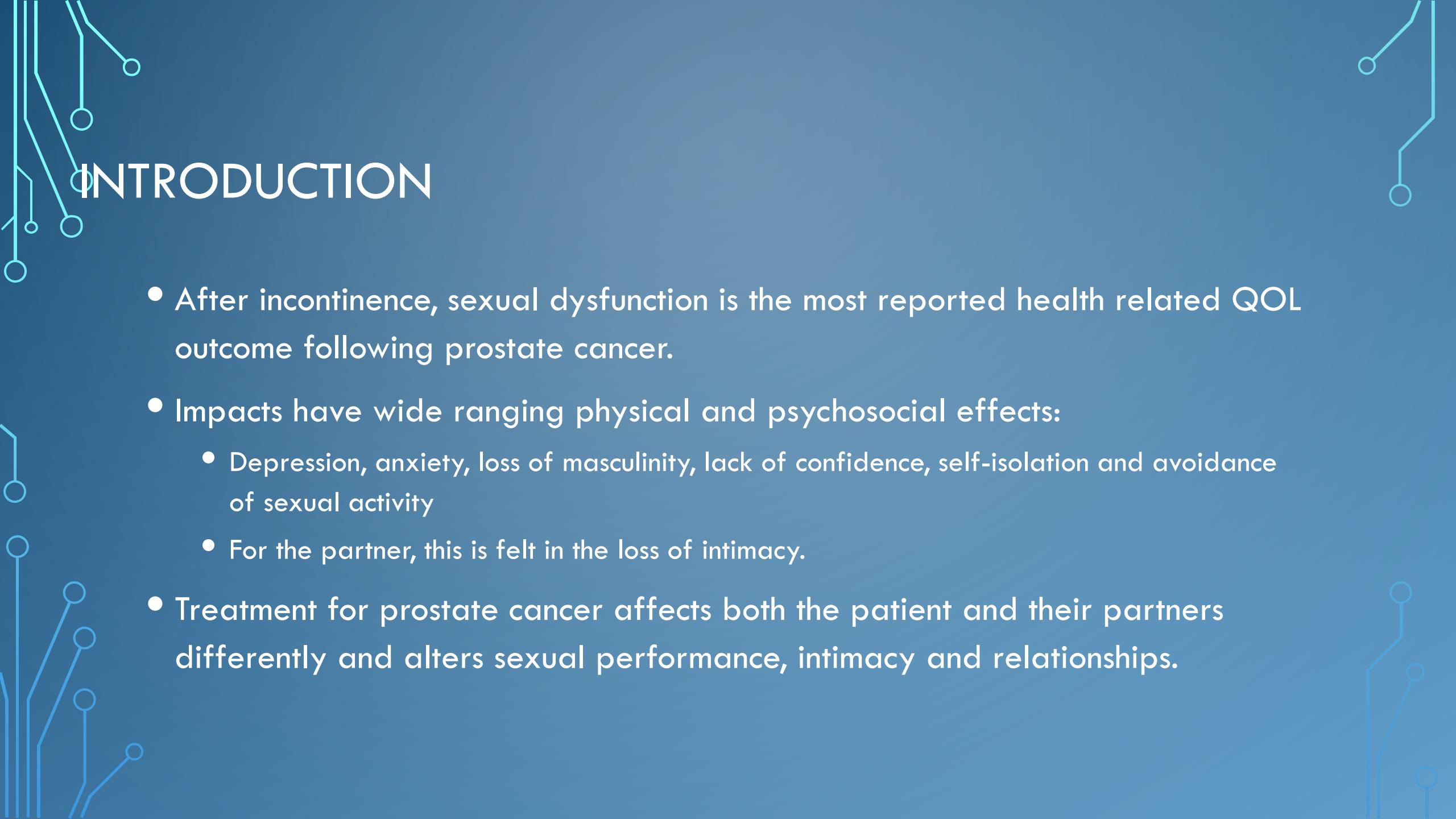


MALE SEXUAL WELLNESS IN THE CANCER SURVIVOR

JOSH TATUM, PA-C, UROLOGY AND SEXUAL MEDICINE



INTRODUCTION

- After incontinence, sexual dysfunction is the most reported health related QOL outcome following prostate cancer.
- Impacts have wide ranging physical and psychosocial effects:
 - Depression, anxiety, loss of masculinity, lack of confidence, self-isolation and avoidance of sexual activity
 - For the partner, this is felt in the loss of intimacy.
- Treatment for prostate cancer affects both the patient and their partners differently and alters sexual performance, intimacy and relationships.

SINS OF SEXUAL MEDICINE

Agism

Projection

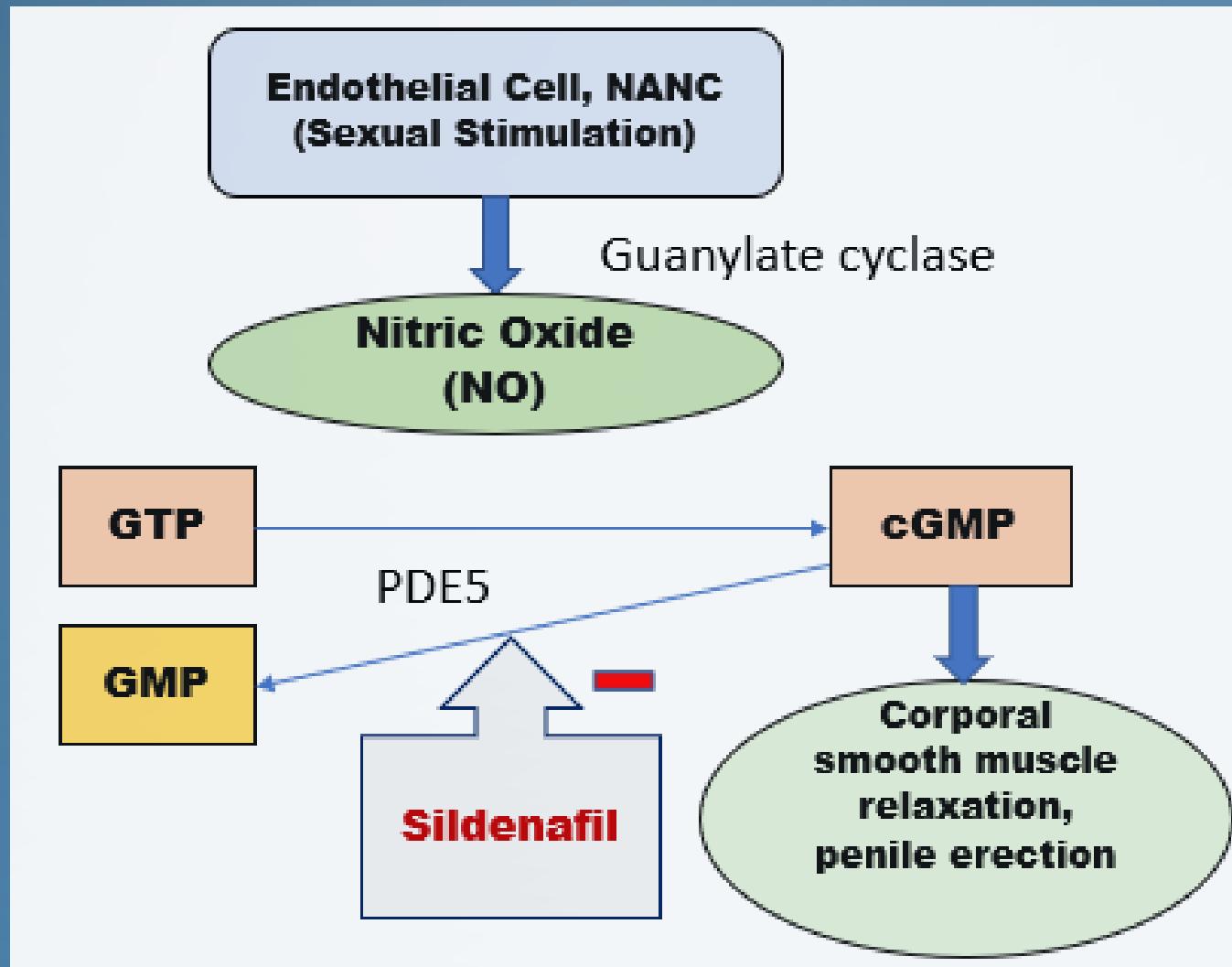
Apathy

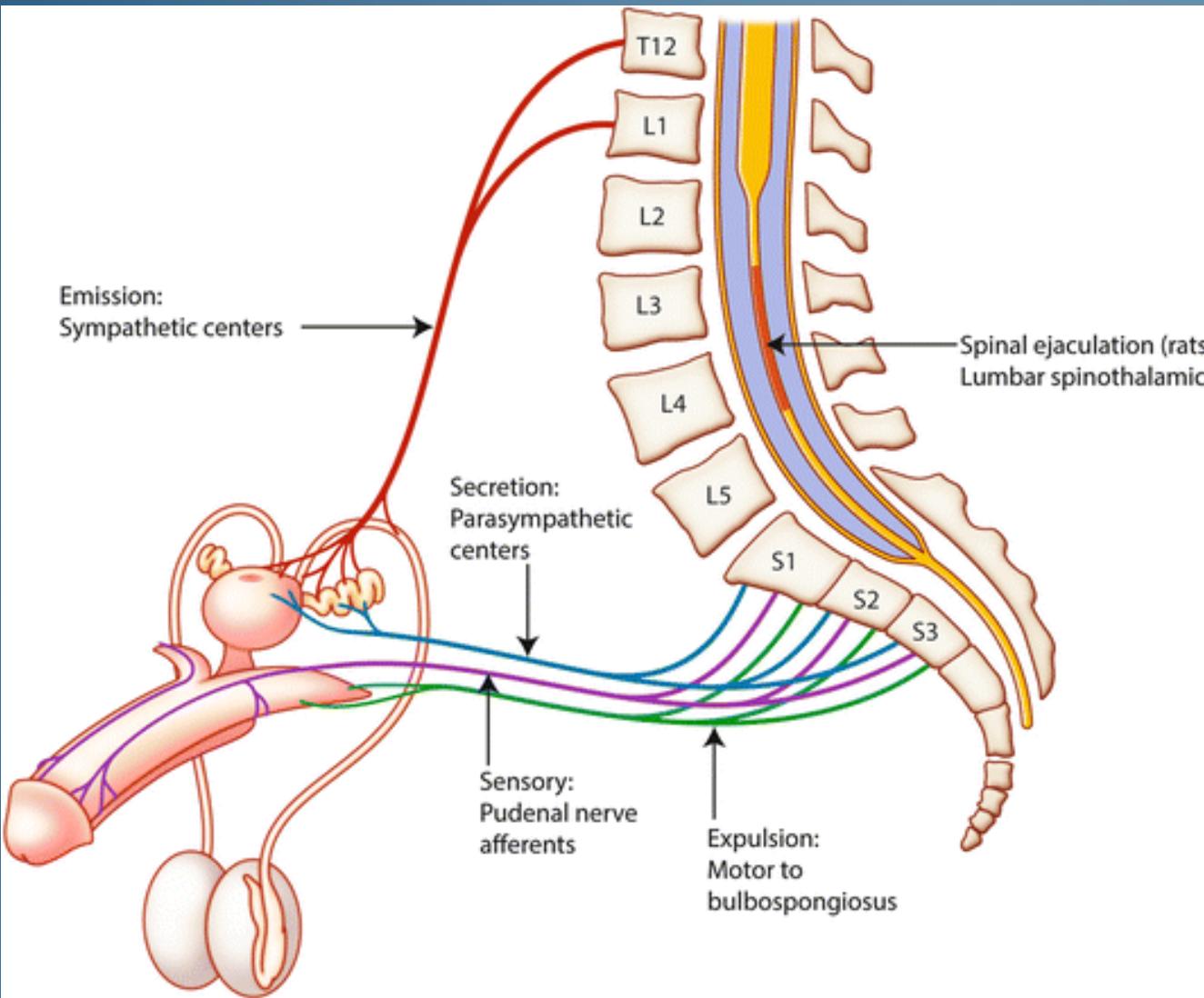
Intolerance

Judgment

IMPACT ON SEXUAL FUNCTION

- Erectile function
 - Studies demonstrates that over half of men undergoing radiation therapy develop worsening erectile dysfunction, with several studies demonstrating that **61-66% of men are unable to achieve erections firm enough for sexual activity 2-years following radiation therapy.**
 - Immediately following radical prostatectomy, 90% of men report erectile function that is not satisfactory for penetrative sexual intercourse. **With longer follow-up, roughly 60-80% of men report some form of erectile dysfunction following surgery.** These rates are dependent on baseline erectile function and nerve-sparing at the time of prostatectomy—with nerve-sparing reducing the reported rates of erectile dysfunction decreases to roughly 50% with longer-term follow-up.
 - Erectile dysfunction following localized treatment is common and is a function of baseline erectile function, competing comorbid conditions, psychologic health, and technical considerations at the time of treatment.



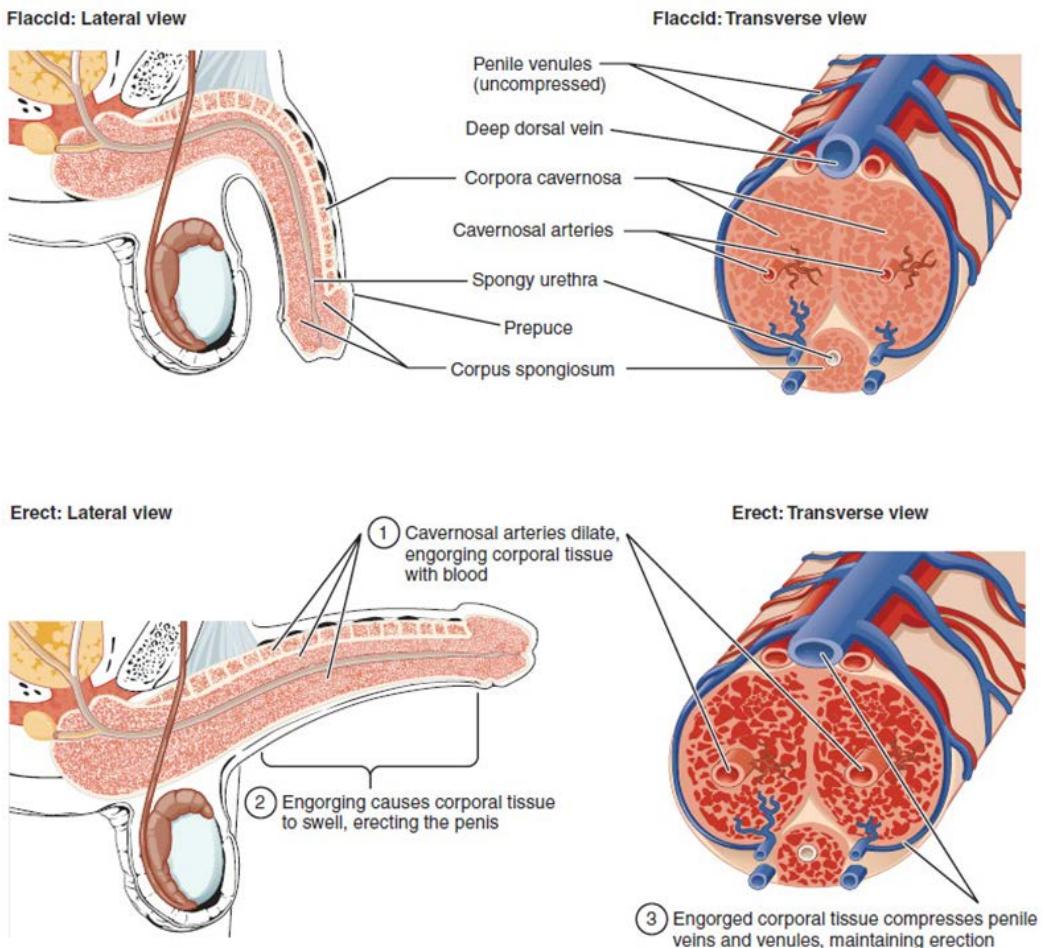


STIMULATION/EJACULATION

"POINT" (ERCTION) =
PARASYMPATHETICS

"SHOOT" (EJACULATION) =
SYMPATHETICS

CAVERNOSAL OXYGENATION





ERECTILE DYSFUNCTION (ED)

- **Inability to obtain and/or maintain an erection firm enough for satisfactory sexual performance**
 - Organic, Psychogenic, or Mixed
- **Organic ED:** is due to physical defects and may be further classified into *vasculogenic, neurogenic, hormonal and cavernosal smooth muscle abnormalities*
- **Psychogenic ED:** caused by a host of factors including but not limited to *anxiety, guilt, lack of confidence, depression and/or conflict about sexual issues. High association with performance anxiety.*
- **BOTH ETIOLOGIES PERTAIN TO POST-PROSTATE CANCER SURVIVORS.**

PATHOPHYSIOLOGY OF ED

**ENDOTHELIAL
DAMAGE**

**NEURAL
INJURY**

**SMOOTH
MUSCLE
ATROPHY**

PENILE REHAB – GETTING BACK TO BASELINE

- Goal to achieve pre-prostate cancer (PCa) erectile and sexual function.
 - *Erectile Function Recovery Rate after Radical Prostatectomy: A Meta-Analysis.* Tal R. et al. JSM, 6 (9), pp. 2538-2546
 - About a 60% EFR 18-24 mo post RP.
 - *multiple factors influence this outcome
- #BTB – utilizing medications and devices to help recover baseline erectile function post PCa.
 - Erection based, not sex based.
 - Bringing blood into the cavernosa
 - Use it or lose it – Preservation of endothelial tissue and preventing collagenization.
 - Conceptually, casted arm and biceps atrophy.

FACTORS INFLUENCING RECOVERY

Pre-op baseline EF

Degree of nerve sparing

Age

Medical Comorbidities



TREATMENTS

- PDE5i
 - +/- VED/tension band
- ICI therapy
- Implants
 - Coloplast – Titan series
 - AMS 700

TREATMENTS

- PDE5i – Low dose nightly then gradually increase
 - *Sildenafil 20 mg qnightly/100 mg prn
 - Tadalafil – 5 mg daily vs 20 mg prn
- Tips:
 1. OOP cost
 2. Correct use
 3. Timing
 4. Contraindications
 5. Integration

PDE5 INHIBITORS

Drug Name	Trade Name	Tmax (hours)	Serum Half Life (hours)
Sildenafil	Viagra®, Revatio®	1	3 - 5
Vardenafil	Levitra®, Staxyn®	1	3 - 5
Tadalafil	Cialis®	2	18
Avanafil	Stendra™	0.5 - 1.5	~6
Lodenafil†	Helleva™	1.2	2
Mirodenafil†	Mvix™	1.125	2.5



THE PILLS WERE WORKING...

- History:

- Pt's 6 week post RP NSS responding to PDE5i
- Then around 3-4 mo no longer responsive (penetrative)...
 - Why?

VACUUM ERECTION DEVICE (VED)

Devices create a vacuum around the flaccid penis, which causes dilation of the cavernous spaces by negative pressure, drawing venous blood into the penis

Coupled with a constriction device (or commonly known as a “c*ck ring”... you can try to give it a polite term, but most won’t get it otherwise).

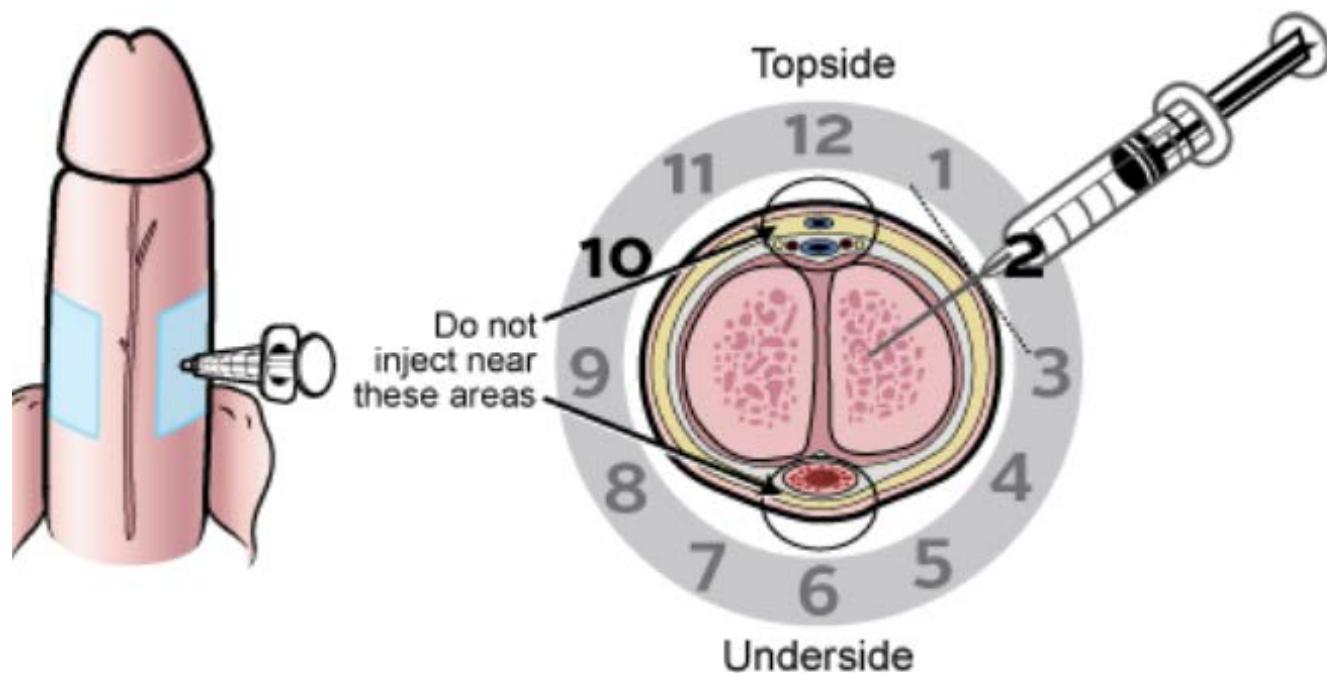
- At the base of the penis, which prevents venous outflow producing and maintaining an erection

Use with caution and **no longer than 30 mins:**

- May lead to petechiae formation or hematoma if the device is over-pressurized.
- Ecchymosis or even skin necrosis may also occur at the site of the constriction band if left on for too long a time
- Depending on tightness of the ring, disruption of ejaculation may occur; this may lead to pain with ejaculation, personal or partner distress, potential disruption of planned fertility

INTRACAVERNOSAL INJECTIONS (ICI)

- Alprostadil (Edex) PGE-1
 - FDA approved ICI therapy, available in retail pharmacies but \$\$\$
- Bi-Mix: Papaverine + Phentolamine
- Trimix: PGE1 (Alprostadil) + Papaverine + Phentolamine (alpha-blocker)
- Quad Mix: just add Atropine 0.1 mg/mL.





INTRACAVERNOSAL INJECTION

- PGE1 (Alprostadil) is FDA-approved for monotherapy by penile injection
- Papaverine and phentolamine are not FDA approved for this indication but are widely used (through sterile compounding pharmacies)
- **Papaverine is a non-specific phosphodiesterase inhibitor and increases intracellular levels of both cAMP and cGMP**
- **Phentolamine is an alpha-1 adrenergic receptor blocker which reduces sympathetic tone in the penis, thereby opposing vasoconstriction**
 - Compound formulations that include two of these erectile ingredients – papaverine and phentolamine – are called “Bimix.” Formulations with all three, papaverine, phentolamine, and PGE-1, are called “Trimix.”
- No standardized formula and results can vary from pharmacy to pharmacy, and each pharmacy may produce a solution that differs markedly in concentrations. So having familiarity with specific contents from specific pharmacies, is essential.
 - i.e. Trimix #1 from IVCCWI, PGE-1 20 mg/mL, Papavarine 30 mg/mL, and Phenotolamine 1.0 mg/mL.

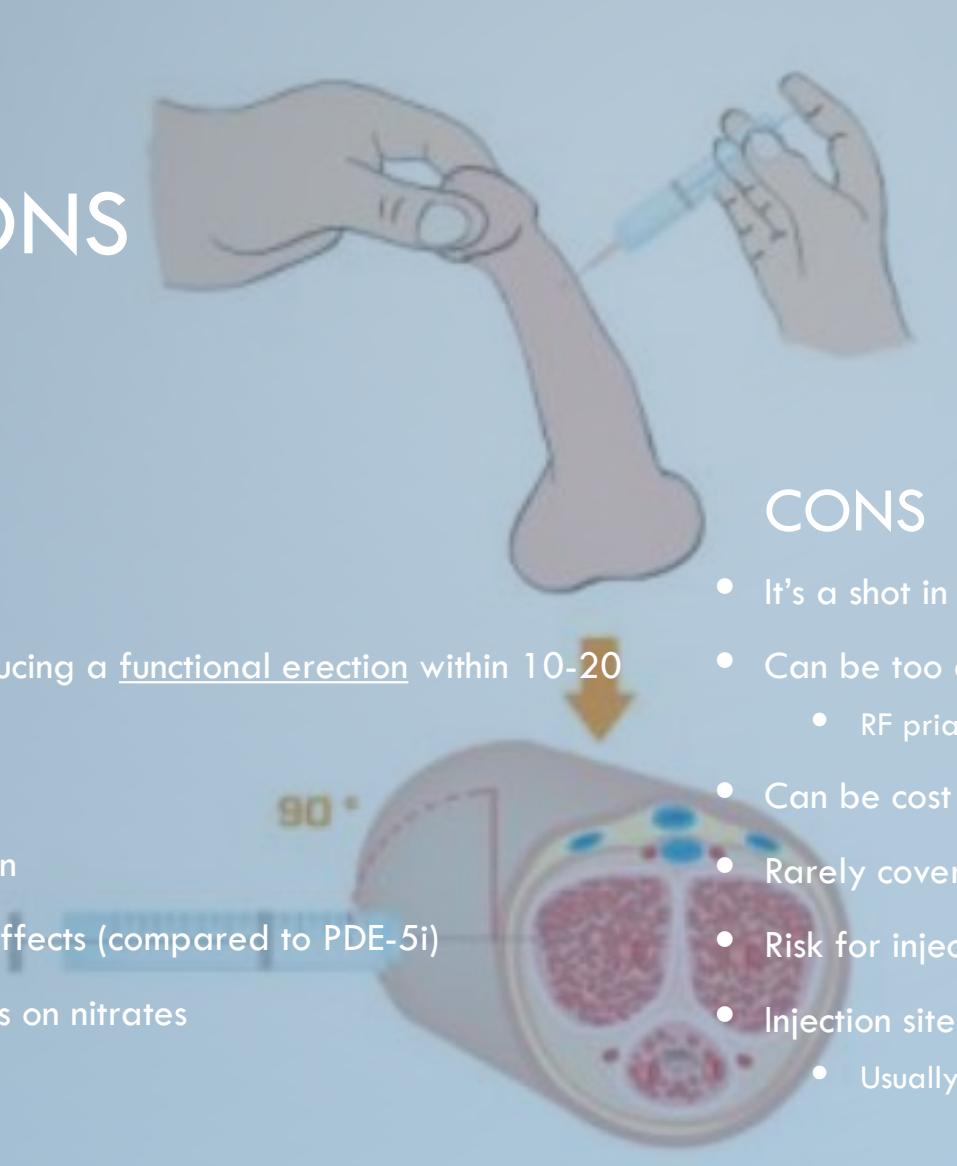
INJECTIONS

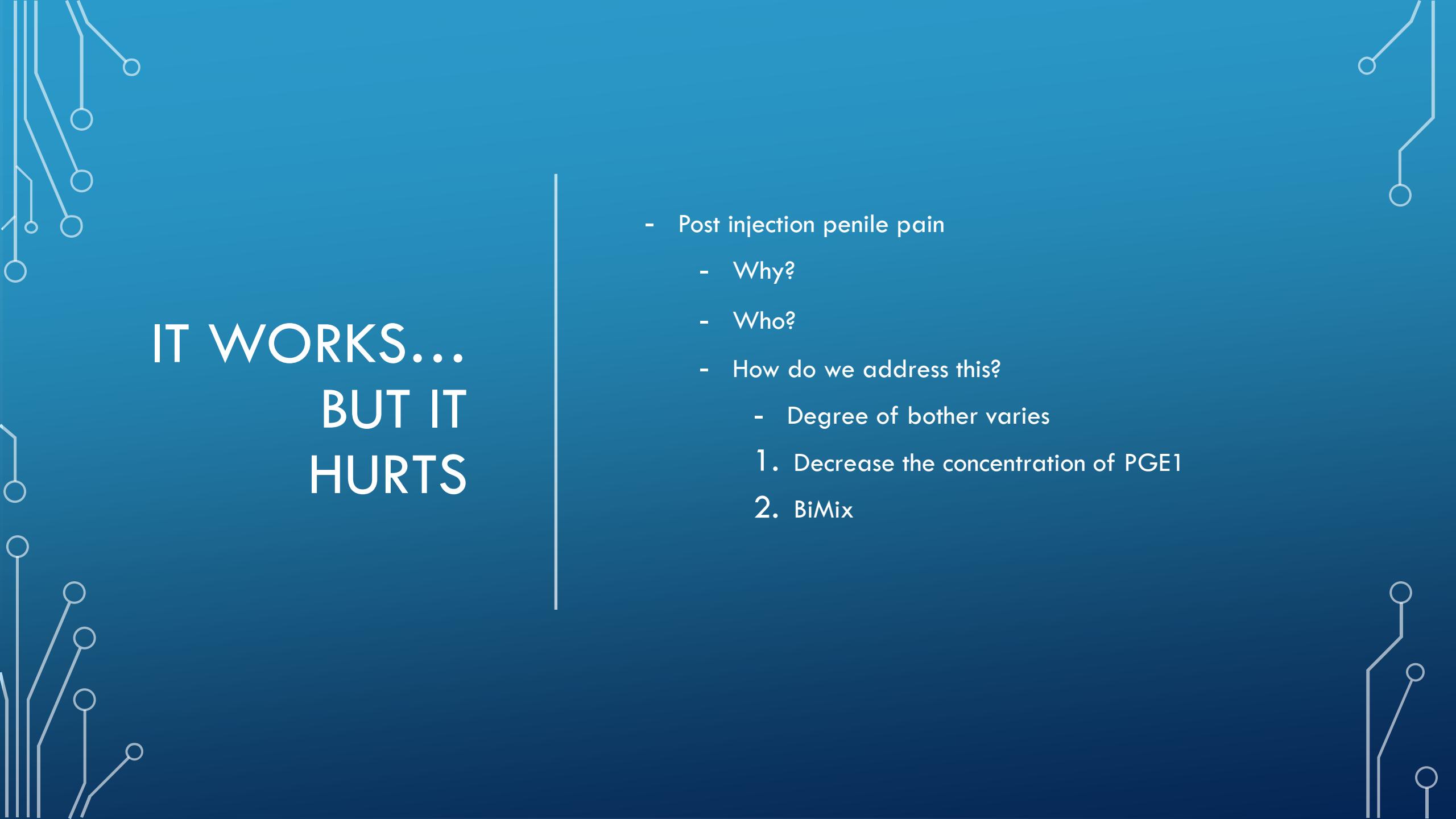
PROS

- Very effective
- Short acting, producing a functional erection within 10-20 mins.
- Duration varies*
- Non-surgical option
- No systemic side effects (compared to PDE-5i)
- Can be used in pt's on nitrates

CONS

- It's a shot in the penis
- Can be too effective
 - RF priapism much greater compared to PDE-5i
- Can be cost prohibitive
- Rarely covered by insurance
- Risk for injection site scarring
- Injection site pain is common
 - Usually from PGE-1





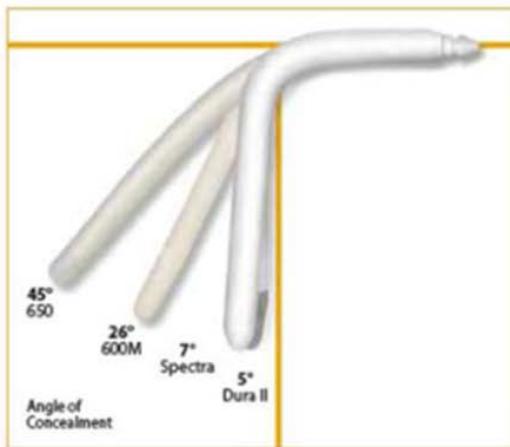
IT WORKS... BUT IT HURTS

- Post injection penile pain
 - Why?
 - Who?
 - How do we address this?
 - Degree of bother varies
 - 1. Decrease the concentration of PGE1
 - 2. BiMix

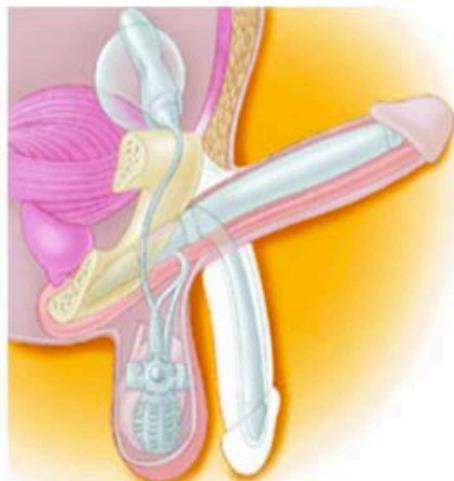
PENILE PROSTHETIC – SURGICAL OPTION FOR ED

- A penile implant is a device that is surgically implanted into the corpora cavernosa.
- Penile implants are used in patients who:
 - Have failed non-surgical management of ED
 - Who are not candidates for non-surgical management or
 - Cannot tolerate non-surgical management or find it unpalatable

Non-inflatable Penile Implant



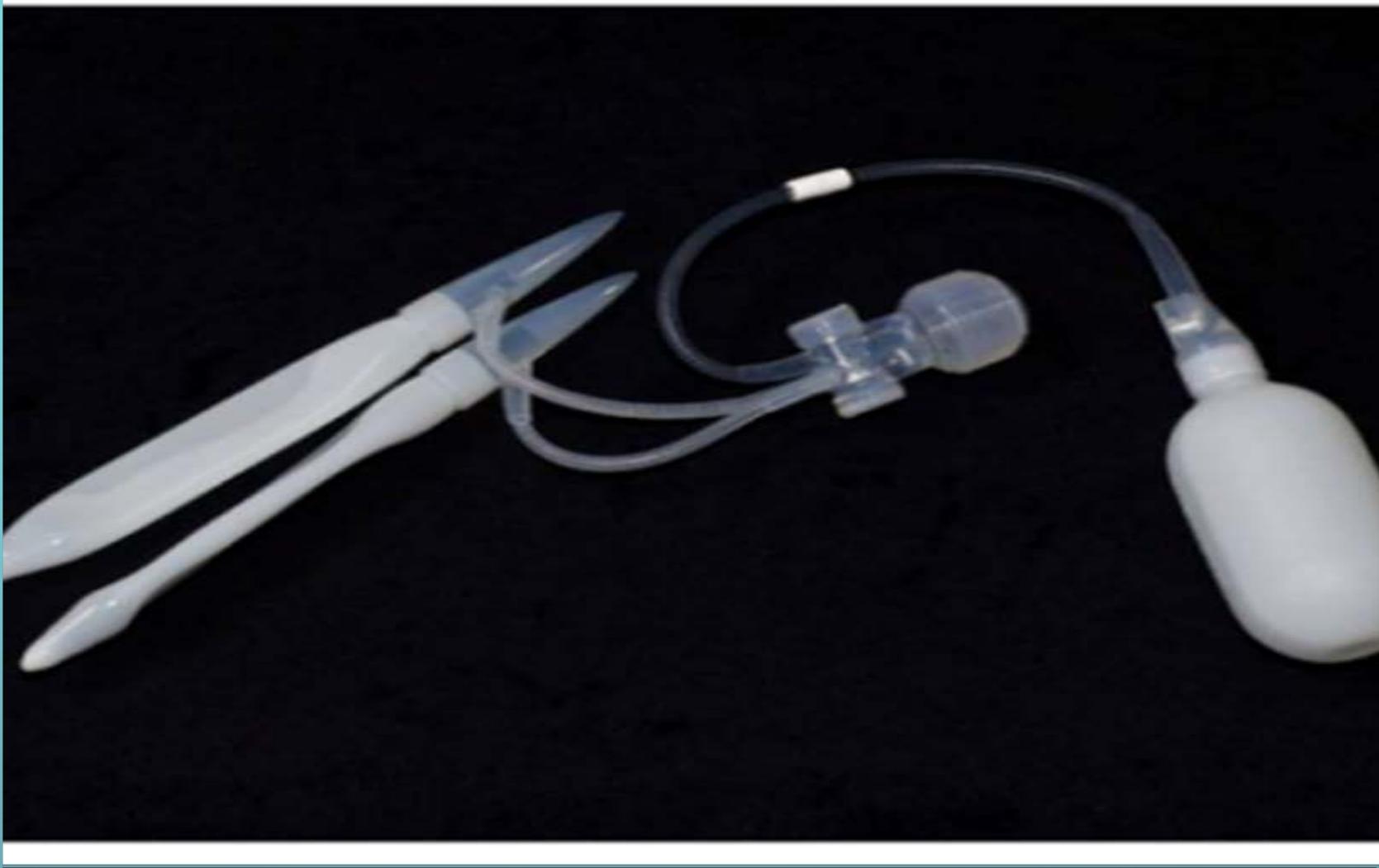
AMS 700 series® 3-piece IPP



PENILE PROSTHETICS SURGICAL OPTION

- Malleable penile prosthesis
 - Used for patients who have physical barriers to inflatable or desire an "easier" device
- Inflatable penile prosthesis
 - 3 piece
 - Durable (15 years on average before replacement)

Coloplast Titan®



ORGASMIC DYSFUNCTION

Climacturia:

- ~60% pt's of men
- Volume highly variable
- Level of distress is also variable and can differ between pt and partner.
- Good news, it's usually self limiting.
- Treatment: Best method is with a constriction ring but efficacy will depend on rigidity.

Delayed orgasm, orgasm anhedonia:

- Medication s/e, psychologic, hormonal, neuropathy...

LIBIDO

More common with ADT and RT



Can be multifactorial



Usually hormonal – hypogonadal... do we treat?

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QUESTIONS?