

# Extremity Reconstruction

**"Saving limbs. Restoring function. Giving life back to mobility."**

## What is Extremity Reconstruction?

Extremity reconstruction refers to surgeries that **restore form and function** to the **arms or legs** after:

- **Cancer surgery (bone or soft tissue tumors)**
- **Severe trauma or accidents**
- **Infections or failed previous surgeries**
- **Congenital (birth) defects**

It aims to **cover wounds, rebuild bone, preserve limb function**, and — when possible — **avoid amputation**.

## Techniques Used in Extremity Reconstruction

### 1. Local Flaps

Tissue moved from nearby areas without cutting the blood supply.

- Used for **small to medium wounds** near the defect.
- Involves **rotating or sliding skin, muscle, or fascia** from adjacent areas.



Advantages: Simple, safe, preserves limb



Best for: Soft tissue coverage after trauma or tumor removal

### 2. Free Flaps

Tissue (with its blood vessels) is taken from another part of the body and reconnected using microsurgery.

- Common donor sites: thigh (ALT flap), back (LD flap), forearm (Radial forearm flap)
- Used for **large, complex defects** involving skin, muscle, or bone



Advantages: Versatile, reliable, restores both function & appearance



Best for: Major limb salvage, exposed bone/tendons, deep wounds

### 3. Capanna Technique

### Advanced limb salvage technique combining:

- A **vascularized fibula flap** (live bone with its own blood supply)
- A **massive allograft** (donated dead bone to fill the gap)

 The live fibula strengthens and grows inside the dead bone shell over time.

 Advantages: Reconstructs large bone defects (>10–12 cm)





 Best for: **Long bone reconstruction** in the arm or leg after tumor removal

### Why Is This Important?

Without proper reconstruction, patients may face:

- **Amputation**
- **Chronic wounds or infection**
- **Loss of mobility or independence**

These techniques help patients:

-  **Walk again**
-  **Use their hands/arms**
-  **Live independently**
-  **Return to work or school**

### Recovery & Rehabilitation

- Hospital stay depends on the technique used
- Physical therapy is essential for regaining strength and mobility
- Most patients can return to **daily activities** over time with support

### Final Word:

Extremity reconstruction is more than saving a limb — it's about **restoring hope, dignity, and independence**.

With modern techniques like **free flaps** and the **Capanna technique**, limb salvage is now possible even in complex cases.