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SURGICAL DRESSINGS

Surgical dressing - a loosely woven cotton dressing for incisions made during surgery. A dressing is a sterile pad or compress applied to a wound to promote healing and protect the wound from further harm. A dressing is designed to be in direct contact with the wound, as distinguished from a bandage, which is most often used to hold a dressing in place. Many modern dressings are self-adhesive.

Several types of interactive products are: semi-permeable film dressings, semi-permeable foam dressings, hydrogel dressings, hydrocolloid dressings, and alginate dressings.

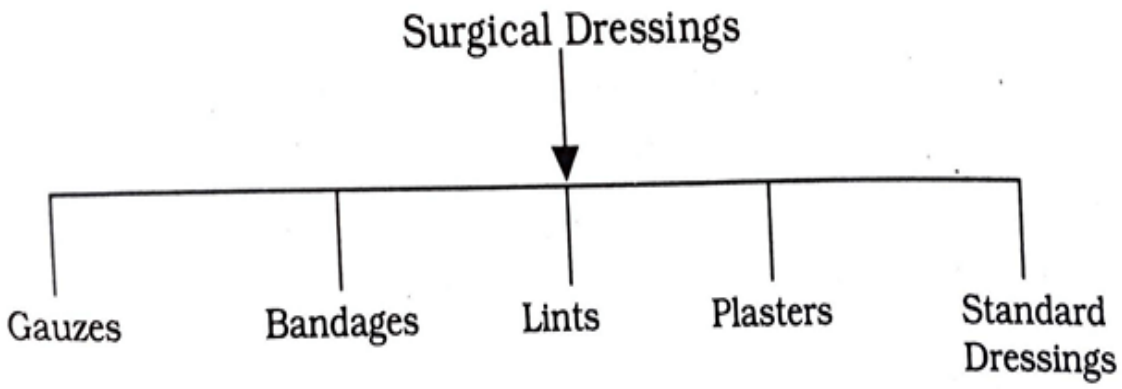
Purpose of dressings:

- Stem bleeding
- Protection from
- Absorb exudate
- Ease pain
- Debride the wound
- Reduce psychological stress

Types of dressings:

- Absorption of exudate, to regulate the moisture level surrounding the wound- for example, dry gauzes absorb exudate strongly, drying the wound, hydrocolloids maintain a moist environment and film dressings do not absorb exudate;
- Gas permeability and exchange, especially with regard to oxygen and water vapour;
- Maintaining the optimum temperature to encourage healing;
- Mechanically debriding a wound to remove slough.

- Pressure dressings are commonly used to treat burns and after skin grafts. They apply pressure and prevent fluids from collecting in the tissue.



ABSORBENT COTTON WOOL

It is the epidermal hairs of the seeds of cultivated species of Gossypium herbaceum or other species of Gossypium.

Preparation:

- Raw cotton discarded by the textile industry as combers waste consists of about 90% cellulose, 3% fat, wax and 7% moisture.
- This cotton is subjected to combing process so as to separate short fibres are spun and woven as cloth.
- The combers waste consisting mainly of short fibres is boiled with dilute caustic soda and soda ash solution for 10-15 hours at a pressure of 1-3 atmospheres.
- This treatment will remove fatty cuticle of the trichomes making the wall absorbent.
- It is then thoroughly washed with water. Bleaching is done by treatment with sodium hypochlorite solution and dilute hydrochloric acid.

- It is washed with water and dried. This cotton is then carded into flat sheets. The carding machine forms thin continuous films of cotton wool.

- Several such thin films are placed one above the other and packed into packages, which are finally sterilized.

Characters: Absorbent cotton is a very pure form of cellulose, which occurs in the form of thin fine filament like hairs. These trichomes are unicellular 2 to 4 m in length and 25 to 40 micro in diameter.

Storage: Cotton should be stored in cool place .

Absorbent cottons are required to comply with standards for the following test categories:

- Acid or alkali
- Water-soluble substances
- Dyes
- Fluorescent whitening agents
- Submersion rate
- Absorbency
- Other filaments
- Nep texture and impurities
- Total ash content

Packaging: Absorbent cotton is transported in bales, which are strapped with metal strapping and wrapped in jute fabric.

ABSORBENT LINT CLOTH I.P.

Synonyms : Lint, Cotton Lint, and Unmedicated Lint

Description : Cotton cloth of plain weave, reasonably free from weaving defects, readily tearable in both directions and bleached to a good white having on one side a nap raised from either the warp or weft yarns and reasonably free from naps; it is clean and reasonably free from leaf, shall and other foreign substances.

Standards : Absorbent Lint is a cotton cloth of plain weave, on one side of which a nap has been raised from either warp or weft yarns. It absorbs water readily but its absorbency may be considerably reduced by medication, the absorbency of the product depending upon the medicament incorporated. It has not less than 98% of the dimensions stated on the label.

Yarn : Reasonably free from slubs, snarls and other defects.

Threads per cm : Warp not less than 16 and weft not less than 10.

Weight : 25g has a superficial area of 1350 to 1370 sq cm.

Absorbency : A piece 10 cm square, placed lightly by means of forceps, unraised side downwards, on the surface of water at 20 degree, becomes saturated within 10 seconds.

Water-Soluble Extractive : Not more than 1%.
Fluorescence : Not more than a few points of fluorescence are visible under screened ultra-violet light.
Storage : Store in well closed packages so as to prevent access of moisture, in a dry place, free from dust.
Labeling : The label on the container states the length and width.

PLAIN ABSORBENT GAUZE

The gauze must be free from loading material and visible particles other than cotton, and be colorless. *Gauze* is a loosely woven, almost translucent fabric that's used to bandage wounds. If you get a bad burn, a doctor might clean it and cover it with *gauze*.

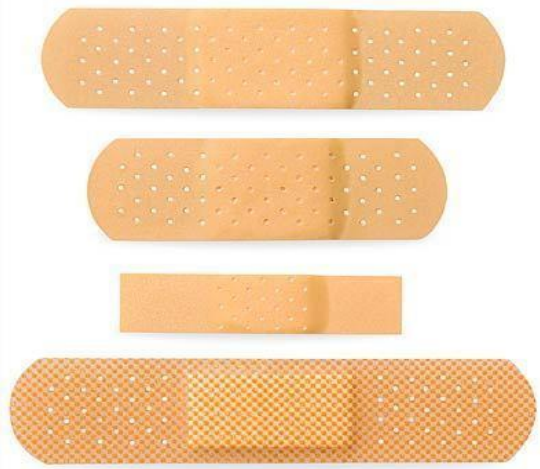
Packaging: Packed in boxes of 10-12 pieces with protective wrapping or in bulk.

In medicine, gauze has several uses. Sterile gauze is usually kept in a sealed package, to ensure that it's perfectly clean. It can be used to clean cuts, scrapes, and burns, and also acts as a large bandage. There is also a non-medical fabric called *gauze* that's used in light, warm-weather clothing.

BANDAGE

A bandage is a piece of material used either to support a medical device such as a dressing or splint, or on its own to provide support to or to restrict the movement of a part of the body. When used with a dressing, the dressing is applied directly on

a wound, and a bandage used to hold the dressing in place. Other bandages are used without dressings, such as elastic bandages that are used to reduce swelling or provide support to a sprained ankle. Tight bandages can be used to slow blood flow to an extremity, such as when a leg or arm is bleeding heavily.



PLASTER OF PARIS BANDAGE

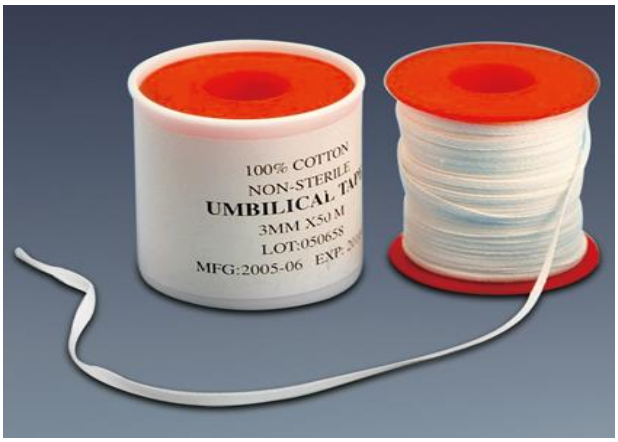
Plaster of Paris Bandages are made from a specially woven cloth, uniformly impregnated with fast setting plaster of Paris. The bandage is spooled on a round core for superior bandage stability. The interlocked weave of this cloth makes the wet bandage more stable and conformable, to mould around awkward contours. The leno cloth also helps to minimise plaster loss. Plaster of Paris Bandages create a strong cast for immobilising broken and fractured limbs. The rapid fracture immobilisation is important especially in accident and emergency departments.

Packaging: One roll, presented in a heat-welded protective wrapping (sealed against humidity)

Storage recommendations: Store under dry conditions (deteriorates with exposure to dampness).
Keep at moderate temperature maximum 25°C (deteriorates under exposure to heat).

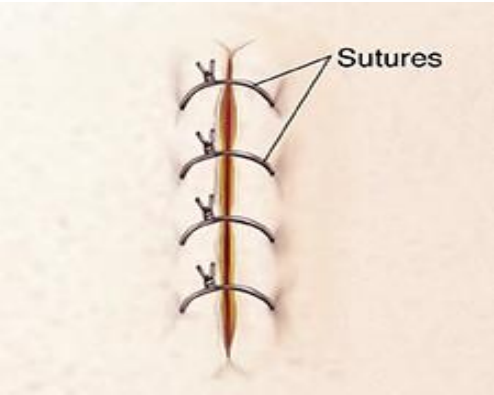
UMBILICAL TAPE

- Sterile Umbilical Cotton Tape is available in pre-cut lengths to tie off the umbilical stump during the catheterization process.
- It is also used to tie off the umbilical cords of newborn infants, in various other ways by surgeons and medical staff performing a wide range of procedures.
- Used in pediatrics and vascular surgery to small structures like tendons, artery, and veins.
- Cut enough length of the Cotton tape as per the indication and use.
- Maximum tape use in lifting the structure like blood vessels and Tendon like structure.



SUTURE

- Sutures, commonly called stitches, are sterile surgical threads that are used to repair cuts (lacerations).
- They also are used to close incisions from surgery.
- A surgical suture is one of the most common medical devices used by doctors during surgeries.
- The suture helps in holding body tissues together after a surgery or an injury.
- The application of a suture essentially involves the use of a needle along with an attached thread.
- The word catgut is derived from the term kitgut or kitstring (the string used on a kit, or fiddle).
- Sutures either are permanent or deteriorate very slowly. They hold their strength for 300 days or longer.
- They are made from natural fibers or from synthetic threads, such as nylon, polypropylene, polyethylene or polyester.



Types of absorbable sutures:

- Gut
- Polydioxanone
- Poliglecaprone
- Polyglactin

Types of nonabsorbable sutures:

- Nylon. A natural monofilament suture.
- Polypropylene (Prolene). A synthetic monofilament suture.
- Silk. A braided natural suture.
- Polyester (Ethibond). A braided synthetic suture.

TRANSFUSION & INFUSION ASSEMBLY

Infusions essentially refer to when an outside substance is administered directly into the bloodstream, while **transfusions** refer to when the same substance, just from an outside source, is administered in the same manner.

Infusion is the **delivery of liquid medicine** or treatment through a vein.

Transfusion is the process of transfusing fluid (as **blood**) into a vein or artery.

BLOOD TRANSFUSION SET

Blood transfusions are a routine medical procedure that delivers blood into a patient's body through a narrow tube that's connected to a vein in their arm or hand.

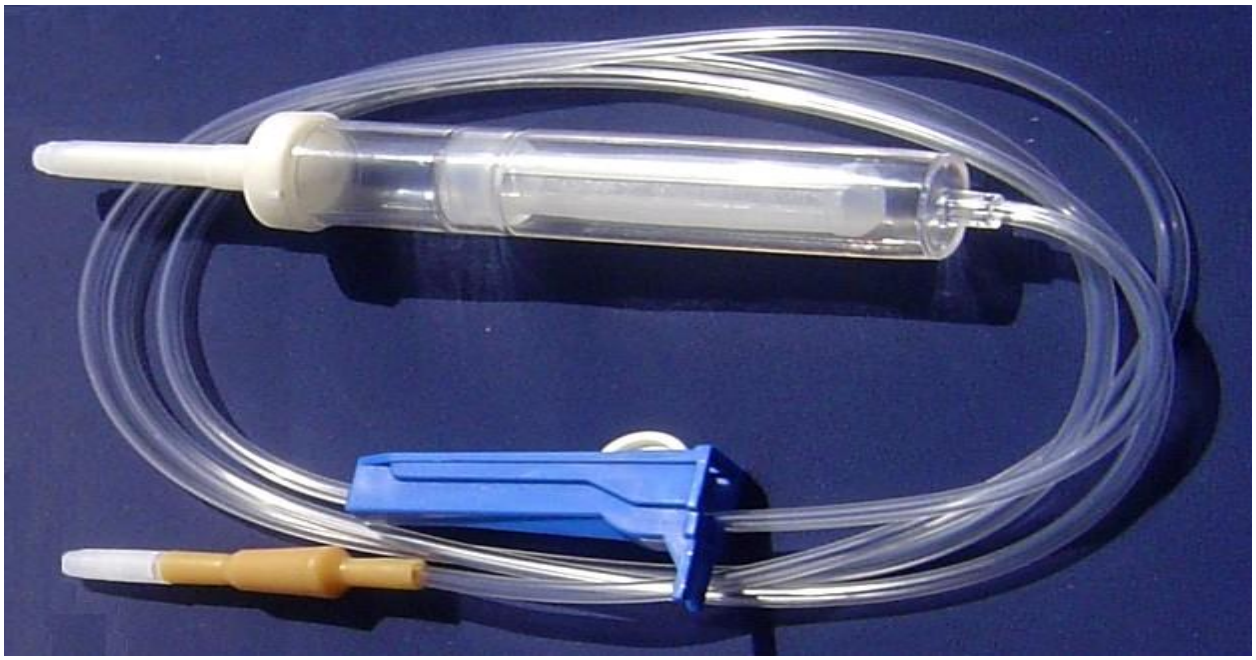
To administer a blood transfusion, healthcare professionals place a thin needle into a vein—usually located in the arm or hand—which allows blood to move from a bag, through a rubber tube, and into the patient's vein through the needle. Nurses must closely monitor their patient's vital signs throughout this procedure.

Red blood cell transfusions may be given to patients who suffer from an iron deficiency (i.e. anemia). This transfusion would boost a patient's hemoglobin and iron levels, while also improving oxygen levels in the body.

Platelet transfusions are often administered to patients who suffer from leukemia or other types of cancer. This is because they may have lower platelet counts due to chemotherapy treatments.

Plasma transfusions provide vital proteins and other substances that are crucial to a patient's overall health. Plasma transfusions are often administered to those with liver failure, severe infections, or serious burns.

Depending on the amount of blood a patient requires, a simple blood transfusion can take anywhere from 1 to 4 hours.



Purpose of a Blood Transfusion:

- Many patients who undergo a major surgical procedure will receive a blood transfusion to replace blood lost during surgery.
- Blood transfusions are typically administered to patients who have suffered serious injuries from car crashes, natural disasters, or other traumatic events.
- Patients who suffer from illnesses that cause anemia will typically require blood transfusions as part of treatment. These can include illnesses such as leukemia or kidney disease.

INFUSION ASSEMBLY/ IV SET

It is a sterile item, used for parenteral administration of injectable preparations.

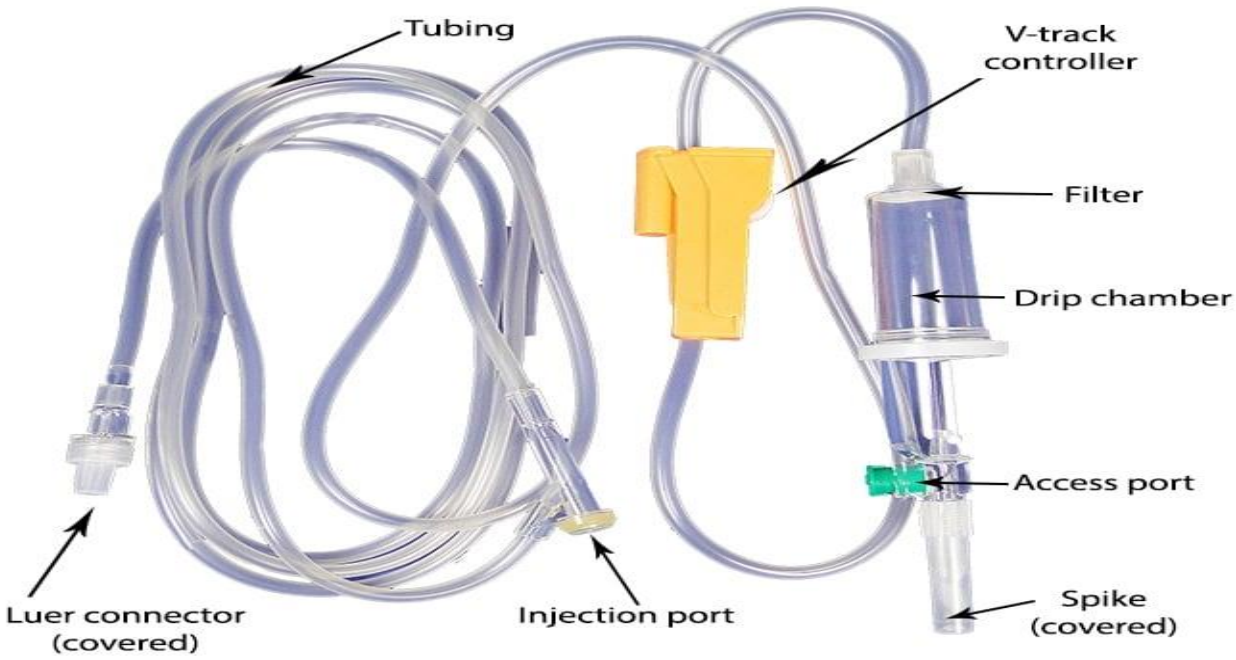
Not for use with blood or blood products.

A collection of sterile devices designed to conduct fluids from an intravenous (IV) fluid container to a patient's venous system; used for gravitational intravenous administration.

Packaging: One infusion set, single-use, sterile, individually peel packed.

Parts of IV set:

- Long sterile tube.
- Connector.
- Drip chamber.
- V-track controller.
- Spike.



Types:

- Microdrip set
- Macrodrip set