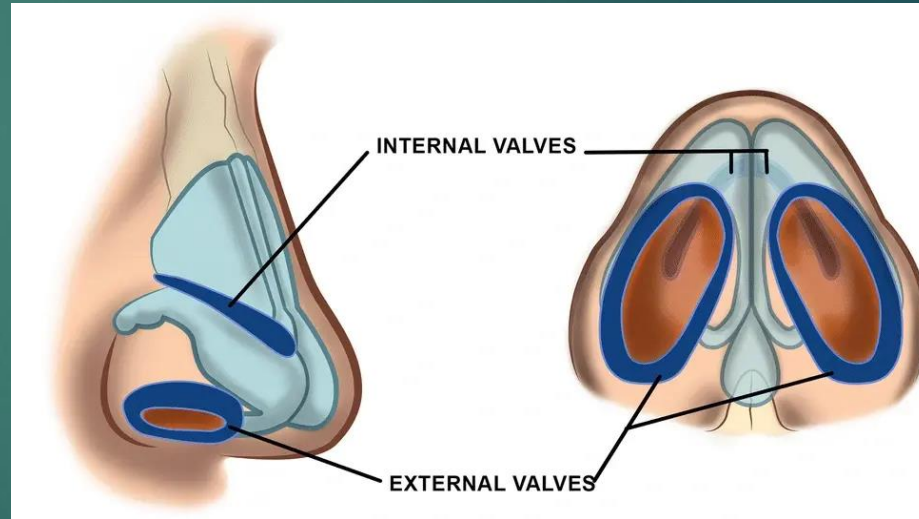


Nasal Valve: What is it and how does it cause symptoms?

LILY LOVE, M.D.
OTOLARYNGOLOGY
AND
FACIAL PLASTIC AND RECONSTRUCTIVE SURGERY

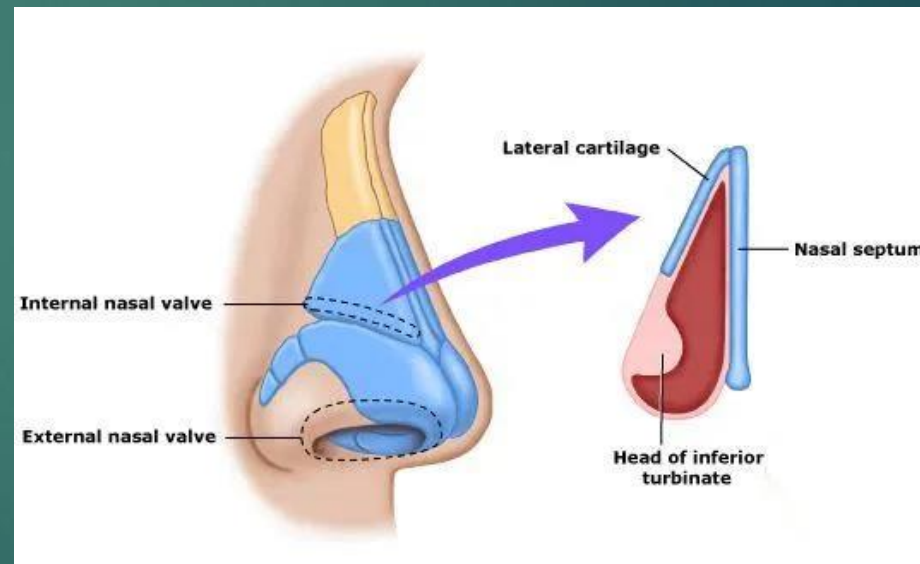
What is the Nasal Valve

- ▶ the narrowest part of the nasal airway, located in the middle to lower portion of the nose, bordered by nasal cartilage, and plays a crucial role in regulating airflow



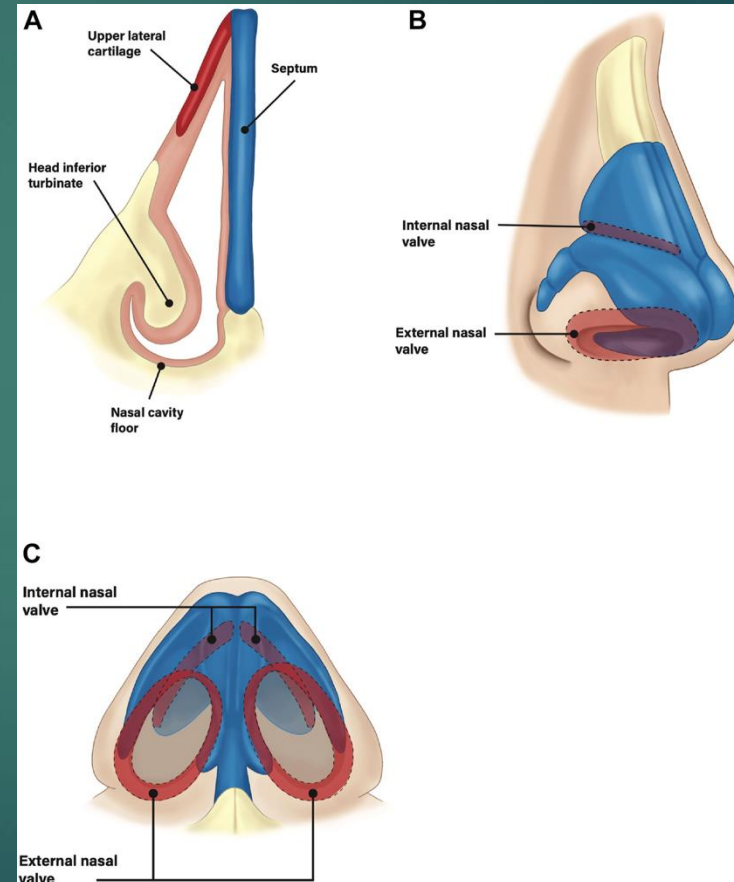
Internal Nasal Valve

- ▶ the narrowest part of the nasal airway, located at the junction of the upper and lower lateral cartilages



External Nasal Valve

- ▶ the opening of the nostril and a key area for airflow within the nose



Nasal Valve Collapse

```
graph TD; A[Nasal Valve Collapse] --> B[Internal Valve]; A --> C[External Valve]; B --> D[Static]; B --> E[Dynamic]; C --> F[Static]; C --> G[Dynamic];
```

Internal Valve

External Valve

Static

Dynamic

Static

Dynamic

Nasal Valve Collapse/Nasal stenosis

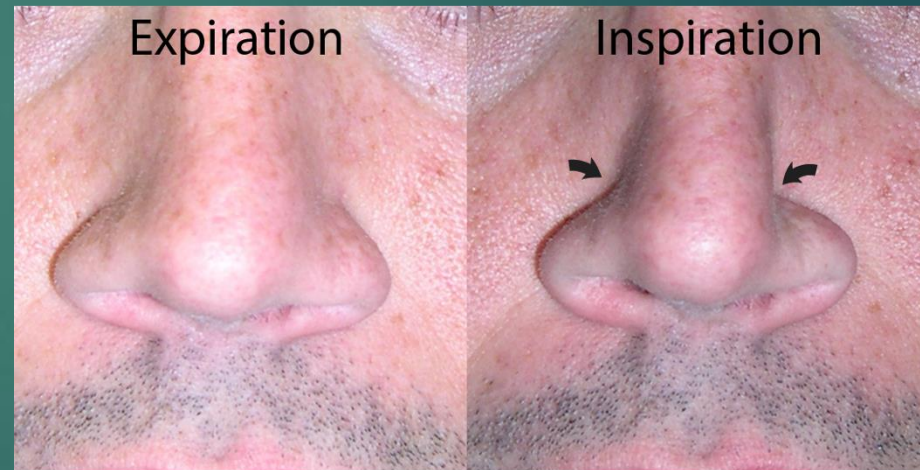
- ▶ The ICD-10 code for nasal stenosis is:
- ▶ **J34.82:** Nasal valve collapse
- ▶ Other related codes:
- ▶ **J34.820:** Internal nasal valve collapse
- ▶ **J34.821:** External nasal valve collapse
- ▶ static internal nasal valve collapse is J34.8201
- ▶ dynamic internal nasal valve collapse is J34.8202
- ▶ static external nasal valve collapse is J34.8211
- ▶ dynamic external nasal valve collapse is J34.8212
- ▶ **J34.829:** Nasal valve collapse, unspecified

Static Nasal Valve Collapse

- ▶ The nasal valve is narrowed or obstructed regardless of whether the person is breathing in or out.



Dynamic Nasal Valve Collapse



Causes of Nasal Valve Collapse

- **Structural abnormalities:** Narrow nasal passages, deviated septum, enlarged turbinates
- **Trauma:** Injuries to the nose, such as fractures or surgeries
- **Allergies:** Chronic inflammation caused by allergies can weaken the nasal valve
- **Aging:** Over time, the tissues supporting the nasal valve can lose elasticity
- **Nasal polyps:** Benign growths in the nasal cavity that can obstruct the airway
- **Rhinoplasty (nose surgery):** Improperly performed surgery can sometimes result in nasal valve collapse
- **Nose blowing**



Symptoms of Nasal Valve Collapse

Nasal obstruction: Difficulty breathing through the nose, especially during sleep or physical exertion.

- **Congestion:** Feeling of stuffiness or blockage in the nasal passages.
- **Snoring:** Loud snoring due to restricted airflow through the narrowed nasal passages.
- **Mouth breathing:** Habit of breathing through the mouth instead of the nose due to nasal obstruction.

- **Whistling or wheezing sounds:** Noisy breathing when inhaling or exhaling through the nose.

- **Nosebleeds:** Frequent or easy nosebleeds.
- **Sleep disturbances:** Difficulty falling or staying asleep due to nasal obstruction.
- **Crusting:** Formation of crusty or sticky mucus in the nasal passages.
- **Dry mouth:** Dehydration from mouth breathing.

Evaluation of Nasal Valve Collapse

- ▶ **Anterior Rhinoscopy:** Visual inspection of the nasal passages using a light and nasal speculum to identify visible collapse of the nasal sidewalls.
- ▶ **Cottle Maneuver:** A diagnostic test where the cheek is gently pulled laterally to open the nasal valve. Improvement in airflow with this maneuver suggests NVC.
- ▶ **Modified Cottle Maneuver:** Similar to the Cottle maneuver, but with the addition of a small instrument inserted into the nostril to pinpoint the area of collapse.
- ▶ **Nasal Endoscopy:** A flexible endoscope inserted into the nasal passages allows for a more detailed visualization of the nasal valve area and the identification of other potential sources of obstruction

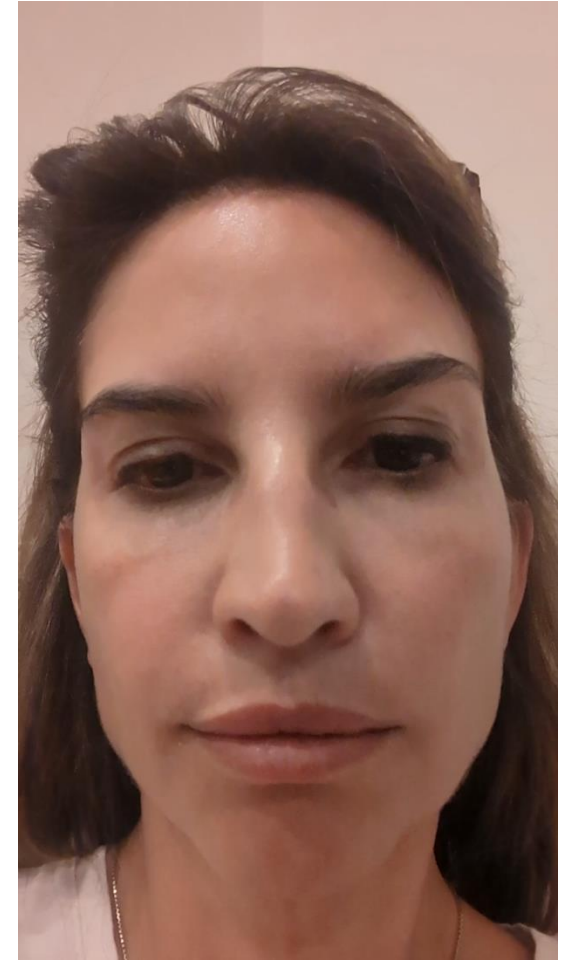


Visual evaluation – Static Nasal Valve Collapse



Visual evaluation - Dynamic Nasal Valve Collapse

- ▶ The nasal valve collapses inward during inhalation, restricting airflow



Cottle Maneuver and “Qtip test”



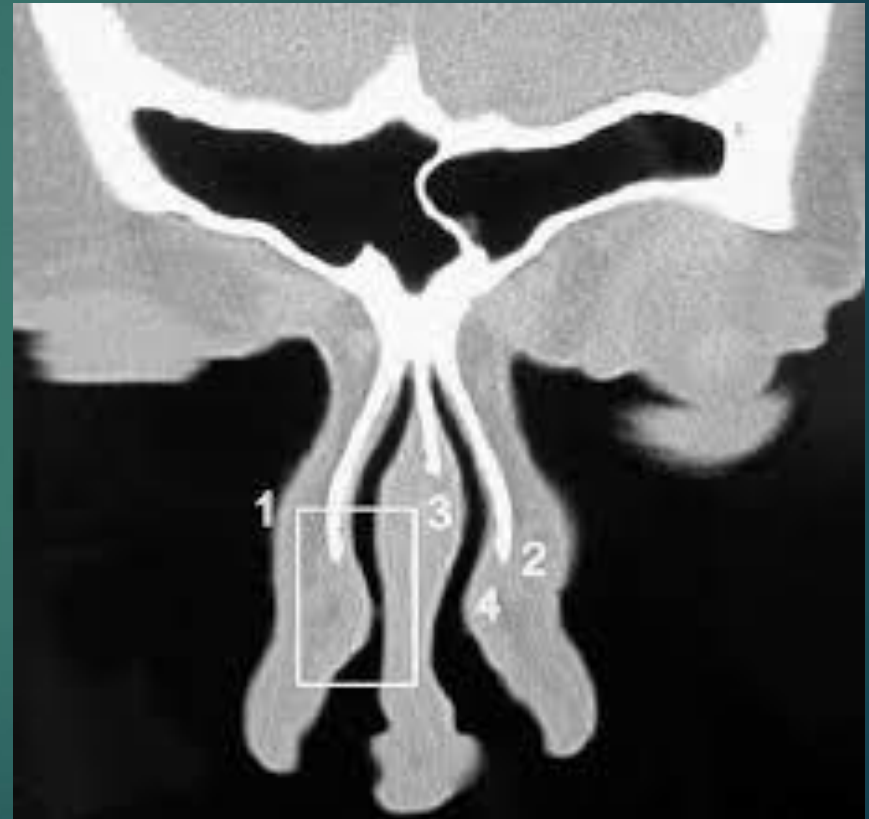
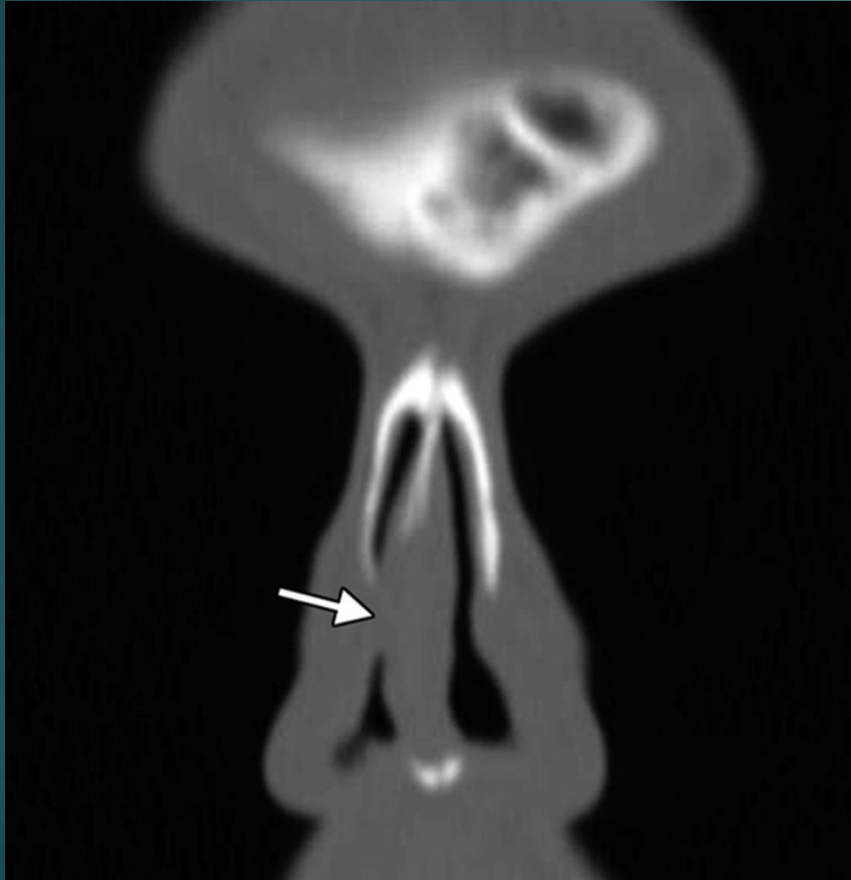
Step 1: Place two finger-tips on your cheeks, on each side of your nose.



Step 2: Gently press and pull outward. Breathe through your nose.



Radiographic findings



Documentation of Nasal Valve Collapse

- ▶ Photodocumentation
- ▶ Radiographic finding of nasal valve collapse
- ▶ Patient has failed conservative management with topical nasal steroids.
- ▶ Improvement of breathing with Cottle maneuver

Non-surgical treatment of Nasal Valve



**open your nose
breathe better**

1 Wash nose with soap and water, dry completely

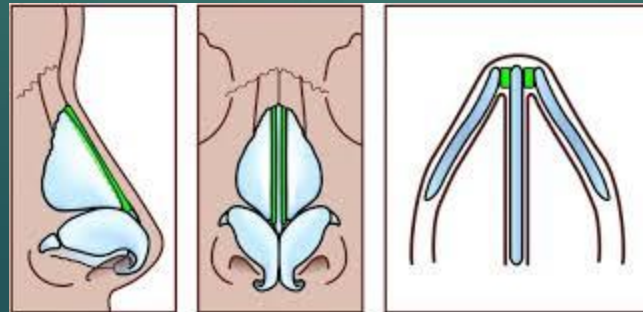
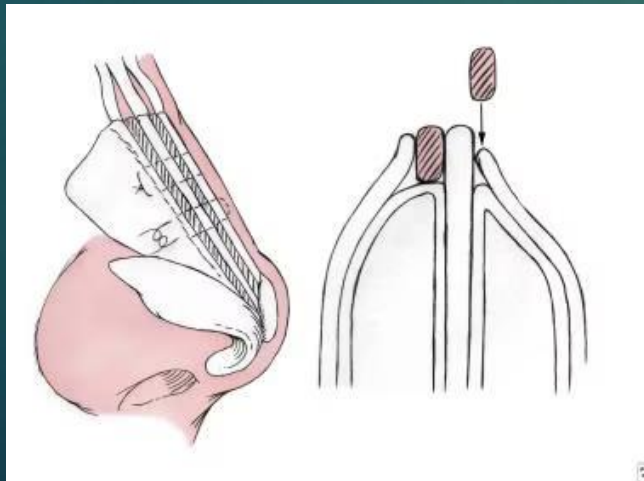
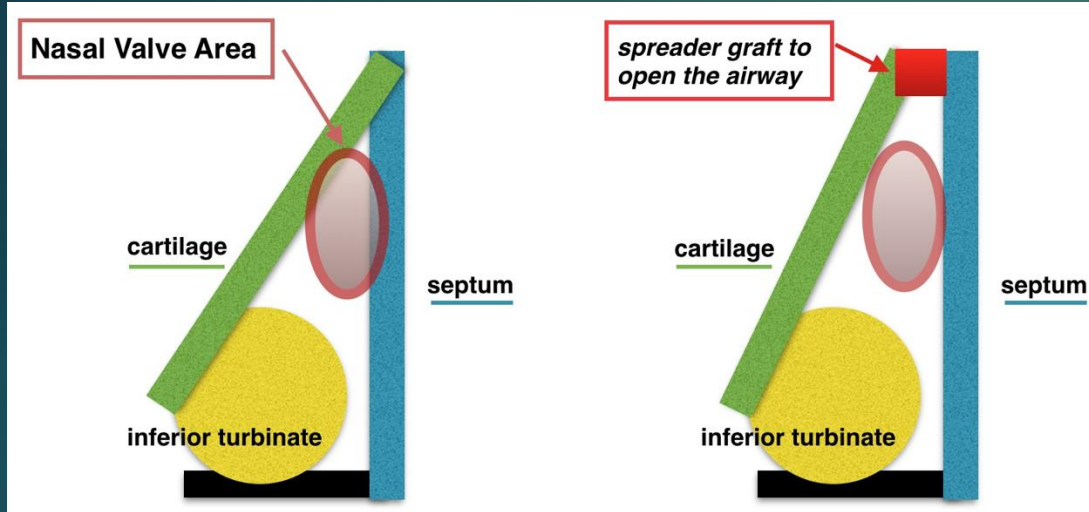
2 Center Nasal Strip over bridge of nose

3 Press and hold for 30 seconds

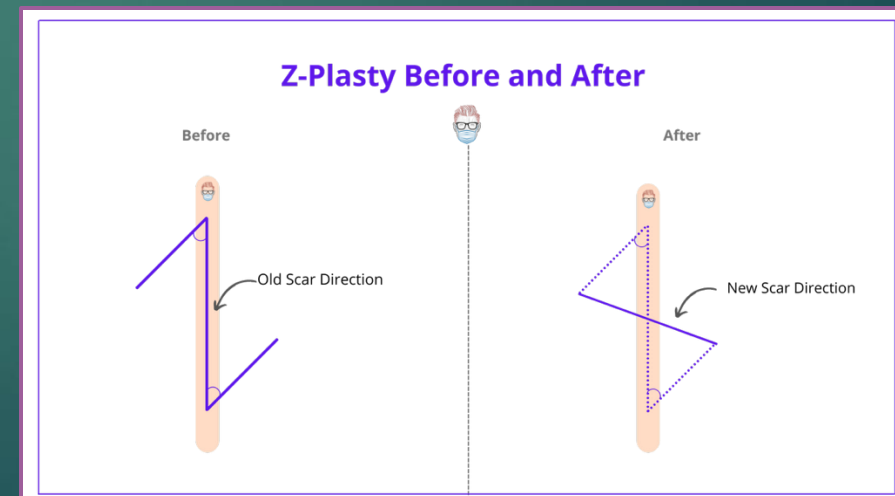
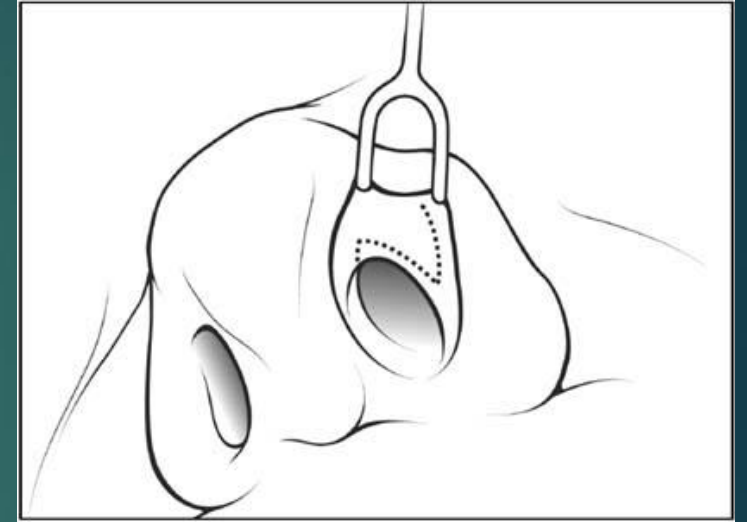
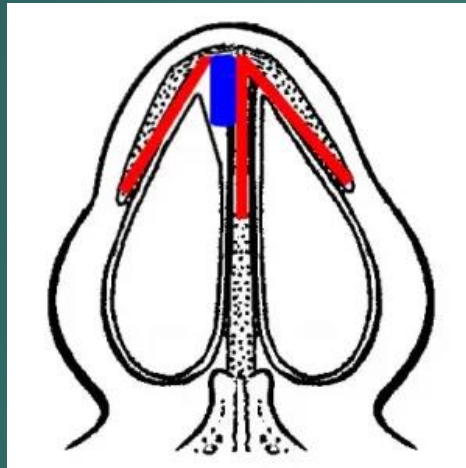
The complex block contains instructional steps for using a nasal strip. It begins with a diagram of a nasal valve with arrows indicating airflow. This is followed by three numbered steps: 1. Washing the nose with soap and water and drying it completely, illustrated by a woman using a tissue. 2. Centering the nasal strip over the bridge of the nose, illustrated by a woman applying the strip. 3. Pressing and holding the strip for 30 seconds, illustrated by a close-up of a woman's nose with the strip applied.



Repair of Internal Nasal Valve Collapse – *Spreader Graft*

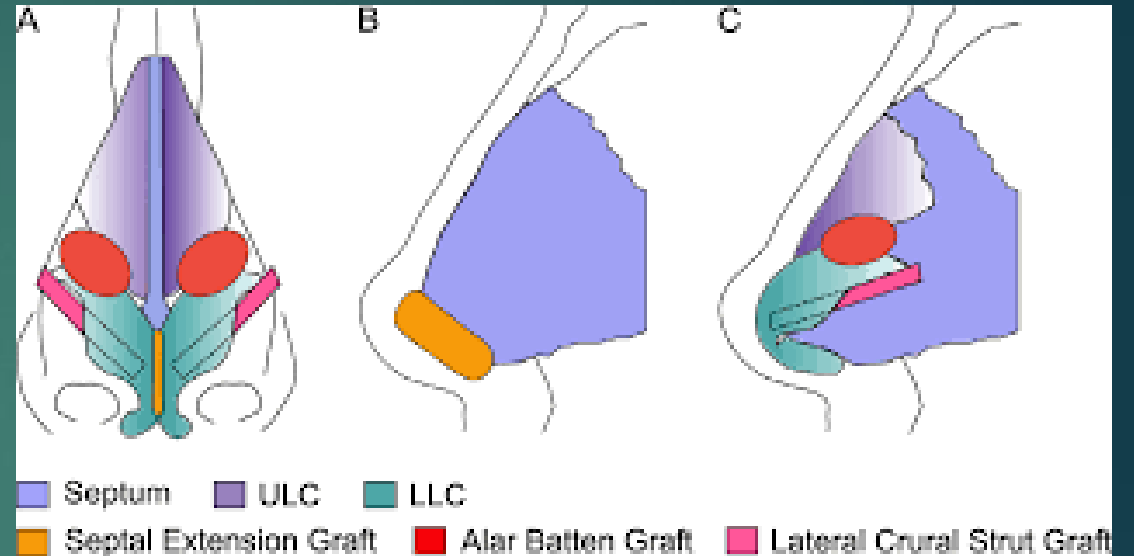
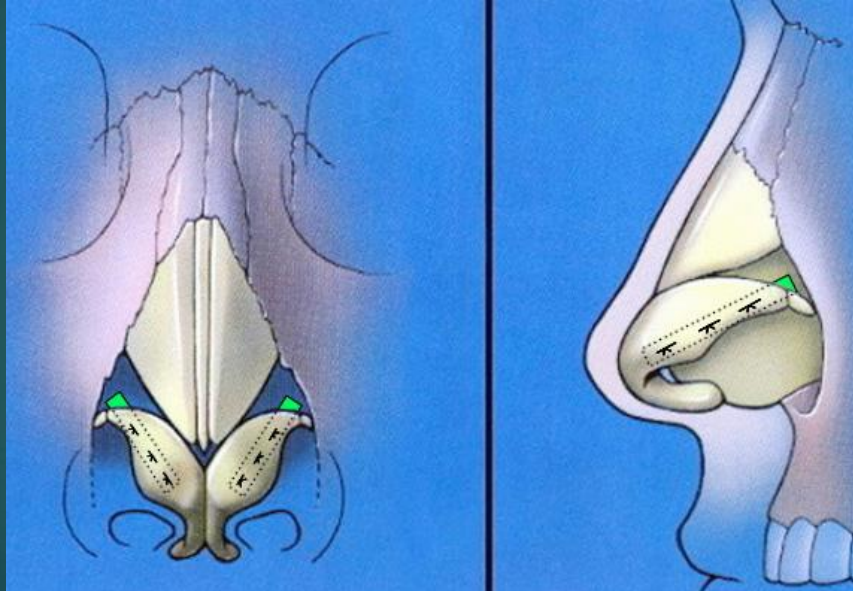


IOP: Repair of Internal Nasal Valve Collapse – *Spreader Graft*

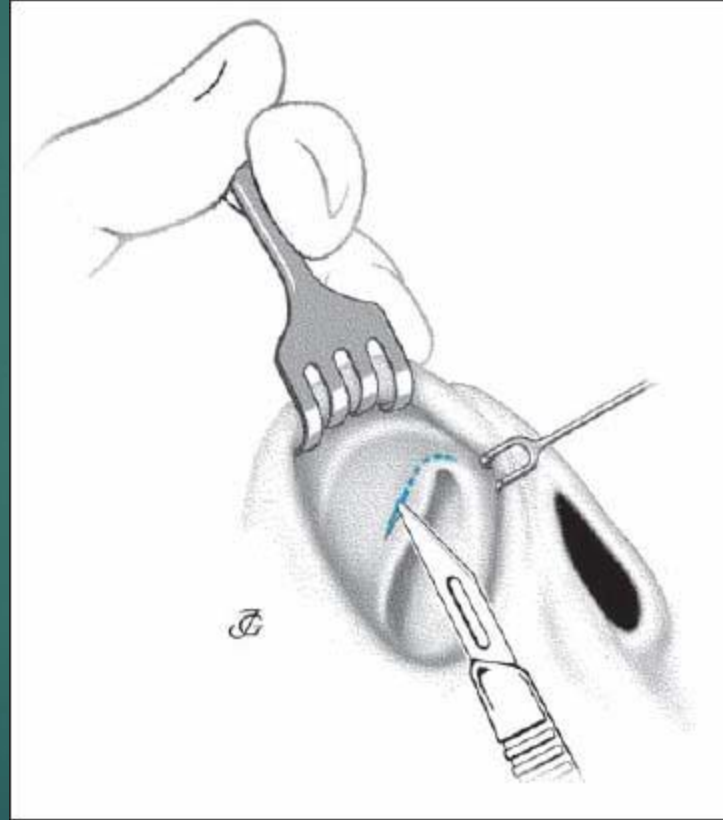
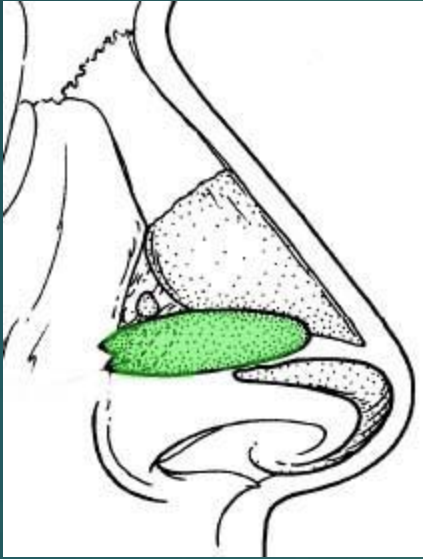


Repair of External Nasal Valve Collapse

- ▶ alar batten grafts, lateral crural strut grafts, or suture suspension



IOP: Repair of External (and Internal) valve collapse – *Alar Batten Graft*



Summary

- ▶ Identify Nasal Valve Collapse
- ▶ May Identify
 - ▶ Internal vs. External
 - ▶ Static vs. Dynamic
- ▶ Document findings
- ▶ Refer for IOP

Thank You

