



Straight Talk on Peyronie's:
Game-Changing Therapies for a Challenging Condition

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Peyronie's Disease (PD) - Background



First described in 1743 by François Gigot de la Peyronie

Termed "induratio penis plastica"

Recognized as fibrotic disorder of tunica albuginea

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Peyronie's Disease (PD)



Progressive condition resulting in **fibrous plaque formation within the tunica albuginea (TA) of the penis**, in some cases leading to **penile deformity** such as shortening, narrowing, and/or curvature, pain with intercourse, inability to have intercourse, and distress.

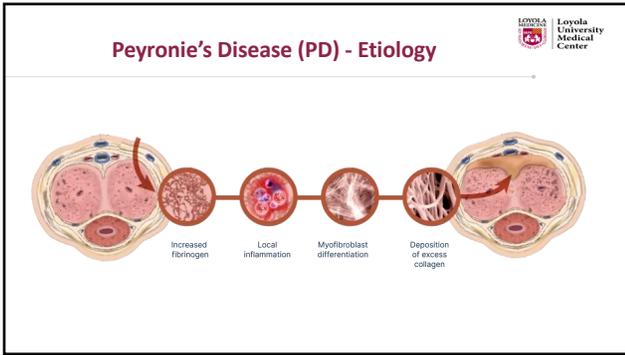
The incidence of PD is estimated to be 22.4 to 25.6 cases per 100,000 men (9%).

The condition most commonly presents in men **50 to 60 years old**

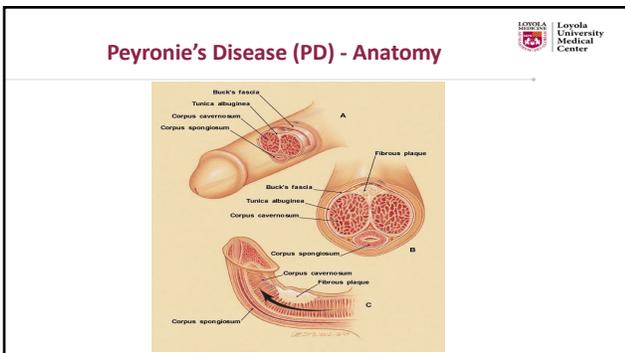
Based on the current data, Caucasian men are most commonly affected, however, this may be due to a **lack of data** evaluating and addressing racial differences and PD.

Association with hypogonadism, Dupuytren's Contracture, diabetes (up to 20%), smoking and alcohol, penile fracture/trauma, RP (15% incidence)

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CASE 1

53y male with upward/dorsal curvature about midshaft for the past year.

He has no pain and feels a bump.

He **CAN** achieve erections. SHIM 24/25.

He has good desire and libido.

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Peyronie's Disease - EVALUATION

HISTORY:
 Duration of symptoms
 Nature of deformity
Presence of Pain (with or without erection)
 Change in deformity over time
Presence of ED – SHIM/IEEF scores

PHYSICAL EXAM:
 Penis on stretch
 Palpation
WHAT TO DOCUMENT?

DEFORMITY ASSESSMENT:
 Direction of curve, hourglass deformity, rotation, indentation
 Use patient self assessment? At home photos?
ICI in office/Goniometer - SUPERIOR

LABS:
 ? Testosterone

IMAGING:
Penile doppler
 • Plaque calcification
 • Penile length
 • Hemodynamics
 ? MRI

BOTHER QUESTIONNAIRE SCORE

PSYCHOLOGICAL READINESS ASSESSMENT
Not always about the curve
Intimate couples

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Peyronie's Disease - Assessment

Peyronie's Disease Bother Domain Questionnaire

PATIENT: Answer this questionnaire* and provide to your healthcare professional (HCP)

Use this scale to identify how bothered you are by your Peyronie's disease symptoms.

0	1	2	3	4
<small>Not at all bothered</small>	<small>Slightly bothered</small>	<small>Moderately bothered</small>	<small>Very bothered</small>	<small>Extremely bothered</small>

Please select the most appropriate answer for each question.

Question 1: Thinking about the LAST time you had an erection, how bothered were you by any pain or discomfort you may have felt in your urethra?
 Did not bother me at all
 Not much bothered
 Moderately bothered
 Very bothered
 Extremely bothered

Question 2: Thinking about the LAST TIME you looked at your erect penis, how bothered were you by the way your penis looked?
 Not much bothered
 Moderately bothered
 Very bothered
 Extremely bothered

Question 3: Does your Peyronie's disease make having vaginal intercourse difficult or impossible?
 Not at all
 Not much
 Moderately
 Very
 Extremely

Question 4: Are you having vaginal intercourse LESS OFTEN than you would like due to your Peyronie's disease?
 Not at all
 Not much
 Moderately
 Very
 Extremely

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Peyronie's Guideline Statements - Diagnosis

- Clinicians should engage in a diagnostic process to **document the signs and symptoms that characterize Peyronie's disease**. The minimum requirements for this examination are a careful history (to assess penile deformity, interference with intercourse, penile pain, and/or distress) and a physical exam of the genitalia (to assess for palpable abnormalities of the penis).
- Clinicians should perform an **in-office intracavernosal injection (ICI) test with or without duplex Doppler ultrasound prior to invasive intervention**.
- Clinicians should evaluate and treat a man with Peyronie's disease only when he/she **has the experience and diagnostic tools to appropriately evaluate, counsel, and treat the condition**.

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Peyronie's Disease (PD) – Natural History

Early/Inflammatory Phase - resolves
 pain
 tenderness
 palpable plaques

Late/Fibrotic Phase - persists
 Painless deformity

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Peyronie's Disease – Plaque Assessment

CONSIDER USING VISUAL AIDS LIKE THE FOLLOWING TO HELP PATIENTS DESCRIBE THE DEGREE OF CURVATURE!

Having a visual representation may help patients articulate what they're experiencing, giving you vital insights to guide their care.

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Peyronie's Disease – Plaque Assessment

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CASE 1

Penile Doppler with ICI/caverject

Plaque was palpated midshaft dorsally: **2 cm plaque**

Good inflow and outflow. Minimal calcium deposits.

Pt did obtain erection sufficient to assess curve.

This curve was measured by Goniometer: **Curve was 45 degrees dorsal MIDSHAFT**

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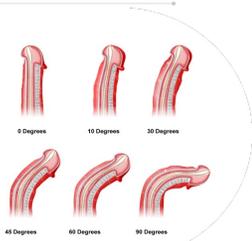
CASE 1 – SUMMARY of ASSESSMENT

Stable midshaft dorsal 2 cm plaque

No Erectile Dysfunction

45 degree curve dorsal midshaft

Treatment Options?



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Peyronie’s Guideline Statements - Treatment

4. Clinicians should discuss with patients the available treatment options and the known benefits and risks/burdens associated with each treatment.

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Peyronie's - Treatment

Oral Therapy

- There is a lack of high quality, level one data to support any oral treatment regimens for PD.
 - Current **AUA Peyronie's Disease Guidelines** (statement 8) recommend **AGAINST** offering oral therapy with Vitamin E, tamoxifen, procarbazine, omega-3 fatty acids, or a combination of vitamin E with L-carnitine due to a lack of demonstrated efficacy.
 - Use of **pentoxifylline/trental**
- Patients with PD-associated symptoms including pain and erectile dysfunction (ED) can be offered **non-steroidal anti-inflammatories and phosphodiesterase-5 inhibitors**

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Peyronie's – Treatment w/ Pentoxifylline (Trental)

<p>Non-specific PDE inhibitor</p> <p>Anti-inflammatory: inflammation and fibrosis</p> <p>In vitro:</p> <ul style="list-style-type: none"> upregulation of cAMP decreased collagen I production upregulation of osteoclastic activity <p>In vivo:</p> <ul style="list-style-type: none"> Decreased profibrotic factors and plaque size <p>Case reports:</p> <ul style="list-style-type: none"> May prevent corporal fibrosis after priapism Decrease calcifications in new-onset PD <p>Side effects:</p> <ul style="list-style-type: none"> nausea (14%) dizziness (9%) Headache (3.5%) bleeding – mild antiplatelet effect <p>Higher quality data is needed – No RCTs</p>	<p>Off label use</p> <p>Early/acute phase Peyronie's disease</p> <p>Patients with non-calcified plaques</p> <p>Progressive curvature</p> <p>Plaque calcification prevention</p> <p>Adjunct with:</p> <ul style="list-style-type: none"> •penile traction therapy •intralesional therapy •PDES inhibitors <p>Typical dosing: Pentoxifylline 400 mg PO TID</p> <p>Duration: 3–6 months minimum (6–12 months)</p> <p>Some studies show reduced progression of calcified plaques</p> <p>Small prospective trials suggest curvature improvement of ~5–10°</p>
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Peyronie's - Treatment

Intralesional Therapy

- Per AUA guidelines the following injections maybe offered:
 - **Intralesional Collagenase Clostridium Histolyticum (CCH/Xiaflex)**
 - Verapamil
 - Interferon alpha-2b
- Counseling
- Experience

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Peyronie's Guideline Statements— Intralesional Treatment (Xiaflex)

8. Clinicians may administer **intralesional collagenase clostridium histolyticum (Xiaflex) in combination with modeling** by the clinician and by the patient for the reduction of penile curvature in patients with **stable Peyronie's disease, penile curvature >30° and <90°, and intact erectile function** (with or without the use of medications).

9. Clinicians should counsel patients with Peyronie's disease prior to beginning treatment with intralesional collagenase regarding potential occurrence of **adverse events, including penile ecchymosis, swelling, pain, and corporal rupture**.

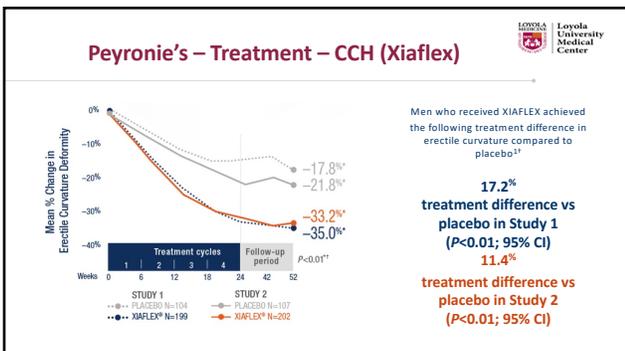
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Peyronie's – Treatment – CCH (Xiaflex)

- Approved by FDA December 2013: weakens plaque, modeling reduces the curve
- Enzymatic degradation of Type I and Type III collagen
- Use for dorsal and lateral plaques - **PALPABLE PLAQUE**
- Typically, not used ventral plaques – urethral injury risk
- **Typically used in the stable phase**, but potential role for use in acute phase
- Patients **CAN** have subsequent surgical correction if needed
- Can use with **traction device**
- **COMPLICATIONS:** injection site bruising/hematoma formation (35-70%), penile fracture (corporal rupture, <1%). This may have been related to modeling, the treatment itself, or the resumption of sexual relations prior to the advised two-week hiatus (a four-week hiatus is now recommended). Recent evidence supports the conservative management of suspected fractures in men undergoing CCH.

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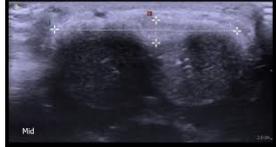


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Peyronie's – Treatment – CCH (Xiaflex)



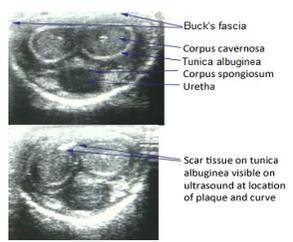
Ultrasound Findings Ideal for Xiaflex Treatment:



- Minimal/No Calcification:** Plaques with significant or complete calcification (seen as bright white spots with shadowing on ultrasound) have a lower response rate to Xiaflex.
- Palpable Plaque:** The plaque must be identifiable via ultrasound and palpable during examination to ensure accurate injection.
- Location:** The plaque should not involve or be immediately adjacent to the urethra (10-20% of cases) due to the risk of serious complications.
- Stable Phase:** The plaque is generally treated with Xiaflex after the active, painful phase has stabilized.

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Peyronie's – Treatment – CCH (Xiaflex)

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Peyronie's – Treatment – CCH (Xiaflex)



CYCLES

1	1 st INJECTION 1-3 days	2 nd INJECTION 1-3 days	HCP MODELING 1-3 days	Patient at Home DAILY MODELING Approximately 6 weeks
2	1 st INJECTION 1-3 days	2 nd INJECTION 1-3 days	HCP MODELING 1-3 days	Patient at Home DAILY MODELING Approximately 6 weeks
3	1 st INJECTION 1-3 days	2 nd INJECTION 1-3 days	HCP MODELING 1-3 days	Patient at Home DAILY MODELING Approximately 6 weeks
4	1 st INJECTION 1-3 days	2 nd INJECTION 1-3 days	HCP MODELING 1-3 days	Patient at Home DAILY MODELING Approximately 6 weeks

- Treatment takes time
 - **Treatment over at least 24 weeks**
 - **Insurance approval delays**
 - Financial Assistance Programs
 - **Downtime with no sex**
- Costly
 - 10x's more costly than plication
- Does not improve Erectile Function
- 80% of men in Studies 1 and 2 received 8 injections over 4 cycles
- **Most Effective Non-Surgical Treatment**

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Peyronie's – Treatment – CCH (Xiaflex) - Technique

Inject laterally without going through plaque.

Inject the entire dose (0.58 mg = 0.25mL)

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Peyronie's – Treatment – CCH (Xiaflex)

By you in the office:
Perform in-office penile modeling procedure as described in the Prescribing Information during each treatment cycle 1 to 3 days after the second injection of XIAFLEX.

By patients at home:
Instruct patients on how to self-perform penile modeling activities at home each day for 6 weeks after each treatment cycle as described in the Medication Guide.

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Peyronie's – Treatment – CCH (Xiaflex)

EVERY PART OF TREATMENT IS IMPORTANT!

<p>INJECTION OF XIAFLEX Helps weaken and may help disrupt Peyronie's plaque!</p>	<p>PENILE MODELING Helps to stretch and elongate the treated plaque!</p>	<p>PATIENT AT-HOME DAILY MODELING Gentle stretching and straightening activities help reduce erectile curvature!</p>
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PLEASE NOTE: In-office HCP penile modeling is to be conducted on a flaccid penis. Patient at home daily modeling consists of stretching the flaccid penis and straightening the erect penis following a spontaneous erection.

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CASE 1

Patient counseled on his treatment options and opted for **Xiaflex Treatment**.

Insurance approved.

Underwent all 4 cycles with success!

12 degree improvement in curve and he is **HAPPY!**

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Peyronie's - Treatment

Other options

- ESWL
 - Per AUA guidelines should **NOT** use to reduce curvature or plaque size but may offer to **improve penile pain**
- Penile Traction
 - Very mild benefit
 - Compliance required
 - Can be used in conjunction with other conservative treatments

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Peyronie's - Treatment

Surgical Management

- Presence of Erectile Dysfunction
- Plaque?
- Degree of curvature
- Counseling on surgical options

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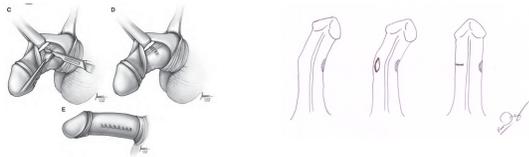
Peyronie's Guideline Statements - Plication



18. Clinicians may offer **tunical plication** surgery to patients whose rigidity is adequate for coitus (with or without pharmacotherapy and/or vacuum device therapy) to improve penile curvature.

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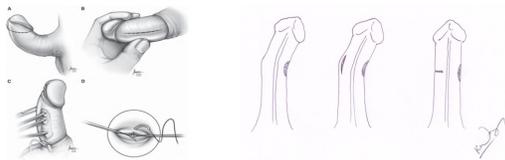
Peyronie's – Treatment with Plication



The Nesbit Procedure: A full-thickness longitudinal ellipsoid segment of tunica albuginea is excised on the convex side of the penis (opposite the curvature). The defect is then closed to promote penile straightening.

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Peyronie's – Treatment with Plication



The Yachia Procedure: A full-thickness vertical incision is made in the tunica albuginea on the convex side of the penis (opposite the curvature). The incision is closed transversely (Heineke-Mikulicz) fashion. As compared with the Nesbit procedure, there is no tissue excision.

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Peyronie's – Treatment with Plication

The 16 Dot Procedure: No tunical incision or excision

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Peyronie's – Treatment Overview

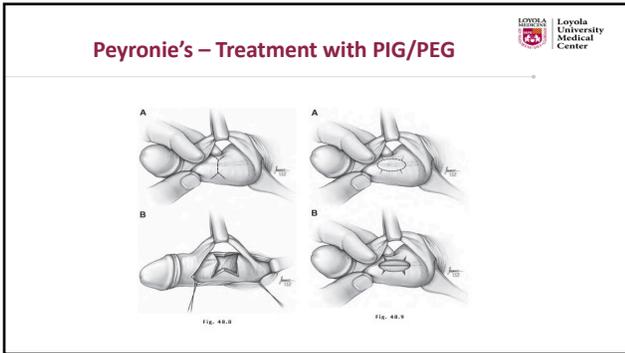
Technique	Indication	Benefits	Drawbacks
Plication	Good erections, <60–70° curve	Simple, quick, low risk	Shortening, no plaque removal
Grafting	Good erections, >60°, hourglass/deformity	Restores length, more cosmetic	Risk of ED, longer recovery
IPP + Modeling/Grafting	ED present	Straightens & restores rigidity	Invasive, prosthesis commitment

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PD Treatments in Men WITH Adequate Erections

	Traction	Intralesional	Plication	PIG/PEG
Address Mild Curvatures	🟡 Maybe	✅ Yes	✅ Yes	✅ Yes
Address Severe Curvatures	❌ No	🟡 Maybe	✅ Yes	✅ Yes
Penile Shortening	No	No	❌ Significant	✅ Unlikely
Restore Penile Length	✅ Yes	❌ No	❌ No	✅ Most Likely
Improve Girth Loss	No	No	❌ May exacerbate	✅ Best to Correct
Key Risks	Failure to improve	Pain Hematoma Fracture (?) Failure to improve	Penile Shortening Sensory Changes	! Erectile Dysfunction Sensory Changes
Surgical Complexity	N/a	N/a	Moderate complexity	Most Complex

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Peyronie's Guideline Statements - Treatment

19. Clinicians may offer plaque incision or excision and/or grafting to patients with deformities whose rigidity is adequate for coitus (with or without pharmacotherapy and/or vacuum device therapy) to improve penile curvature.

20. Clinicians may offer **penile prosthesis surgery** to patients with **Peyronie's disease with erectile dysfunction (ED)** and/or penile deformity sufficient to prevent coitus despite pharmacotherapy and/or vacuum device therapy.

21. Clinicians may perform adjunctive intra-operative procedures, such as **modeling, plication or incision/grafting**, when significant penile deformity persists after insertion of the penile prosthesis.

22. Clinicians should use **inflatable penile prosthesis** for patients undergoing penile prosthetic surgery for the treatment of Peyronie's disease.

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CASE 2

73-year-old male, h/o Robotic-assisted Laparoscopic Radical Prostatectomy with no erections for 12 years is undergoing an IPP (penoscrotal approach).

We implant the device and cycle it.

It looks like this:

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CASE 2

Severe curvature 75°



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CASE 2

Severe curvature 75°



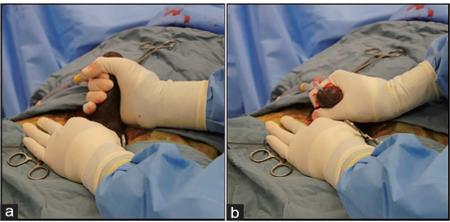
What should we do?

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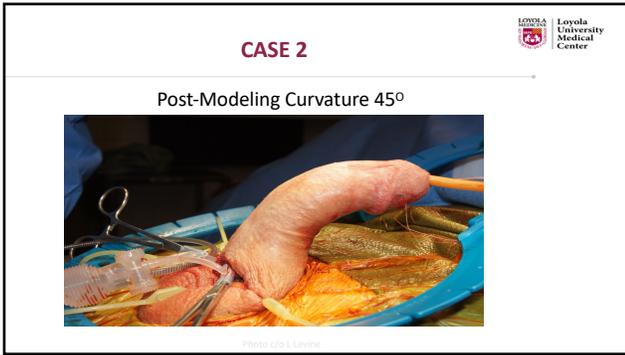
CASE 2

Manual Modeling



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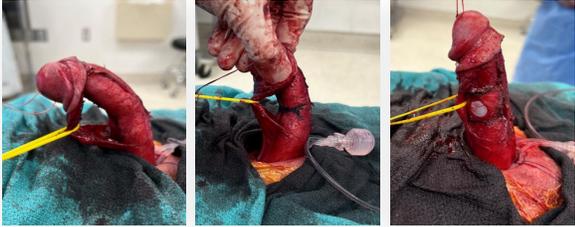


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CASE 2

Double-Y Incision is incised on 15W coagulation current and modeling performed

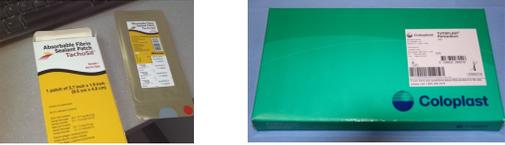


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If Defect > 2cm → Graft

Tachosil (equine collagen) Tutoplast human pericardium



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CASE 2

Tachosil graft applied and Buck's fascia closed over graft



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Effects of Peyronie's to Surgically Address

- Curvature
- Loss of length
- Loss of girth
 - Indentation
 - Narrowing
 - Hourglass
 - Buckling/instability
- ED




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PD Treatments in Men WITHOUT Adequate Erections

	IPP with Modeling	IPP with TAP	IPP with PIG
Address Mild Curvatures	✔ Yes	✔ Yes	✔ Yes
Address Severe Curvatures	✘ No	✔ Yes	✔ Yes
Penile Shortening	Unlikely	✘ Significant	Least Likely
Restore Penile Length	✘ No	✘ No	✔ Most Likely
Improve Girth Loss	Probably	Probably	✔ Most Likely
Key Risks	Urethral Injury	Cylinder Injury Penile Shortening Sensory Changes	! ! Glans Necrosis Sensory Changes Cylinder Herniation
Surgical Complexity	Least Complex	Moderate Complexity	Most Complex

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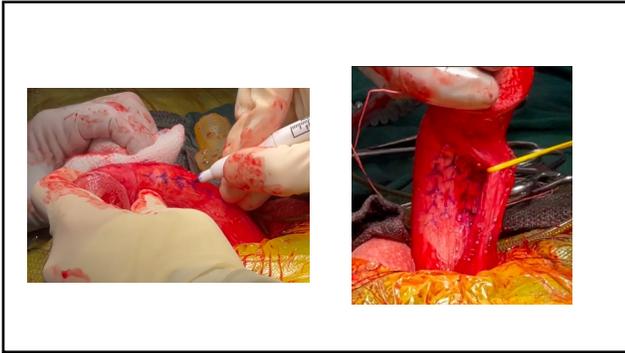


IPP/PIG defects can be quite large

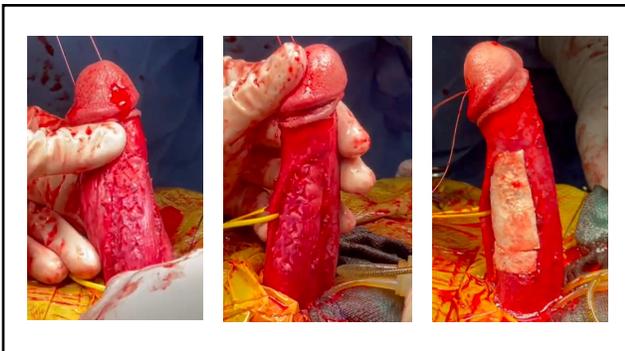
- Cylinder herniation through graft site is possible
- Using multiple smaller incisions may make this less likely



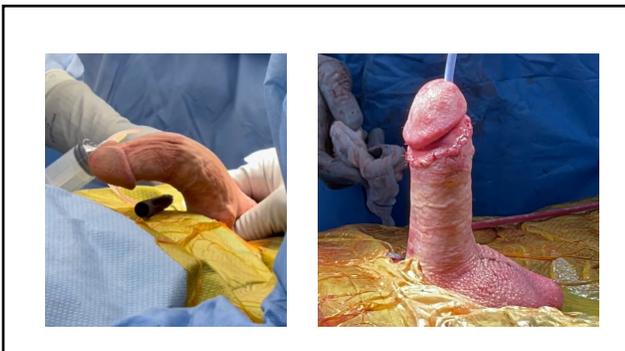
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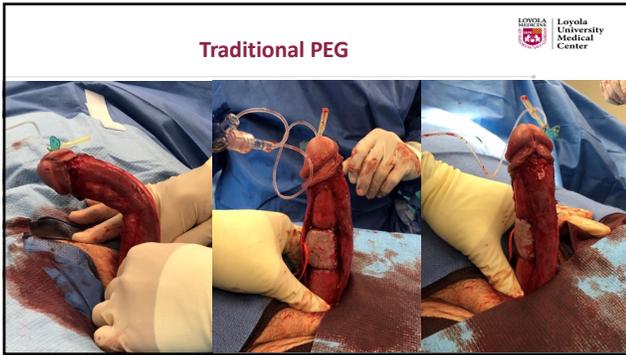
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Peyronie's – Treatment Counseling

Important to set expectations early

Shared decision making

What factors should be considered?

Can make it better but not perfect

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PD Treatment Considerations

Significant psychological impact

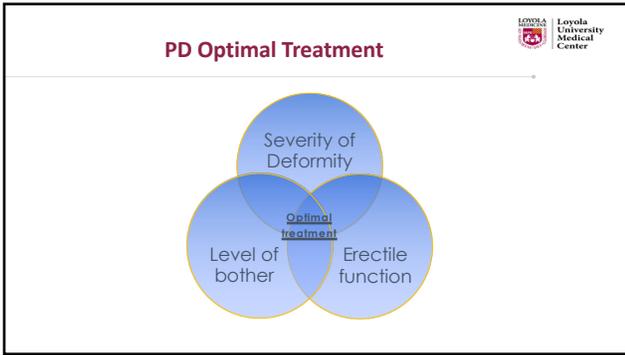
Not only about the curvature

Advancements in length and girth loss

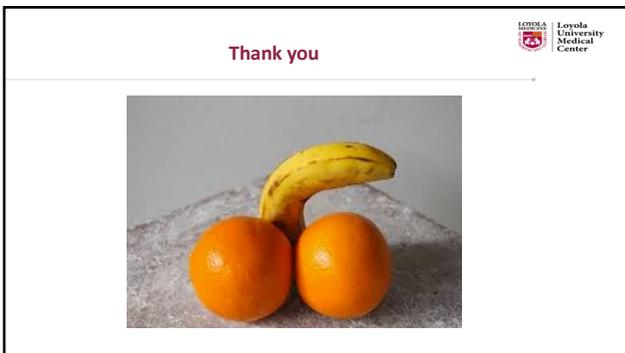
Surgical Approach individualized

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