

# Skin Grafts: Grafts & Flaps 2022

## Skin Grafts: Grafts and Flaps

Transfer of: skin, bone, cartilage, fat, fascia, muscles, and nerves

### 2 Types of Skin Grafts

- Free skin grafts
  - o Reconstructive microsurgery
  - o Skin flaps
- Free Graft
- Skin Transplant (from donor to recipient)
- Split Thickness
- Full Thickness

### Skin Grafting

Types (Table 24-12)

- Skin is major organ- skin grafting is really an Organ Transplant
- Isograft
  - Identical twin
- Autograft
  - Living tissue transplant from same person
  - Cultured epithelial autograft (CEA) – grown from small specimens
    - Full immune compatibility
- Engineered skin grafts
  - Langerhans' cells removed

### Skin Grafting Procedure

- Excise injured tissue
- Choose skin graft type

### Graft Types: Full Thickness

- Contains epidermis and dermis with trimmed subcutaneous tissue
  - Minimal contractures
  - Used in flexion areas
  - Able to withstand trauma
  - More aesthetically pleasing
  - Good for small facial wounds

### Graft Types: Split Thickness

- Contains epidermis and portion of dermis
  - Becomes vascularized more rapidly
  - May be meshed to allow for expansion
  - Donor site heals faster
- Complications
  - May have post graft contracture
  - Less resistant to trauma
  - May look least like normal skin

### Dermatome

- Used for removing split thickness skin grafts from donor sites

### Split-Thickness: Meshed Graft

- Type of split thickness graft
- Uses:
  - Enlarge grafts
  - Allows blood and secretions to drain
  - Prevents graft loss
- Less durable
- Scarring

### Skin Mesher

- Graft enlarged by making small slits in graft
- Mesh enlarges up to four times original size
- Spaces between mesh fills in with new epithelial cell growth
- Allows for drainage of fluids and decreased hematoma formation

### Potential Complications of Skin Grafting

- Donor site is painful
- Infection Risk
- Scarring Visible
- Decrease in normal movement, joint function
- Color and texture differences

### Skin Flaps

- Moving a section of skin & subq tissue from one part of the body to another without terminating the vascular attachment (i.e. pedicle)
  - Benefits
    - Carry own blood supply
    - Retain more properties of normal skin
    - Shrink less than grafts
  - Disadvantages
    - Bulky appearance
    - May require multiple operations, an intermediate flap, and prolonged hospitalizations

### Nursing Care of Flaps and Grafts

- Donor Site Care
  - Dressing
  - Watch for infection
  - Pain control
- Graft Survival
  - Modified pressure dressing
  - Immobilization
  - Monitor color and temperature of graft
  - Care with dressing changes

### Reconstructive Microsurgery:

#### Microsurgical Replantation

- Attempt to reattach a completely amputated digit or body part
- Goal:
  - Restore function beyond that provided by prosthesis
- Revascularization:

- Performed on incomplete amputations when the body part remains attached to body by skin, artery, vein, or nerve.
- Successful replantations
  - Within 4-6h of injury
- Depend upon experience of surgical team, surgeon, equipment (i.e., microvascular instruments and sutures)
- Good candidate
  - Thumb, digits, palm, wrist or forearm, elbow, or any body part of child

#### Microsurgical Replantation

- Surgery can last 10-12 hours
- Patient comfort is important
- Carefully monitor peripheral vascular and neuromuscular checks
- Post operative PT is important to enhance mobility

The End! (You did it!!!) ☺