

What is Buccal Mucosa Reconstruction?

It's a **surgical procedure** to rebuild or repair the inside of the cheek using tissue from the same area or another part of the body. The aim is to:

- **Restore normal mouth function** (talking, chewing, swallowing)
- **Prevent tightness or scarring**
- **Maintain appearance and comfort**

Reconstruction Options:

The type of reconstruction depends on **how big the defect is** and **where it is inside the mouth**.

Primary Closure

- If the missing area is **small**, the surgeon can simply **stitch the edges together**.
- Fast and simple.
- No extra tissue is needed.

Buccal Fat Pad Flap

- There is a natural pad of fat inside the cheek.
- This fat can be **gently moved** to cover small to medium-sized wounds inside the mouth.
- Works well, especially for **back of the cheek** areas.
- Heals quickly with low risk.
- High chances of atrophy after Radiation, can lead to deformity.

Nasolabial Flap

- A small piece of skin and tissue is taken from the **skin beside the nose**.
- It is tunneled into the mouth to cover the missing area.
- Useful for **front cheek** defects.
- May leave a small scar on the face.

Submental Flap

- Tissue is taken from the **upper neck** area, just below the chin.
- It's rotated into the mouth.
- Matches the color and texture of the inside of the cheek.
- Common in elderly patients or those who can't undergo long surgeries.

Free Flap Surgery (For large or complex defects)

This is the standard of care for Head & Neck cancer reconstruction.

In this advanced method, **tissue is transferred from a different part of the body** and connected to **tiny blood vessels in the neck** using microsurgery.

Common Free Flap Options for Buccal Mucosa Reconstruction

Radial Forearm Free Flap (RFFF)

- **Tissue from inner forearm** (thin, flexible skin)
- Ideal for **lining the inside of the mouth**
- Matches the delicate texture of buccal mucosa
- Can include **skin, fat, fascia, or even tendon** if needed
- Heals well; scar on forearm is usually minor

Most commonly used flap worldwide for inner mouth reconstruction.

Anterolateral Thigh Flap (ALT)

- Tissue is taken from the **outer thigh**
- Contains **skin and soft fat**
- Offers **larger surface area** — good for wide or complex defects
- Can be **thinned** to better fit inside the mouth
- Scar on thigh is **easily concealed**

Great option when both cheek and skin of the face or neck are removed.

MSAP Flap (Medial Sural Artery Perforator)

- Tissue is taken from the **back of the lower leg**
- Very **thin and pliable**, similar to buccal mucosa
- Leaves **less noticeable donor site scar** than forearm

An excellent choice for thinner, hairless inner lining reconstruction.

How is the Surgery Done?

1. **Tumor or damaged tissue is removed**
2. The chosen **flap is harvested** from the arm, thigh, or leg
3. Microsurgical tools are used to **connect the flap's blood vessels** to neck vessels (like the facial artery and vein)
4. The tissue is **shaped and stitched** to perfectly cover the cheek defect
5. The **donor site is closed** (sometimes with a skin graft)

Surgery Duration & Recovery

- Hospital stay: **4-5 days**
- Swelling decreases over weeks

- Patients gradually resume **eating, speaking, and oral hygiene**

Benefits of Free Flap Reconstruction

- Provides **healthy, living tissue** that heals well
- **Long-term durability** with excellent blood supply
- Restores **function and appearance**
- Improves **speech, chewing, and swallowing**
- Can withstand **radiation therapy** after surgery