AMPUTATIONS

Amputation is a procedure where a part of the limb is removed through one or more bones. It should be distinguished from disarticulation where a part is removed through a joint. For simplifying this discussion, the term 'amputation' is applied to both these procedures. Amputation of lower limb is more commonly performed than that of upper limb; however, partial amputation of fingers or hand is common in developing countries, mainly as a sequelae of farm and machine injuries.

Indications For Amputation

1. Injury.
2. Peripheral vascular disease, including diabetes.
3. Infections e.g., gas gangrene.
4. Tumours.
5. Nerve injuries.
6. Congenital anomalies.

Indications for amputation vary in different age groups. In the **elderly** (50-75 years), peripheral vascular disease with or without diabetes is the main cause. In **younger** adults (25-30 years), amputation is most often secondary to injury or its sequelae. In children, limbs may be deficient since birth. Amongst the acquired causes, injury and malignancy top the list.

Nomenclature of amputation by levels

Above knee amputation: Through the femur
Knee disarticulation: Through the knee
Elow knee amputation: Through the tibia-fibula

Level Of Amputation

With modern tech of fitting artificial limbs, strict levels adhered to in the past are no longer tenable. Principles guiding the level of amputations are as follows:

• **The disease:** Extent and nature of the disease or trauma, for which amputation is being done, is an important consideration. One tends to be conservative with dry-gangrene (vascular) and trauma, but liberal with acute life threatening infections and malignancies.

• **Anatomical principles:** A joint must be saved as far as possible. These days, it is possible to fit artificial limbs to stumps shorter than 'ideal' length, as long as the stump is well healed, non-tender and properly constructed.

Skin flap: is designed to go over the stump, where the main consideration is to maximise blood supply and healing.

Stump: After an amputation, the bit that's left beyond a healthy joint is called a residual limb, or more commonly, a stump.

Special Features Of Amputations In Children

Amputations in children have the following special features:

• Children may have amputation since birth.

• A disarticulation is preferred to an amputation through the shaft of a long bone at a more proximal level. This is because disarticulation preserves the epiphysis distally, and therefore growth of the stump continues at the normal rate.

• As the child grows, terminal overgrowth of the bone occurs and needs frequent revisions.

• A child needs frequent changes in the size of the artificial limb.

• Children tolerate artificial limbs much better and get used to wearing it more quickly.