

Local skin flaps summary

A FLAP is a unit of tissue that is transferred from one location (donor site) to another (recipient site), maintaining a viable blood supply.

Transposition Flap

Moves laterally into the primary defect, around a pivot point. E.g. 2-, 4- and 5-flap Z-plasty, rhomboid flap, triangular transposition flap.

Rotation Flap

Rotates laterally into the primary defect, around a pivot point. E.g. the cheek rotation flap and the buttock rotation flap.

Advancement flap

Slides forwards into the primary defect, without any rotation. E.g. the V-to-Y advancement flap and the islanded advancement flap.

2-Flap Z-Plasty

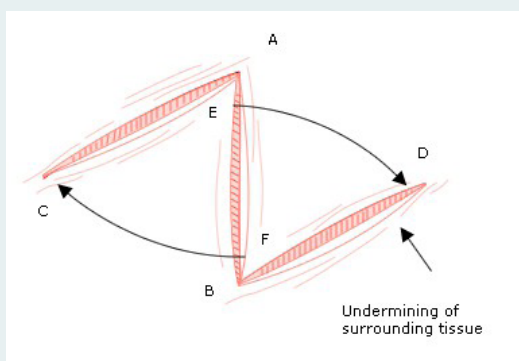
2 triangular flaps of equal dimensions are transposed. In doing so, both the orientation and the length of the central limb are changed.

Indications: re-align scars, increase length of an area of tissue or scar (also preemptively e.g. Dupuytren's fasciectomy).

30° angle = 25% increase in length
45° angle = 50% increase in length
60° angle = 75% increase in length
75° angle = 100% increase in length
90° angle = 125% increase in length

Original limb = AB Triangular flaps CEB + AFD are raised

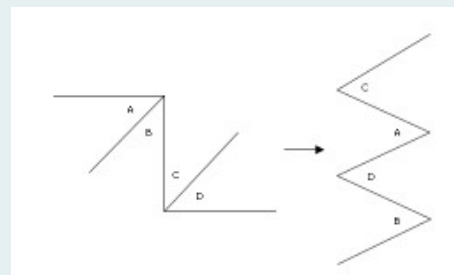
Flaps are transposed F to C and E to D



4-Flap Z-Plasty

Original 'ABCD' configuration becomes 'CADB' after transposition. Hence, sometimes referred to as the 'CADBury' flap.

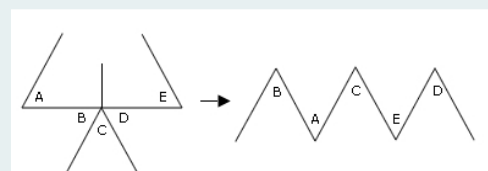
Indications: lengthen linear scar contractures in web-spaces or axillary folds.



5-Flap Z-Plasty

2 opposing Z-plasties (AB and DE), with a V-Y advancement flap (C). Known as the 'jumping man flap'.

Indications: release of contractures of webspace and correction of epicanthal folds.

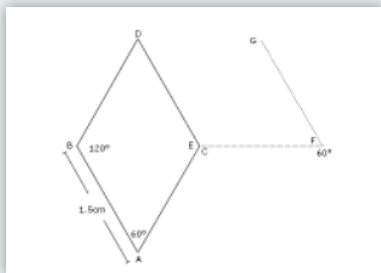


Rhomboid

Sides equal in length with two opposing 60° and 120° angles.

4 potential design options - depending on laxity of surrounding skin or distortion of adjacent structures.

Indications: small skin defects, commonly face.

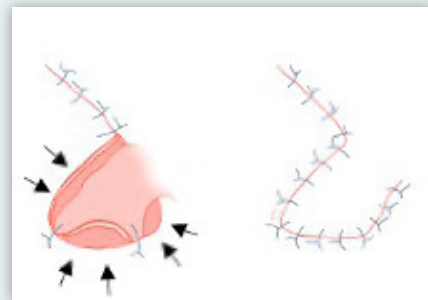
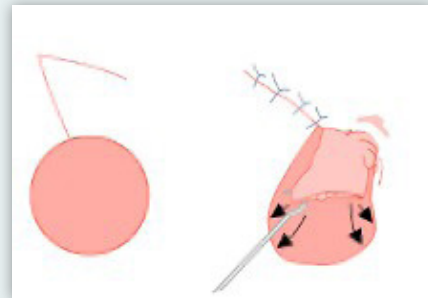


Rhomboid Modification

'A square peg into a round hole'

A circular primary defect is created rather than a rhomboid one.

The flap is designed to be smaller than the defect.



Triangular Flap

Single triangular flap, which lies entirely within adjacent, unscarred skin. The scar is released by creating a cross-cut, perpendicular to the direction of the contracture. The triangular flap is then transposed into the cross-cut and the secondary defect is closed directly.

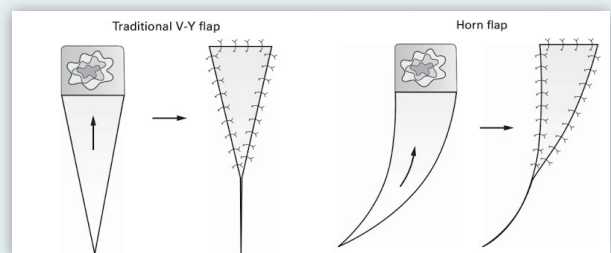


Indications: linear scar contracture along edge of mature burn scar or skin graft (flap raised in scarred skin = high risk of necrosis).

V-Y Advancement Flap

These flaps are incised along their cutaneous borders. Their blood supply comes from deep tissue through a subcutaneous pedicle.

Horn flaps and oblique V-Y flaps are modifications of this.



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