and cAMP

Decreased TGF-B

?? decrease fibrosis already present



"I've been replaced by a computer at work and a vibrator at home."

Treatment

- ❑ General Measures
- ❑ Psychosexual counselling
- ❑ Oral medication
- ❑ +/- TRT if Ageing male with LOH
- ❑ Home self injection therapy of VAD
- ❑ Vacuum Device
- ❑ Penile Prosthesis Surgery
- ❑ Other methods: MUSE, Revascularisation surgery, venous ligation surgery, SWT

Management

- ❑ Main goal: diagnose and treat underlying cause
- ❑ Modify reversible causes (lifestyle, drugs).
- ❑ Men who initiated physical exercise and weight loss have upto 70% improvement

(note: cycling more than 3 hours per week may cause dysfunction)

Treatment of ED General Measures

- ❑ Smoking cessation
- ❑ Reduce alcohol
- ❑ Weight loss
- ❑ Exercise
- ❑ Psychosexual therapy

Psychosexual therapy

- ❑ Even if cause of ED is physical the patient will develop psychosexual issues
- ❑ Performance anxiety
- ❑ Sensate focus exercises
- ❑ Relationship counselling

Pharmacotherapy for ED

❑ Oral agents

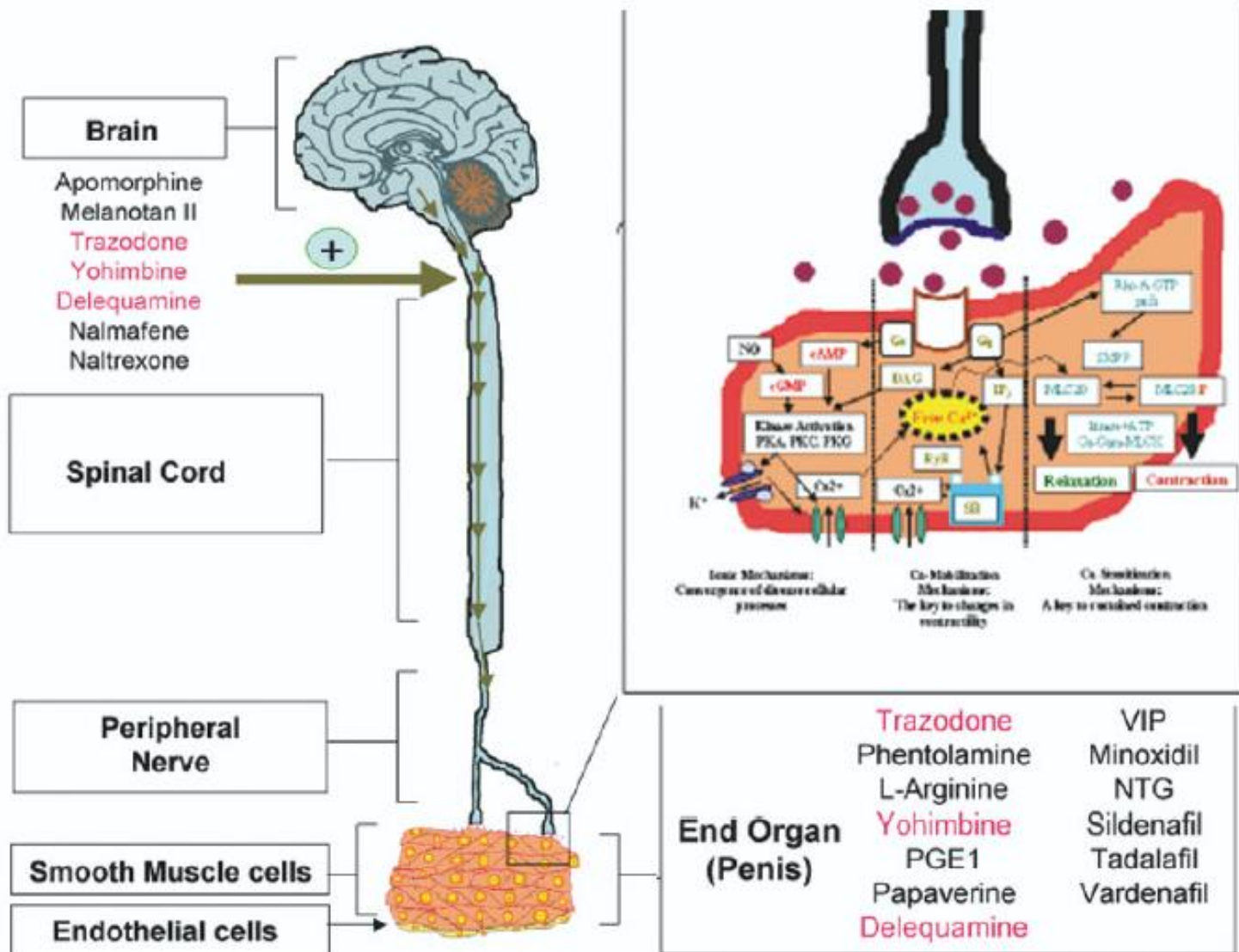
- Centrally acting dopamine-receptor agonist
eg Apomorphine
- Phosphodiesterase type 5 inhibitors

❑ Intra-cavernosal

- Prostaglandin E1 Alprostadil
- Bimix/Trimix

❑ Intra-urethral

- Alprostadil



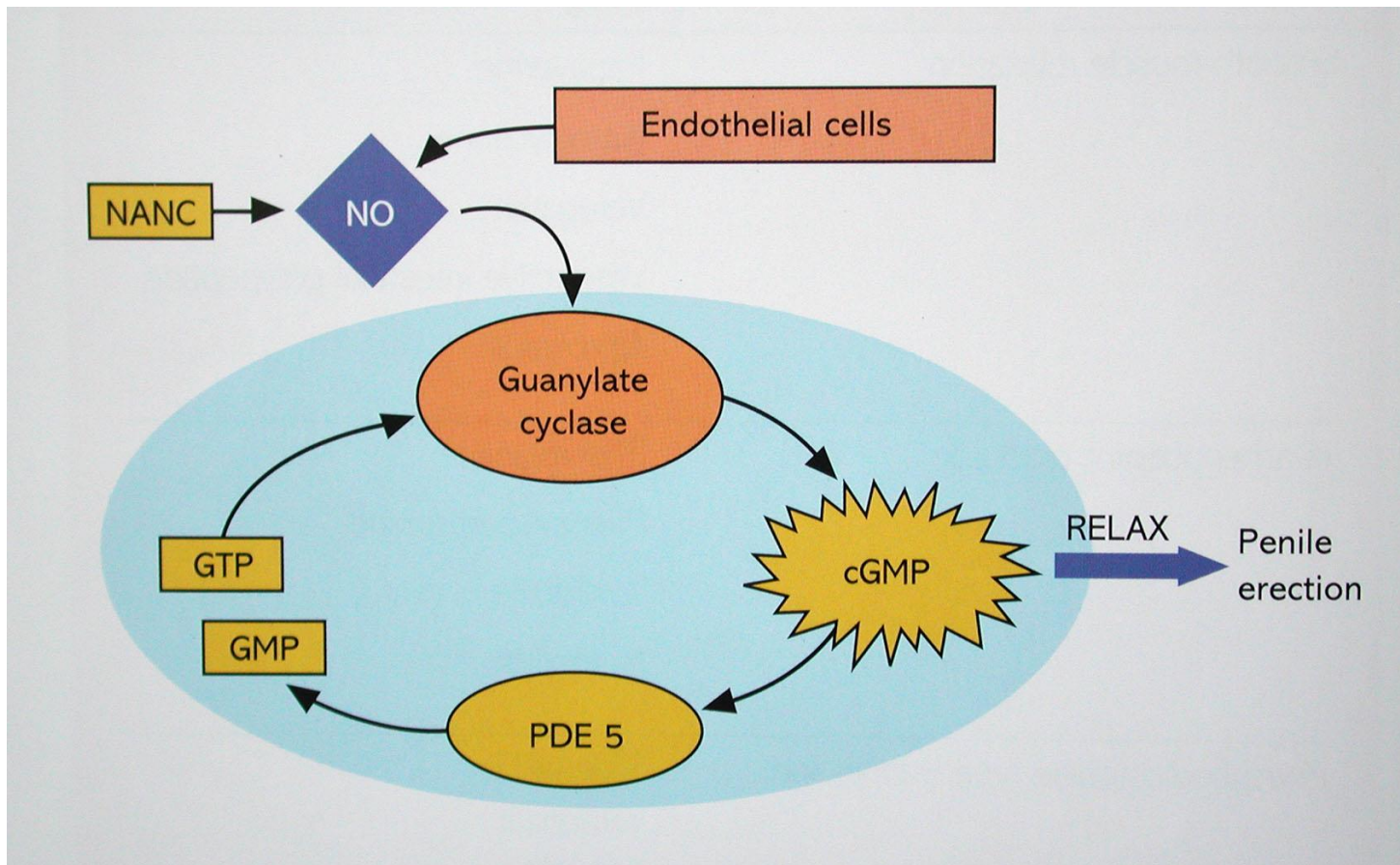
Schematic depiction of the general classification and putative sites of action of the currently used drugs for the treatment of erectile dysfunction.

PDE5 inhibitors

- ❑ Sildenafil 50mg, 100mg
- ❑ Tadalafil 10mg, 20mg
- ❑ Tadalafil 5mg
- ❑ Udenafil 100mg

- ❑ Vardenafil and Avanafil – not available in India

PDE5 Physiology



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Pharmacokinetics and Clinical Characteristics of PDE inhibitors

| | <u>Sildenafil</u> | <u>Vardenafil</u> | <u>Tadalafil</u> |
|--------------------|------------------------------|-----------------------------|-----------------------|
| T_{\max} | 0.8 hrs | 0.7 hrs | 2.0 hrs |
| $T_{1/2}$ | 4 hrs | 4 hrs | 17.5 hrs |
| Earliest onset | 14 min | 16 min | 16 min |
| Median onset | 36 min | 25 min | 45 min |
| Duration of action | 4-6+ hrs | 4-6+ hrs | 36+ hrs |
| Efficacy | ~75% | ~75% | ~75% |
| Side effects | HA, flushing | HA, flushing | HA, myalgia |
| Food effect | Often, esp. high fat meal | Very high fat (57%) meal | None |
| α -blockers | After 4 hours | Contraindicated | OK with Tamsulosin |

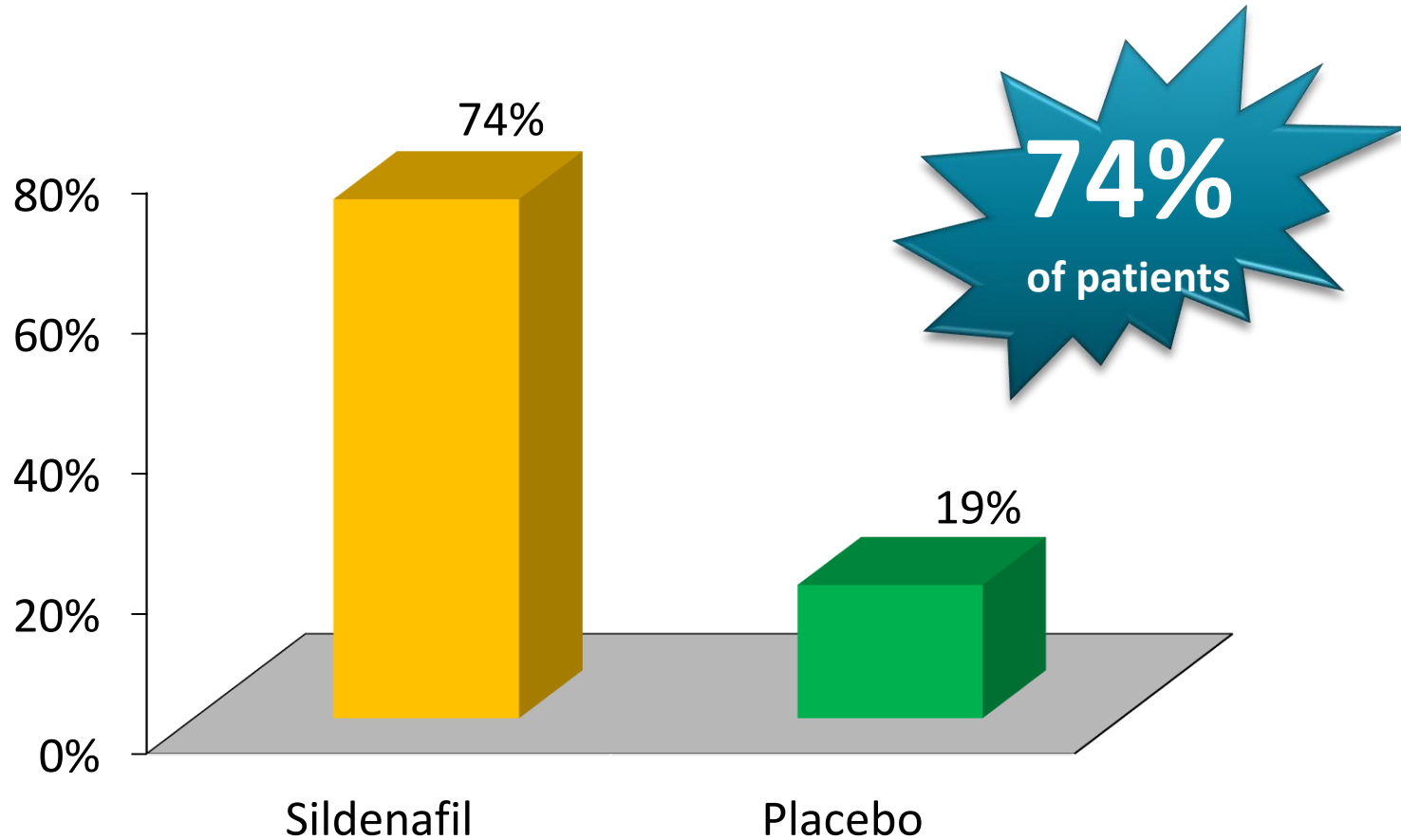
Expression of PDEs in Human Tissues

PDE

Distribution

| | |
|-------------|--|
| PDE1 | Testes, heart, brain, vascular SMC (proliferating) |
| PDE2 | CNS, adrenal cortex |
| PDE3 | Adipose, vascular SMC, cardiac muscle, liver, platelets |
| PDE4 | Neural, endocrine, lung, mast cells |
| PDE5 | Lung, platelets, vascular SMC, kidney, SMC in corpus cavernosum |
| PDE6 | Retina (rod and cone cells) |
| PDE7 | Skeletal muscle, T-lymphocytes |
| PDE8 | Testes, ovary, intestine |
| PDE9 | Spleen, intestine, kidney, heart, brain |
| PDE10 | Brain, testes |
| PDE11 | Prostate, skeletal muscle, testes |

Reported improved erections



Sildenafil – Clinical Indications

- ❑ Not an aphrodisiac
- ❑ Does NOT directly affect
 - Libido/desire
 - Ejaculatory control
- ❑ Hence, proper sexual history is important

Sildenafil v/s Tadalafil

- ❑ Frequent unplanned intercourse - Tadalafil
- ❑ Planned, infrequent intercourse - Sildenafil
- ❑ Side – effects and efficacy will vary in individual pt.
- ❑ Try both
- ❑ Let patient chose

PDE5 Inhibitors Side Effects

- ❑ Facial flushing
- ❑ Headache
- ❑ Nasal congestion
- ❑ Dizziness
- ❑ Dyspepsia
- ❑ Visual disturbance (blue halo)
- ❑ Priapism
- ❑ Non-arteritic anterior ischaemic optic neuropathy

PDE5 Drug Interactions

❑ Nitrates

- Glyceryl trinitrate, isosorbide mono or dinitrate
- Chest pain after taking Sildenafil/Vardenafil no nitrates 24 hours, Tadalafil no nitrates 48 hours
- Recreational amyl nitrate (Poppers)

❑ Cytochrome P450 inhibitors

- Protease inhibitors especially Ritonavir use very small dose
- Cimetidine, Ketoconazole, Erythromycin

❑ Alpha blockers

PDE5 Contraindications

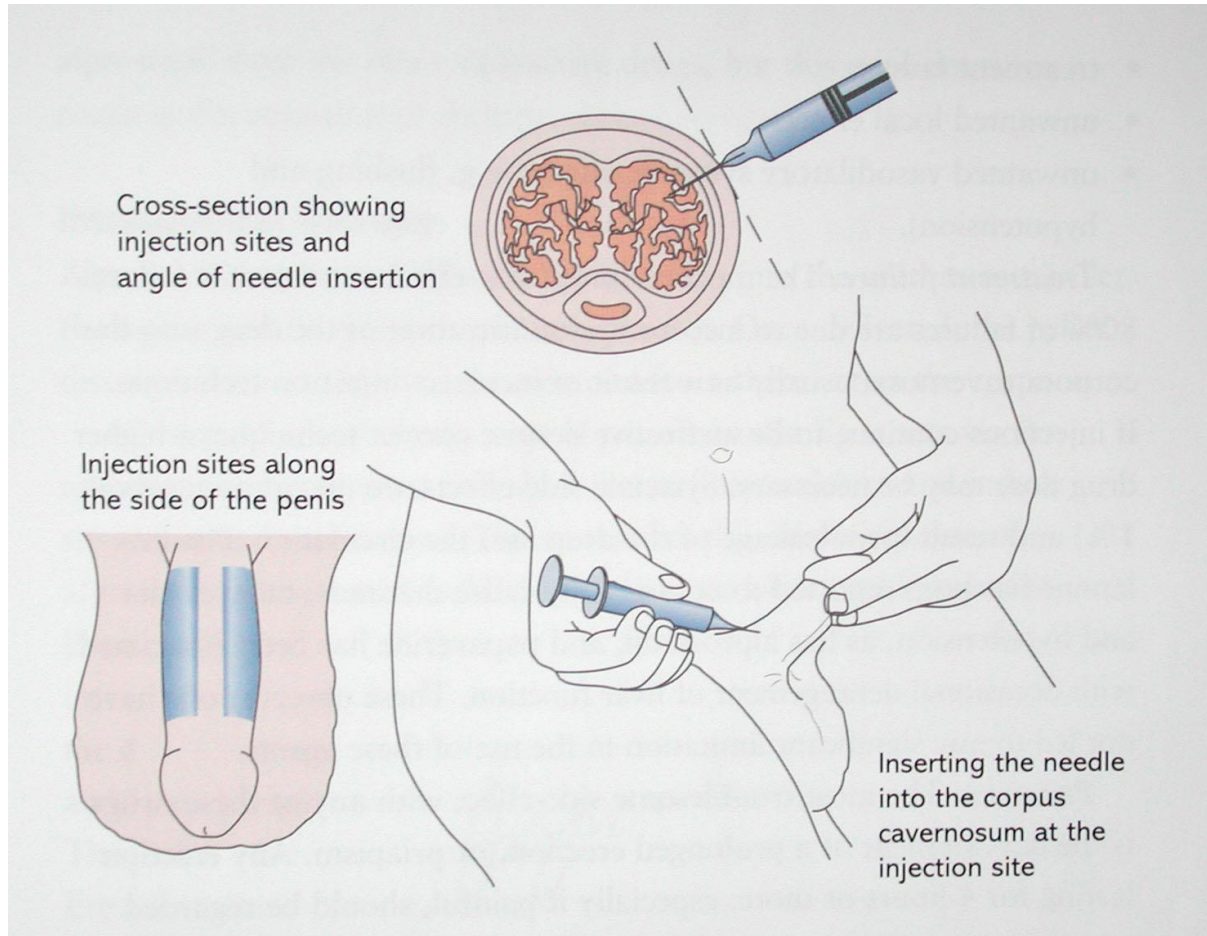
- ❑ Recent cardiovascular event
- ❑ Nitrates
- ❑ Hypotension
- ❑ Anatomical deformity
 - Angulation, Cavernosal fibrosis, Peyronie's
- ❑ Predisposition to prolonged erection
 - Sickle cell disease
 - Multiple myeloma
 - Leukaemia

History of ICIVAD

- ❑ Modern drug therapy for ED made a significant advance in 1983, when British neuro-physiologist Giles Brindley, Ph.D. dropped his trousers and demonstrated to a shocked Urodynamics Society audience at AUA meet in Las Vegas, his phenoxybenzamine-induced erection.
- ❑ The drug Brindley injected into his penis was a non-specific vasodilator, an alpha-blocking agent, and the mechanism of action was clearly corporal smooth muscle relaxation.

Klotz, L. (Nov 2005). "How (not) to communicate new scientific information: a memoir of the famous Brindley lecture". BJU Int 96 (7): 956–7.

Intracavernosal Injections

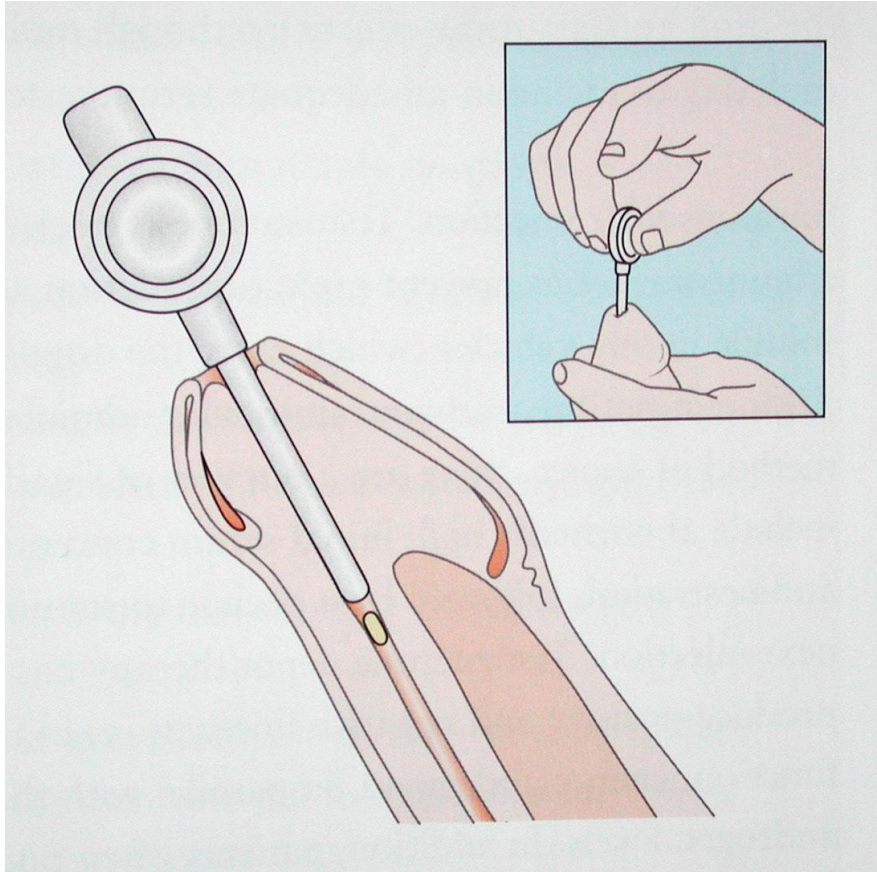


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Oxford: Health Press Limited; 2002 : 53

Results of intracavernosal therapy

- ❑ Papaverine alone - 30% success rate
- ❑ PGE1 alone - 70% success rate
- ❑ Combination therapies may have success rates of 85-90%
- ❑ Priapism less with PGE1 (0.4% vs 6% for Papaverine)
- ❑ Early drop-out rate as high as 50%
- ❑ Bimix : combination of papaverine and phentolamine/
chlorpromazine
- ❑ Reduced incidence of priapism

Intraurethral Alprostadil

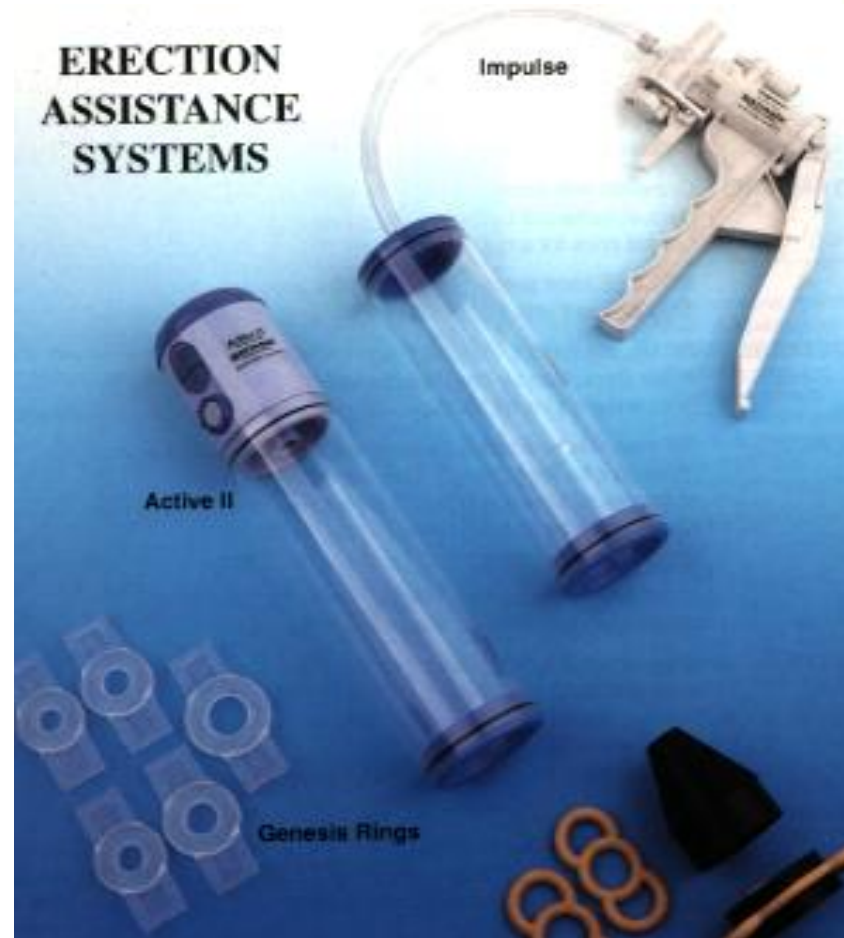


- ❑ Alprostadil (Muse) 125mg, 250mg, 500mg, 1g
 - Pellet inserted with applicator
 - Massage penis to aid absorption
 - Side effects: Penile pain, dizziness, priapism rare

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Vacuum device

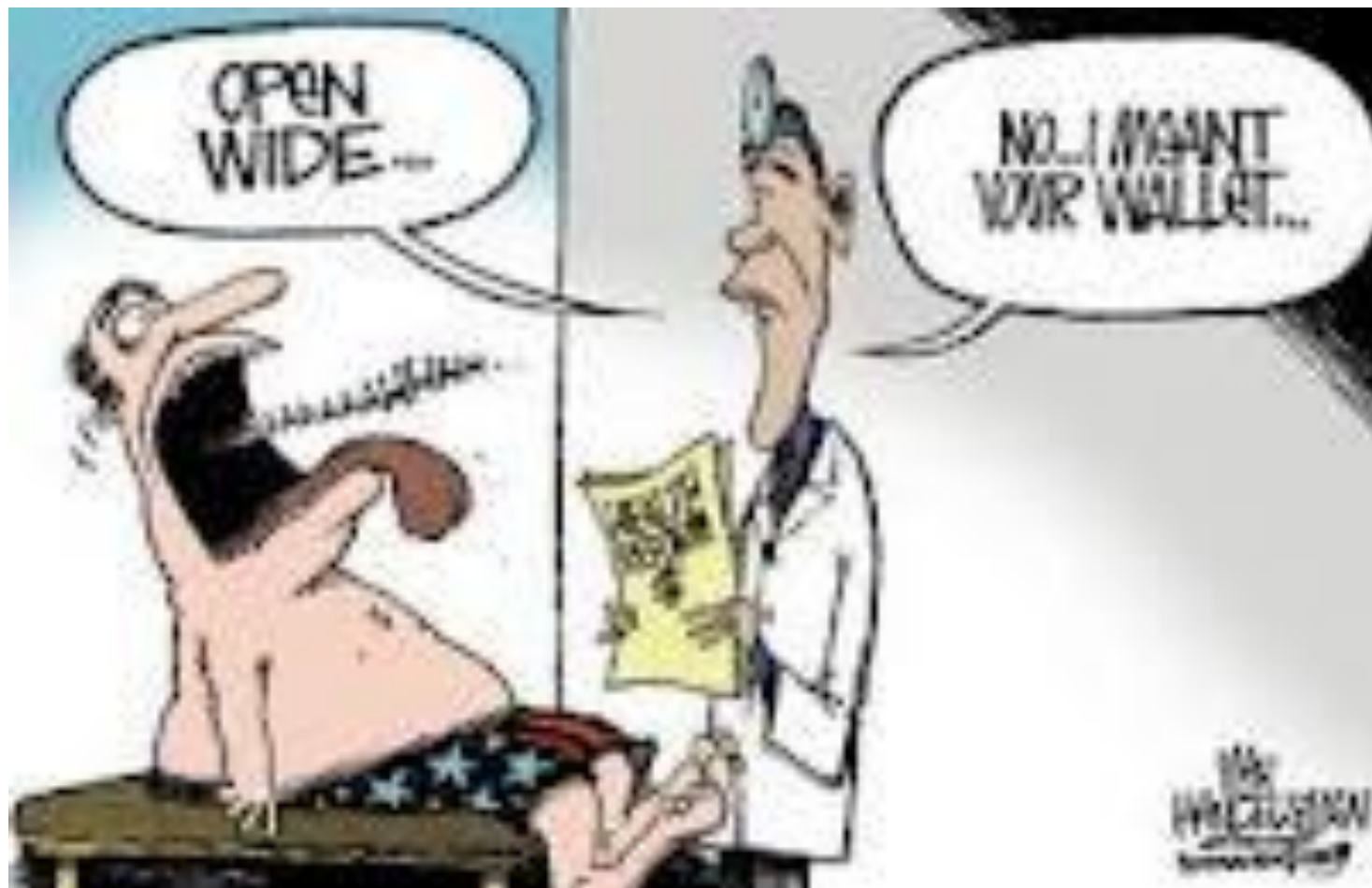
- ❑ Less invasive than intracavernous injection
- ❑ Results variable
- ❑ Bruising reported so contraindicated in bleeding diathesis or anticoagulant treatment
- ❑ Expensive for patient to purchase



Third-line treatment

- ❑ Penile prosthesis: semi-rigid, malleable or inflatable.
- ❑ Considered if impotence has organic cause and fail to respond to medical management

Penile Prosthesis



Penile Prosthesis

- ❑ Usually tried only after injections and/ or for E.D. associated with Peyronie's disease
- ❑ Malleable/Semi-Rigid, or Inflatable types
- ❑ Insertion requires strict asepsis under GA/SA
- ❑ Only **curative** treatment for ED

Ideal Penile Prosthesis

- ❑ Mimic a native physiologic erection
- ❑ Mimic flaccid state when not in use
- ❑ Not interfere with urination/ejaculation
- ❑ Improve QOL and sexual satisfaction
- ❑ Simple to place and use
- ❑ Last for lifelong

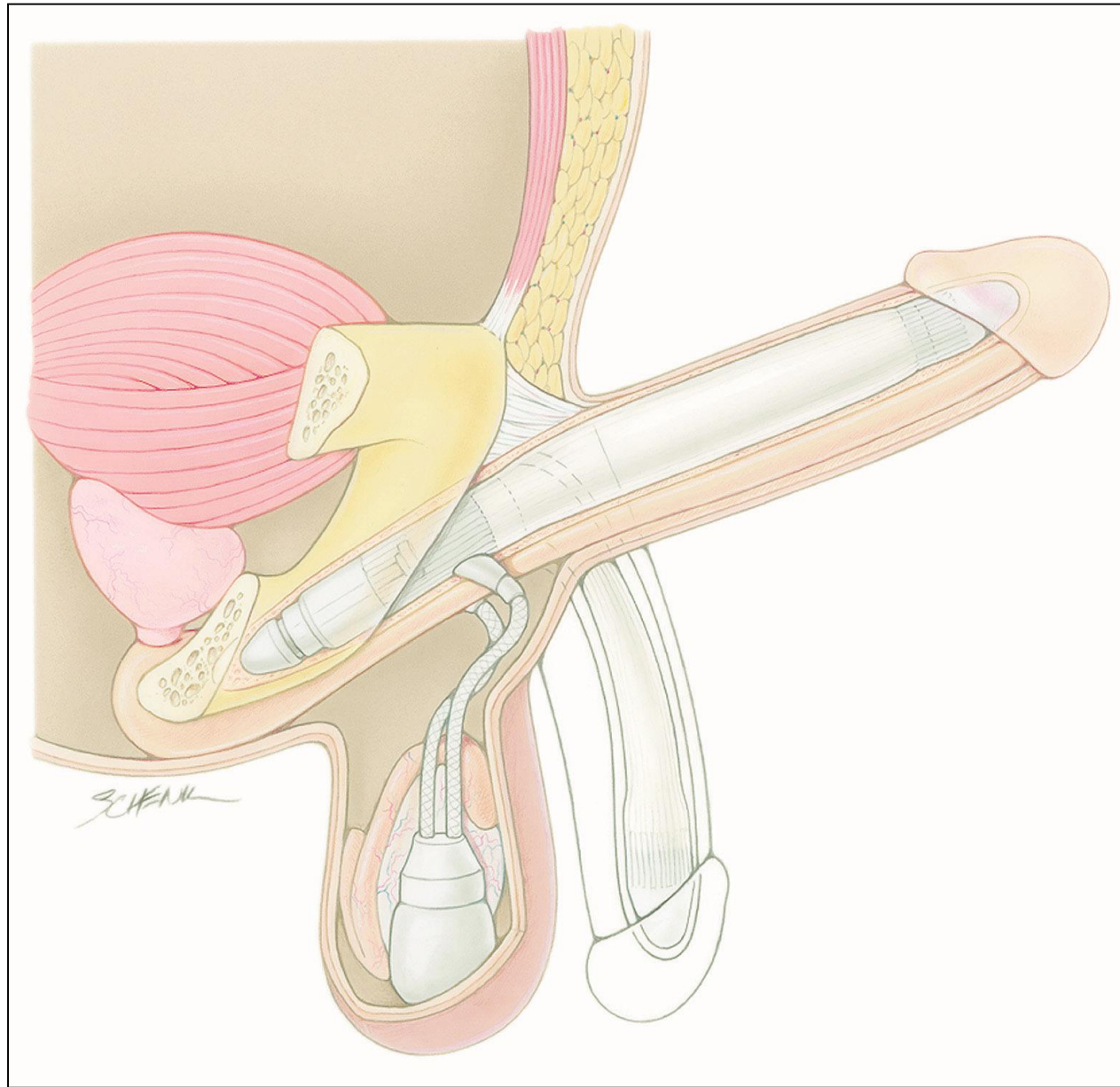
Penile Prosthesis



Shah Semi-Rigid Device



AMS Ambicor 2 piece inflatable device





AMS 700: 3 piece inflatable device

The Future

- ❑ Better understanding of chemical mediators may lead to better pharmacological treatments.
- ❑ Drug combinations
- ❑ Gene therapy
- ❑ ? Use of Stem cells/PRP

Summary of management of ed

| Psychogenic | Organic |
|--|---|
| <ul style="list-style-type: none">• Psychosexual counselling• Pde5 inhibitors• Intracavernosal injections• Implant(very rare) | <ul style="list-style-type: none">• Pde5 inhibitors• TRT if LOH present• Intracavernosal injections• Penile implant if conservative methods fail |

Failure to achieve orgasm/ejaculate

- ❑ Climax disorder
 - Does not reach orgasm
- ❑ Phase-1 Ejaculatory disorder
 - Failure of emission
- ❑ Phase-2 Ejaculatory disorder
 - Retrograde ejaculation
- ❑ Phase-3 Ejaculatory disorder
 - Failure of antegrade propulsion

Anorgasmia/Climax disorder

- ❑ **Anorgasmia**, or Coughlan's syndrome, is a type of sexual dysfunction in which a person cannot achieve orgasm despite adequate stimulation
- ❑ **Delayed ejaculation**, also called **retarded** ejaculation or **inhibited** ejaculation, is a man's inability for or persistent difficulty in achieving orgasm, despite typical sexual desire and sexual stimulation

Aetiology

- ❑ Psychogenic
- ❑ Inadequate sexual stimulation
- ❑ Poor sexual arousal
- ❑ Diabetic neuropathy
- ❑ Multiple sclerosis
- ❑ Genital mutilation
- ❑ Hormonal disturbances
- ❑ SCI
- ❑ Drugs (SSRI)
- ❑ Drug abuse

Management of Anorgasmia

- ❑ Counseling
- ❑ Treatment of cause
- ❑ Penile vibratory stimulation
- ❑ Medication
- ❑ PDE5 i

Pharmacotherapy for Delayed orgasm

| DRUG | DAILY DOSAGE | ON DEMAND |
|-----------------|---------------------|------------------------------|
| AMANTADINE | 75-100mg BID/TID | 100-400mg 2 - 6 hrs prior |
| BUPROPRION | 75mg bid/tid | 75-150 mg 2 hrs prior |
| BUSPIRON | 5-15mg BID | 15-60mg 2 hrs prior |
| CYPROHEPATADINE | - | 4-12mg |
| YOHIMBINE | 5.4mg tid | 5.4-10.8 mg |

Pharmacotherapy for Delayed orgasm

| DRUG | DAILY DOSAGE | ON DEMAND |
|------------------------------|-------------------------|-----------------------|
| CABERGOLIN | 0.25 mg Twice a week | |
| REBOXETINE | 4 -8 mg daily | |
| OXYTOCIN intranasal spray | | During intercourse |

Anejaculation

- ❑ Anorgasmic/Orgasmic
- ❑ Total / Partial

Orgasmic Anejaculation

- ❑ Partial – most commonly due to retrograde ejaculation
- ❑ Total – either due to failure of emission/ retrograde ejaculation or failure of antegrade propulsion

Medical therapy

Common pharmacologic treatments for retrograde ejaculation (35)

| Medication | Class | Dose/ Frequency | Efficacy % (1) | Side effects |
|-----------------|--------------------------------------|---|-------------------|---|
| Pseudoephedrine | Alpha receptor agonist | 60 mg 4 times daily or 120 mg twice daily | 30 | Hypertension, abdominal pain, nausea/vomiting |
| Brompheniramine | Anti-histamine | 16-24 mg daily | 38 | Anticholinergic side effects |
| Imipramine | Tricyclic antidepressant | 25 mg twice daily | 65 | Anticholinergic side effects including cardiac dysrhythmias |
| Midodrine | Alpha receptor agonist | 15 mg daily | 62 | Headache, anxiety, dry mouth |
| Ephedrine | Indirect adrenergic receptor agonist | 50-100 mg daily | 20 | Tachycardia, hypertension, nausea, headache |

Failure of Emission

- ❑ Medical therapy- if due to neuropathy
- ❑ Penile vibro-stimulation
- ❑ Electroejaculation



Premature ejaculation

Persistent or recurrent ejaculation that occurs with minimal stimulation before, on, or shortly after penetration before the person wishes it to occur which the person has no voluntary control which causes marked distress or interpersonal difficulties

PE : DSM-IV-TR

- ❑ Primary (lifelong) PE
 - Biological and genetic basis
- ❑ Acquired PE
 - Develops after a period of normal control

Etiology of PE

□ Psychogenic

- Anxiety
- Early sexual experience
- Frequency of sexual intercourse
- Ejaculatory control techniques
- Evolutionary
- Psychodynamic theories

□ Biological

- Penile hypersensitivity
- Hyper-excitability ejaculatory reflex
- McMahon et al, TEXTBOOK OF SEXUAL MEDICINE
- Arousability
- Endocrinopathy
- Genetic predisposition
- 5-HT receptor dysfunction

□ Primary (lifelong) PE

- Penile hypersensitivity
- Hyper excitable ejaculatory reflex
- 5-HT receptor dysfunction
- Genetic predisposition

Ejaculation related effects of 5HT at different receptors

| Receptor | | Effect produced | |
|---------------------------------------|-------------------------------|-------------------------------|--------------------|
| 5HT _{1A} | Somatodendritic autoreceptors | Decreases ejaculatory latency | Central regulation |
| 5HT _{1B} , 5HT _{1D} | Presynaptic autoreceptors | Prolongs ejaculatory latency | |
| 5HT _{2C} | Signaling receptors | Prolongs ejaculatory latency | Central regulation |

Modulating Serotonin for PE Control

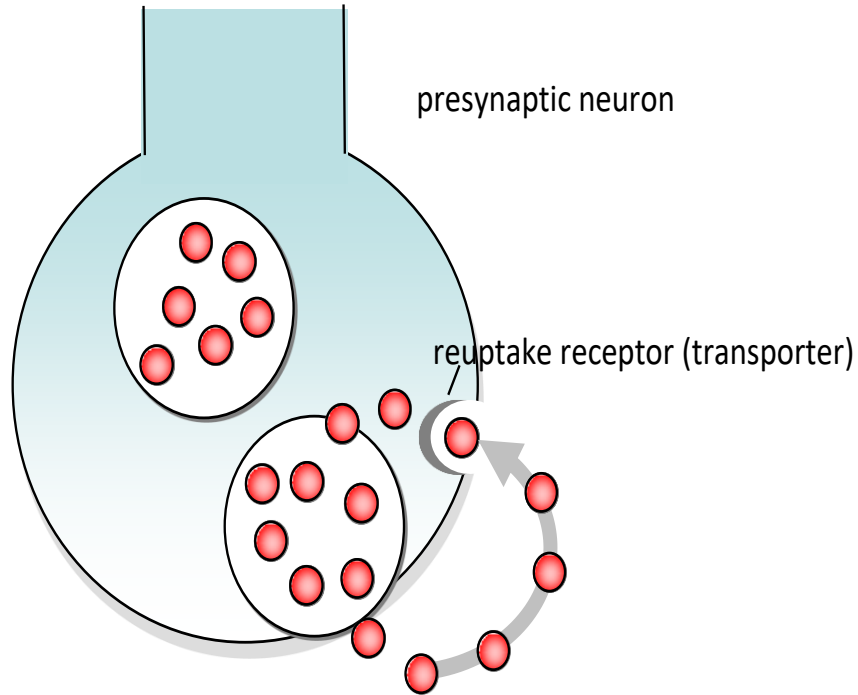


- ❑ Serotonin pathways delay ejaculation
- ❑ Central 5-HT receptor imbalance
- ❑ Lower 5-HT transmission in PE?
 - 5HT_{1A} hypersensitivity?
 - 5HT_{2C} hyposensitivity?
 - Extent of 5HT_{1A}/5HT_{2C} imbalance

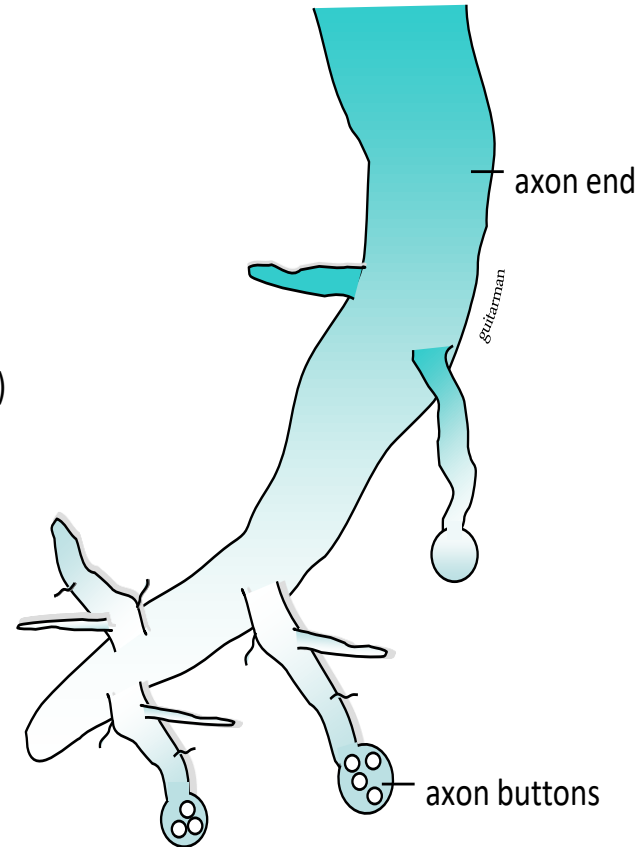
Montorsi F: J Sex Med, 2005;2 (Suppl 2): 96-102

Ahlenius S, et al. Pharmacol Biochem Behav 1981;15:785-92

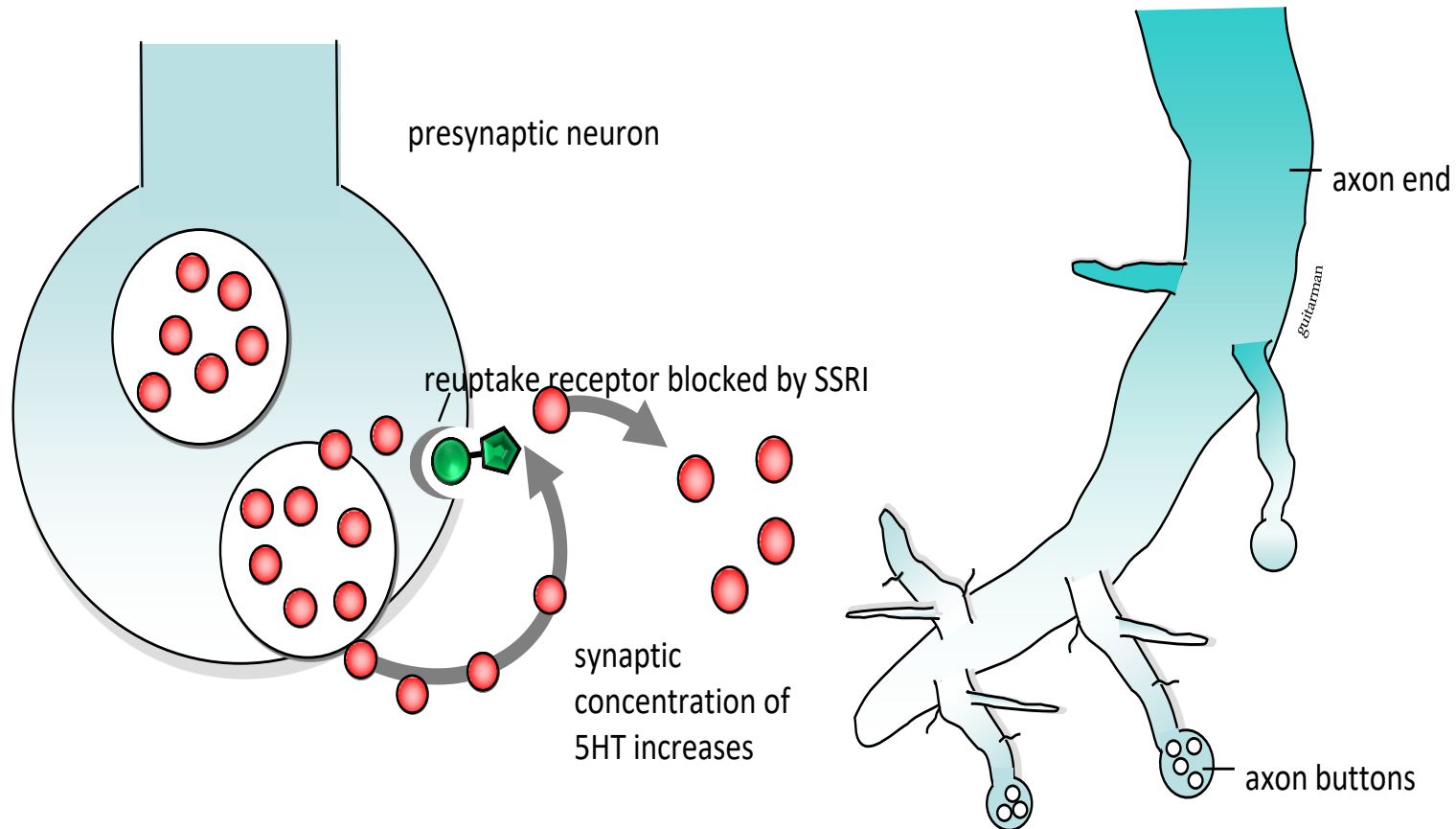
Serotonergic presynaptic reuptake mechanism



reuptake and recycled back to presynaptic neuron by reuptake mechanism (transporters)



How do SSRI drugs work ?



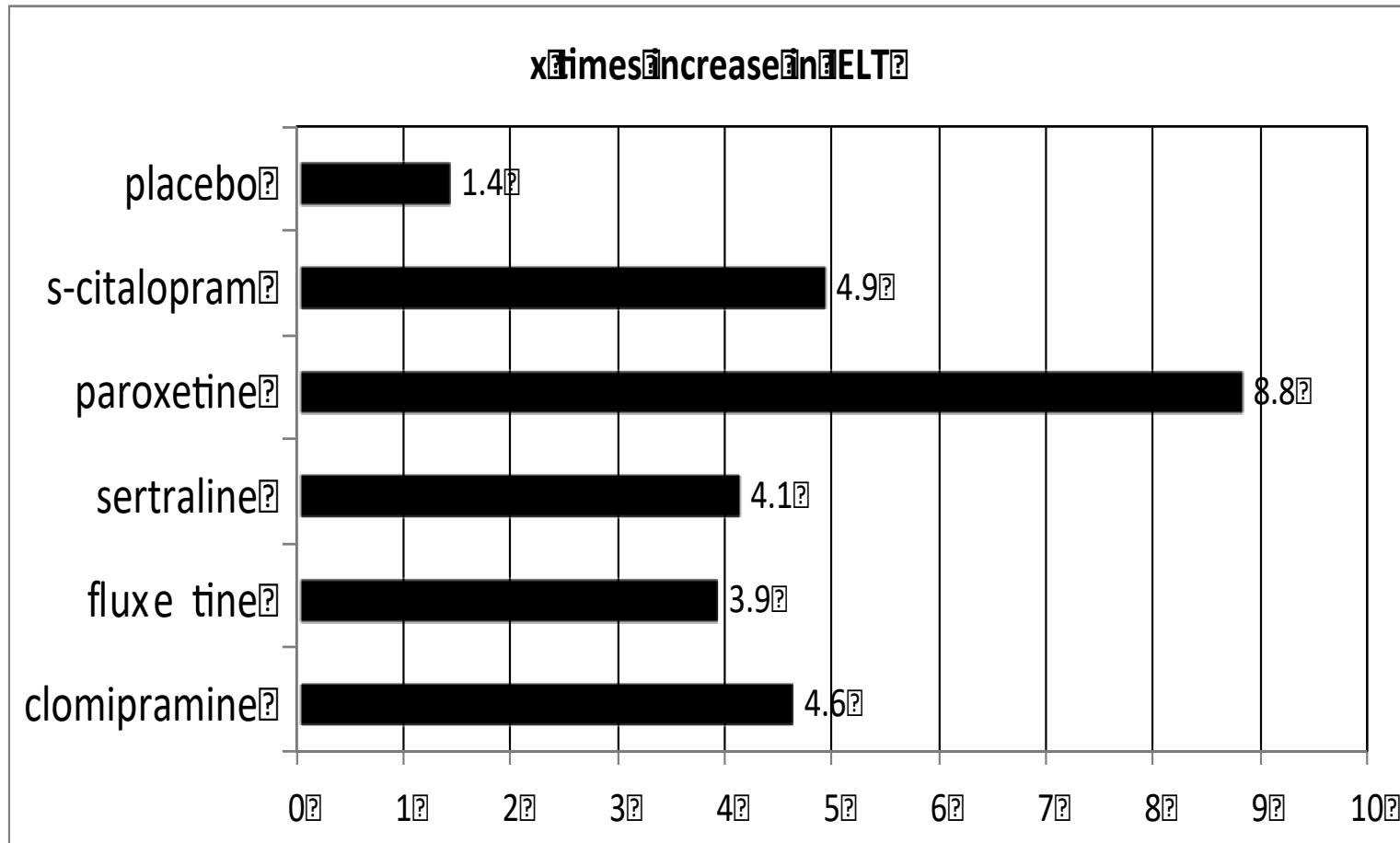
Management of PE

- ❑ Psychosexual counseling
- ❑ Technique and position
- ❑ Start stop/squeeze technique
- ❑ Medication

Pharmacological Options

- ❑ SSRIs - long-acting
- ❑ SSRI - short-acting
- ❑ Tricyclic anti-depressants with SSRI action
- ❑ PDE5i
- ❑ Topical anesthetics
- ❑ Glans injections with hyaluronic acid
- ❑ Intra-cavernosal injections

SSRI effects on increasing IELT



Waldinger Int J Impot Res, 2004; 16: 369-381

Safety of SSRIs

❑ General side effects

- Insomnia; fatigue; nausea, constipation, loss of appetite; suicidal ideation

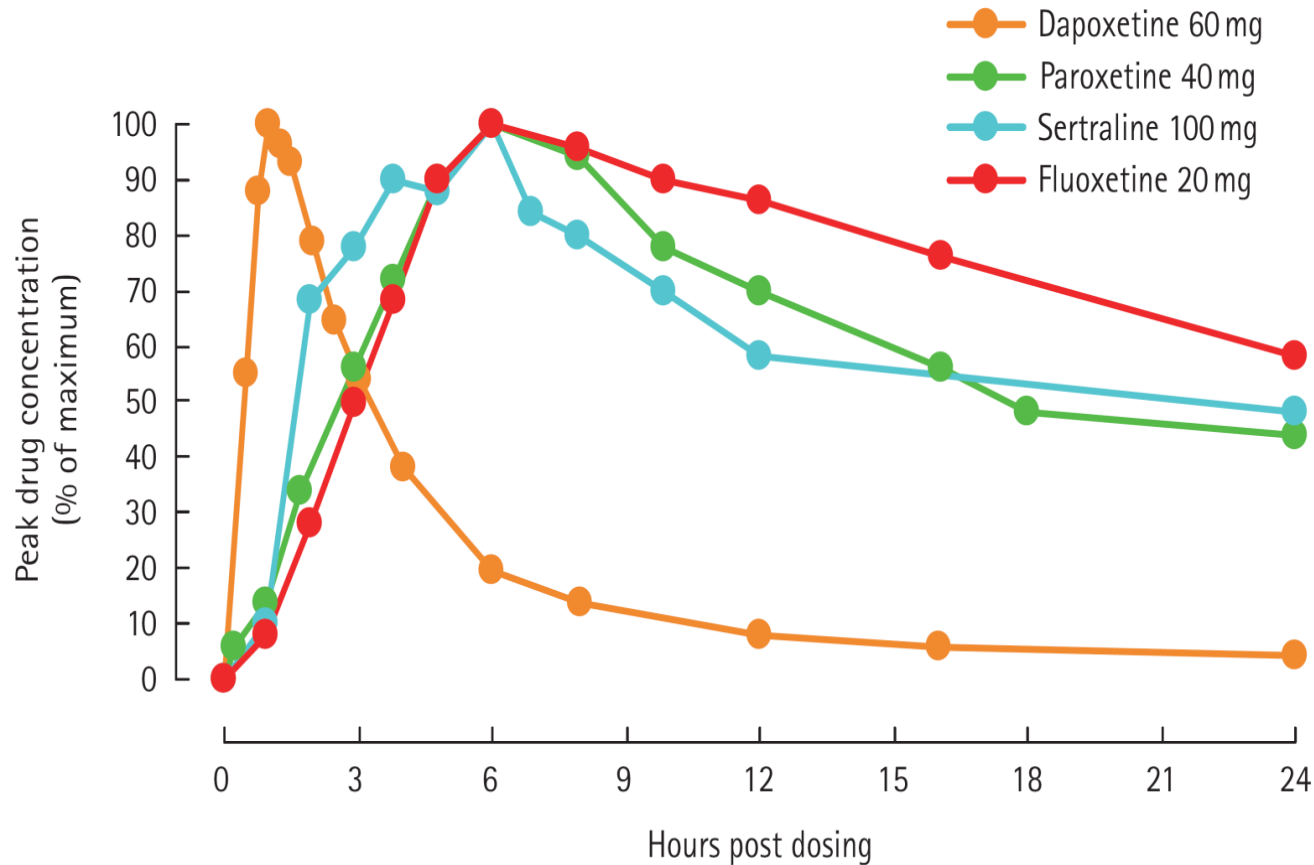
❑ Sexual side-effects

- Reduced libido; anorgasmia; ED

❑ Discontinuation syndrome

- Dizziness, nausea, vomiting, fatigue; headache; ataxia; lethargy; anxiety; agitation; insomnia

Dapoxetine in PE



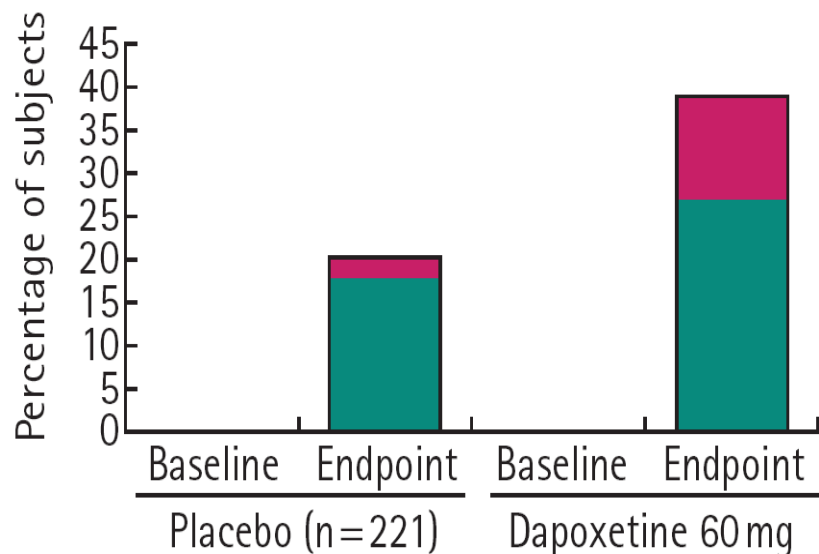
- Comparative half-lives of DAP versus other SSRIs

Dosing and Administration

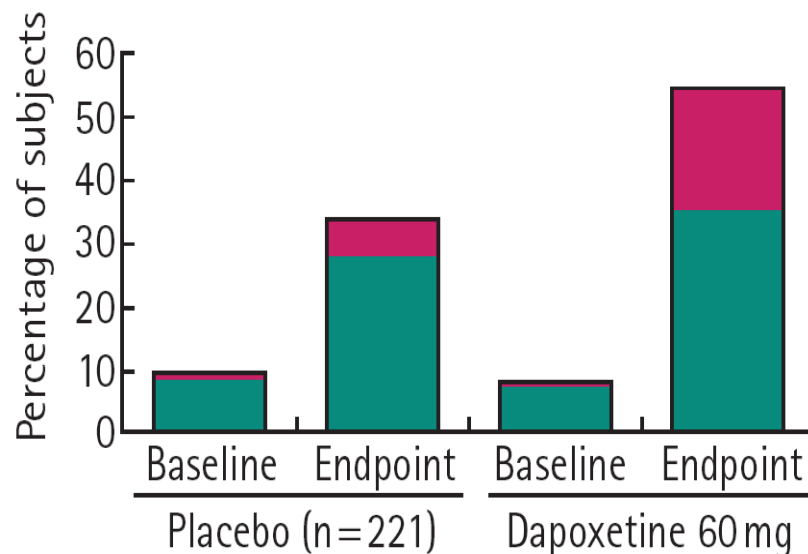
- ❑ Starting dose - 30 mg, 1 to 3 hours prior to sexual activity
- ❑ If 30 mg is insufficient and side effects are acceptable, increase to 60 mg
- ❑ The maximum recommended dosing frequency is once every 24 hours

Satisfaction with Dapoxetine

■ "Very good" perceived control over ejaculation
■ "Good" perceived control over ejaculation



■ "Very good" satisfaction with sexual intercourse
■ "Good" satisfaction with sexual intercourse



□ 50% of patients are happy with the therapy

Adverse Effects

| | PLA (n = 872) | DAP 30 (n = 876) | DAP 60 (n = 870) |
|-----------------------------------|--------------------------|-----------------------------|-----------------------------|
| Nausea | 1.9% | 8.7% | 20.1% |
| Diarrhea | 1.4% | 3.9% | 6.8% |
| Headache | 4.0% | 5.9% | 6.8% |
| Dizziness | 0.8% | 3% | 6.2% |
| Somnolence | 0.2% | 3.2% | 3.7% |
| Reasons for study discontinuation | | | |
| Nausea | 0.1% | 1.3% | 3.8% |

Tramadol for PME

- ❑ Randomised, placebo-controlled, double-blind, phase 3 trial across 62 sites in Europe of tramadol ODT
- ❑ Placebo; 62mg tramadol; 89 mg tramadol
↑ IELT: 0.6min; 1.2 min; 1.5 min
- ❑ Well tolerated, discontinuation from side-effects: 1.6%

Bar_Or et al, Eur Urol. 2012 ;61:736-43

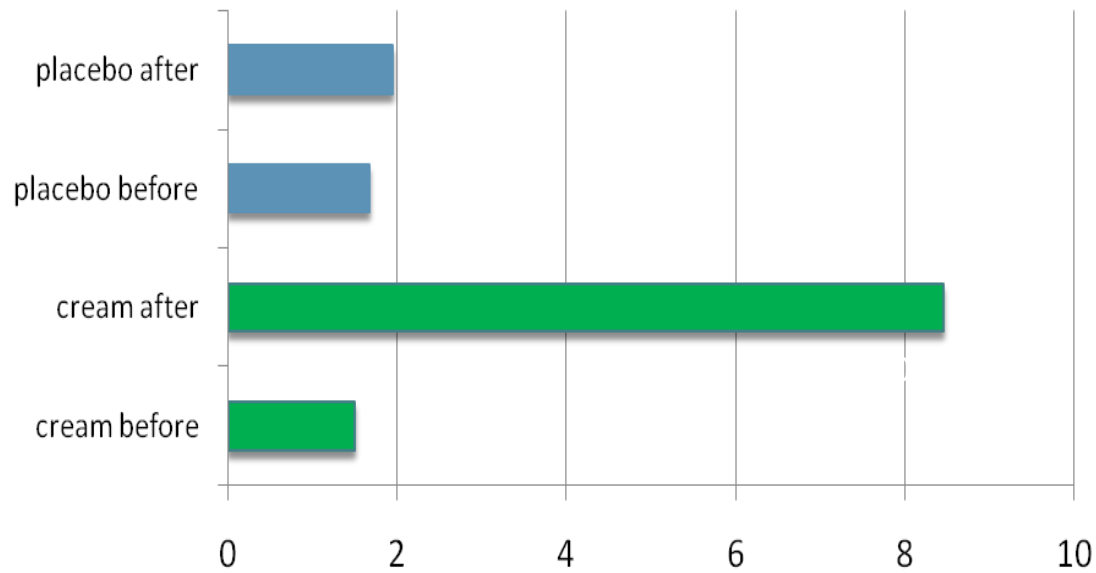
Topical anesthetics for PME

| Authors | Drug | Level of Evidence |
|---|-----------------------|-------------------|
| Choi HK, Jung GW, Moon KH. et al | SS-Cream | 1B |
| Atikeler, M.K., Gecit, I., Senol, F.A. | Prilocaine-lidocaine | 1B |
| Damru, F | Ethyl aminibenzoate | |
| Berkovitch, M., Keresteci, A.G., Koren, G | Prilocaine-lidocaine | 1B |
| Sahin et al | Prilocaine-lidocaine | 3B |
| Atan, A., Basar, M.M., Aydoganli, L | Fluoxetine, Lidocaine | 3B |
| Xin, Z.C., Choi, Y.D., Choi, H.K. | SS Cream | 3B |
| Xin, Z.C., Choi, Y.D., Lee, S.H. et al | SS Cream | 1B |
| Xin, Z.C., Choi, Y.D., Seong, D.H. et al | SS Cream | 1B |

Disorders fo Orgasm and Ejaculation in men Mc Mahon et al.,
committee 9A Textbook of Sexual Medicine

Topical Anaesthetic Creams and Sprays

IELT before and after using lignocaine-prilocaine cream



- ❑ To be used 20-30 min before & washed off immediately after
- ❑ Lignocaine 9.6% spray
- ❑ Lidocaine 2.5%-prilocaine 2.5% cream
- ❑ Lidocaine-prilocaine spray
- ❑ Dyclonine/alprostadil

Treatment options

- ❑ Young male
- ❑ Lifelong PE
- ❑ Frequent intercourse
- ❑ Counseling and technique
- ❑ Clomipramine 10-40mg daily, before dinner vs Paroxetine 10-20mg daily
 - Increase dose every 20 days, as per response/SE
- ❑ Dapoxetine / local anesthesia gel/spray

Treatment

- ❑ Older male
- ❑ Less frequent intercourse
- ❑ Dapoxetine 30/60mg on demand
- ❑ Clomipramine on demand if SSRI not tolerated
- ❑ Spray/gel
- ❑ Tramadol 50-100mg if disturbed sleep

Treatment

- ❑ Male looking at quick solution
- ❑ Not tolerating SSRI
- ❑ For immediate relief/ situational or partner related PE
- ❑ Local anesthetic Gels or creams 30 min before procedure
- ❑ Wash 10 min later/use condom to avoid partner numbness

Treatment

- ❑ LUTS/CPPS
- ❑ PE
- ❑ Correct underlying cause
- ❑ On demand SSRI

Treatment

- ❑ If no benefit at maximum tolerated dose
- ❑ Switch to daily dose if using on demand SSRI
- ❑ Use long acting if on Dapoxetine / combinations
- ❑ Add local anesthetic
- ❑ Add PDe5/ICIVAD





All this waiting, and its over in a minute
- just like our sex life

Summary

- ❑ Disorders of **Libido/Arousal** - treatment of underlying cause if any/psychosexual counselling
- ❑ **ED** - if young, psychogenic- Counselling and PDE5i
- ❑ Older/organic ED may need HSIP/Penile implant, if PDE5i unresponsive
- ❑ **Anorgasmia** - treatment of underlying cause, if any/psychosexual counseling, medication
- ❑ **Anejaculation** - medication/PVS/EE
- ❑ **PE** - primary PE with daily use Clomipramine/Paroxetine
- ❑ Acquired or infrequent use - on demand Dapoxetine
- ❑ Quick fix solution - anesthetic gels/spray