

# UREGROW®

UROLOGY CELL THERAPY FOR  
URETHRAL STRICTURE



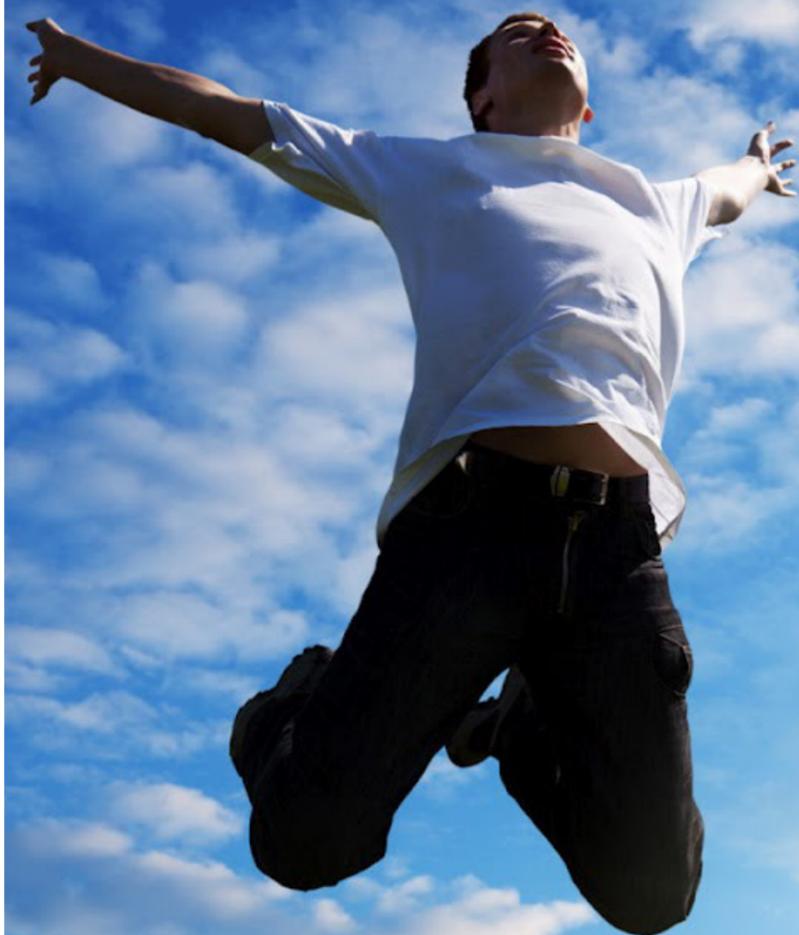
# REGROW® YOUR TISSUE

Mere Liye. Mera Apna.

This brochure describes a procedure for  
treating Urethral Stricture

Regenerated by  
**REGROW  
BIOSCIENCES®**  
Regrow your cells Rebuild your life

# GO WITH THE FLOW!

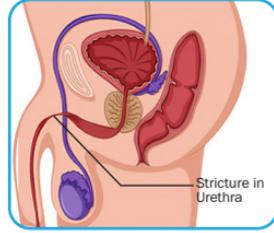


## **Disclaimer:**

The information presented by Regrow Biosciences Pvt. Ltd. is for educational purposes only and does not recommend self-management of health issues. The information should not be treated as comprehensive and does not intend to provide diagnosis, treatment or any medical advice. Individual results may vary and hence, it is advisable to consult your doctor regarding any medical or health related diagnosis or treatment options.

# A. URETHRAL STRICTURE

- The urethra is the tube that carries urine out of the body
- A urethral stricture is a narrowing of the urethra caused by injury, instrumentation error, infection, and certain non-infectious forms of urethritis
- The narrowing of the tube affects the flow of urine and leads to incomplete emptying of bladder
- Any section of your urethra may be affected.



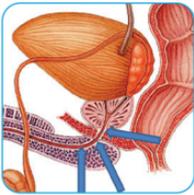
## Types of Urethral Strictures

- > Penile
- > Bulbar
- > Navicular
- > Prostatic
- > Membranous

## What Causes Urethral Strictures?

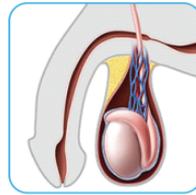
Common causes appear to be chronic inflammation or injury which leads to scarring of the urethra.

## Causes of Urethral Strictures



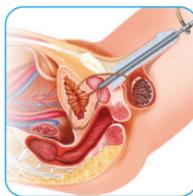
### INJURY

An injury to your penis or pelvic fracture  
*Eg: Falling on to the frame of the bike*



### INFECTION

An infection, most often sexually transmitted diseases  
*Eg: Gonorrhoea*



### IATROGENIC

IATROGENIC (Patients do not understand this term!)  
Major iatrogenic or idiopathic causes include urethral catheterization, cystoscopy, TURP (urethral surgery), and hypospadias surgery.  
*Even a kidney stone removal procedure may cause urethral stricture*

# Risk Factors That May Cause Urethral Strictures

- History of hypospadias surgery
- Traumatic injury/ Accident
- Prostate cancer treatment
- Perineal trauma
- Idiopathic Causes
- Urethritis
- Urethral catheterization
- Transurethral surgery /Transurethral resection of the prostate (TURP)
- Prostatectomy
- Lichen Sclerosus/Gonorrhoea
- Brachytherapy
- Cystoscopy

# Symptoms of Urethral Stricture



Weak urination



Pain during urination



Straining to urinate



Swelling of Prostate Gland



Inability to completely empty the bladder

# Need For Treatment

- A stricture puts more pressure on the bladder to pass urine.
- Due to incomplete voiding of bladder, accumulation of urine takes place. This makes you more prone to bladder, prostate and kidney infections.
- A ball of infection (an abscess) above the stricture may also develop, causing further damage to the urethra.

## Impact on Daily Life

The Quality of life (QOL) is severely impacted due to its negative impact on emotional, social and physical well-being of the patient and family.

- Sleep Disturbances
- Diminished social life
- Reduced working days, thereby loss of pay
- Impaired sexual intimacy with partner
- Emotional stress

## Self Diagnosis

AMERICAN UROLOGICAL ASSOCIATION (AUA) SYMPTOM SCORE records the severity of the stricture

### Self-Assessment Questionnaire for Urethral Stricture:

1.	Do you feel that your bladder is not completely empty after urinating?	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 0 No
2.	Do you need to urinate every 2 hours?	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 0 No
3.	While urinating, does your flow stop and start again for more than 2 times?	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 0 No
4.	Is it hard to wait when you need to urinate?	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 0 No
5.	Do you have a weak urinary stream?	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 0 No
6.	Do you need to put pressure or strain to start urinating?	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 0 No
7.	Do you feel the need of urination very frequently at night?	<input type="checkbox"/> 1 Yes <input type="checkbox"/> 0 No

**Note:** For each answer as “Yes” give yourself “1 mark” and for each answer as “No” give yourself “0 mark”.

Once you answer all the questions, total the marks of all the answers you provided.

If you get 2 or more than 2 marks, that could be a sign of urethral stricture and you need to consult with an Urologist.

# Diagnosis of Urethral Stricture

## Uroflowmetry

1. Uroflowmetry is performed by urinating into a special funnel. This funnel is connected to a measurement device that calculates the amount of urine passed, the rate of flow in seconds and the length of time it takes to completely empty the bladder. Uroflowmetry is a non-invasive diagnostic test.

## Other Diagnostic Techniques Include



URETHRO-CYSTOSCOPY



RETROGRADE URETHROGRAPHY (RUG)



ULTRASOUND URETHROGRAPHY



VOIDING CYSTOURETHROGRAM (VCUG)

- Your urologist will recommend you for the best option based on your symptoms

## CURRENT STANDARD OF CARE FOR URETHRAL STRICTURES

Surgical treatment is usually advised to improve the flow rate of urine, to ease symptoms and to prevent possible complications. Current surgical treatment modalities for Urethral Strictures are as below:

### 1. Dilation: Widening of the stricture

- Thin rods of increasing diameters are gently inserted into the urethra in order to open the urethral narrowing.

### **Limitations:**

- Quality of Life(QOL) is severely impacted
- Recurrence rate is very high
- Urinary infection is very high

### **2. Urethrotomy:**

- A rigid telescope (cystoscope) along with tiny knife is passed into your urethra to examine the narrowing after which your surgeon will use to make a cut in the scar tissue to make your urethra wider.

### **Limitations:**

- Recurrence of stricture is seen in > 90% of cases
- Temporary management of the problem, not a permanent solution
- Repeat surgeries increase healthcare costs
- Decrease in quality of life

### **3. Urethroplasty:**

- Urethroplasty is an open surgical reconstruction or replacement of the urethra that has been narrowed by urethral stricture.
- The stricture area is cut out and the two ends of the healthy urethra stitched together with large sized oral tissue grafts

### **Limitations:**

- Large buccal tissue mucosa taken for grafting causes oral cavity complications (Need not say buccal as we use the same)
- Highly invasive method of treatment.
- Length of urethra decreases
- Most patients develop erectile dys function and decreased sexual intimacy

## **TREATMENT OF URETHRAL STRICTURE WITH EPITHELIAL CELL THERAPY (UREGROW®)**

Cell Therapy- Autologous Adult Live Cultured Buccal Epithelial Cells (Uregrow®) is indicated to treat patients with Urethral Strictures. Uregrow® is India's 1<sup>st</sup> Cell Based Therapy to treat Urethral Strictures using patients' own cells (Autologous) in a natural and biological method.

[https://www.bostonscientific.com/content/dam/bostonscientific-anz/patients/downloads/Enlarged\\_Prostate\\_Symptom\\_Score\\_Questionnaire.pdf](https://www.bostonscientific.com/content/dam/bostonscientific-anz/patients/downloads/Enlarged_Prostate_Symptom_Score_Questionnaire.pdf)

This product has been approved by the CDSCO (DCGI, Ministry of Health and Family Welfare, Government of India) and supported by Department of Biotechnology (DBT, Ministry of Science and Technology, Government of India). It is widely accepted by various Urologists in India.

### Approved Indication For Uregrow®

Treatment of bulbar urethral stricture of at least 1-2 cm in length in males for age group 18-56 years. This treatment is autologous (auto = self) in nature.



**Step 1:** Tissue Harvest of buccal mucosa (oral tissue) from the patient



**Step 2:** Isolation of pure Epithelial cells



**Step 4:** Implantation of cultured Epithelial cells at stricture location back into same patient (Autologous)



**Step 3:** Cell culture in Regrow® GMP laboratory

## ELIGIBILITY FOR EPITHELIAL CELL THERAPY (UREGROW®)

- Person with complaint of difficulty while urinating and reduced stream of urine
- Person with complaint of pain during urination
- Person diagnosed with bulbar urethral stricture
- Person who has had previously failed attempts at dilation and urethrotomy procedures

## DO'S & DONT'S

### Precautions to be Taken Post Tissue Harvest

- Avoid spicy and hot food which requires chewing until you seek advice from your urologist.
- Do regular gargle with medication as per advice from your urologist
- Avoid smoking and consuming alcohol.
- Avoid forceful brushing on teeth for 1 week.
- If you observe swelling, pain or bleeding around the mouth and cheeks, contact your urologist.

### Precautions Post-Implantation of Uregrow®

- Catheter may be removed within 2 weeks' post-implantation as per your urologist discretion.
- Patients will be discharged after 24 hours or before and prolongation of hospitalization may be as per your urologist discretion.
- Take all medications as directed by your urologist.
- Follow treating your urologist guidelines for showering. Avoid swimming, bathing, using a hot tub, and other activities until your urologist.
- Avoid heavy lifting and strenuous activities as directed.
- Avoid sex for 4-6 weeks.
- Avoid driving until urologist . Do not drive if taking medications that make you drowsy or sleepy.  
Avoid straining to pass stool. If needed, take stool softeners as directed by your urologist .
- Drink plenty of water. This prevents urine odor and dehydration. Follow any other diet instructions given.

## POSITIVE OUTCOMES OF UREGROW®

- ✓ Natural and biological regeneration of urethra
- ✓ Normal flow of urine
- ✓ Resume normal and daily activities
- ✓ Restoration of sexual function
- ✓ Improvement quality of life

## SUCCESS OF UREGROW®

### UREGROW® CLINICAL TRIAL In India Cure of Urethral Stricture with UREGROW® Epithelial Cell Therapy

#### **Title:**

A prospective, Open label, Multicentric clinical trial to assess safety and efficacy of Autologous Adult Live Cultured Buccal Epithelial Cells (Uregrow®) in patients with urethral stricture in males.

#### **UREGROW® Trial Results**

- The trial was conducted at multiple hospitals across India after receiving approval from the CDSCO (DCGI) Ministry of Health and Family Welfare, Government of India\*.
- **Efficacy Analysis:**  
Uroflowmetry and AUA Symptom score significantly improved from the baseline for all patients.
- **Safety Analysis:**  
There was no Adverse Event (AE) reported related to the product in the entire clinical trial.  
There was no SAE reported during the entire clinical trial.
- **Conclusion:**  
Autologous Adult Live Cultured Buccal Epithelial Cells (Uregrow®) is safe and effective, well tolerated with significant improvement in all parameters for indication of urethral stricture disease in males.
- Using this product, the quality of life and urination (excretory function) of the patients greatly improved.
- Uregrow Cell Therapy (Brand name: Uregrow®, manufactured by Regrow Biosciences Pvt Ltd), is approved for Treatment of bulbar urethral stricture of at least 1-2 cm in length in males for age group 18-56 years. by the Drugs Controller General of India (Central Drugs Standard Control Organization), Ministry of Health and Family Welfare, Government of India.



\*<http://ctri.nic.in/Clinicaltrials/pmaindet2.php?trialid=17331&EncHid=&userName=uregrow>



# GET BACK TO DOING WHAT YOU LOVE THE MOST

REGROW Therapy® can now be availed under  
Mediclaime/Cashless Policy.

**INSURANCE COVERAGE UNDER  
Government & Private Health Schemes**

**ESIC | CGHS | Private Health Insurance**

✉ info@regrow.in | ☎ 9930896160



**REGROW  
BIOSCIENCES®**

Regrow your cells Rebuild your life

**REGROW BIOSCIENCES PVT. LTD.**

(Formerly known as Regenerative Medical Services Pvt. Ltd.)

CIN: U24100MH1989PTC054162



**www.regrow.in**



**1800-209-0309**

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