

**ULTRA
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ULTRA FOR MEDICAL PRODUCTS CO.

Ultramed I.V Infusion Set Description & procedure

Product Name: I.V Infusion Set

Intended Purpose:

- ❖ The Infusion Sets are used to administer Intravenous fluid and medicines into human circulating system.
- ❖ The product is sterilized using EO (Ethylene Oxide)

Intended User: Skilled Or Trained Personnel (In-Charge)

Intended Patient Population:

- ❖ Intravenous therapy is an effective and fast-acting way to administer fluid or medication treatment in an emergency situation
- ❖ For patients who are unable to take medications orally. Approximately 80% of all patients in the hospital setting will receive intravenous therapy.
- ❖ it used for male and female patients (all Ages)

Medical Conditions Of Using I.V. Infusion Set:

- ❖ If a patient is ill and has fluid loss related to decreased intake, surgery, vomiting, diarrhea, or diaphoresis, the patient may require IV therapy.
- ❖ To replace fluids and electrolytes and maintain fluid and electrolyte balance: The body's fluid balance is regulated through hormones and is affected by fluid volumes, distribution of fluids in the body, and the concentration of solutes in the fluid.
- ❖ To administer medications, including chemotherapy, anesthetics, and diagnostic reagents: About 40% of all antibiotics are given intravenously.
- ❖ To deliver nutrients and nutritional supplements: IV therapy can deliver some or all of the nutritional requirements for patients unable to obtain adequate amounts orally or by other routes.

Contraindications:

- ❖ Some patients have anatomy that poses a risk for fluid extravasation or inadequate flow and peripheral IVs should be avoided in these situations.
 - ❖ Examples include extremities that have massive edema, burns or injury.
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- ❖ For the patient with severe abdominal trauma it is preferable to start the IV in an upper extremity because of the potential for injury to vessels between the lower extremities and the heart.
- ❖ For the patient with cellulitis of an extremity, the area of infection should be avoided when starting an IV because of the risk of inoculating the circulation with bacteria. As well, extremities on the side of a mastectomy or that have an indwelling fistula should be avoided because of concerns about adequate flow.

Mode Of Action:

- ❖ Intravenous therapy (IV) is a therapy that delivers liquid substances directly into a vein (intra- + ven- + -ous). Intravenous infusions are commonly referred to as drips. The intravenous route is the fastest way to deliver medications and fluid replacement throughout the body, because the circulation carries them. Intravenous therapy may be used for fluid replacement (such as correcting dehydration), to correct electrolyte imbalances, or deliver medications.
- ❖ The device uses gravity to deliver a constant amount of medication, Fluids or nutrients over a set period of time. With a drip, the medication and solution drip from a bag through a tube and into your catheter.

Key Performance Claims:

- ❖ **Spike Cover:** to keep the spike sharpness for easy penetration of fluid container.
- ❖ **Non-Vented Spike:** spike with 3Holes to get the most effective infiltration of fluid.
- ❖ **Vented Spike:** air vent is provided with Filter for removing air from the solution and give no permission for micro-organisms entrance.
- ❖ **Flexible Drip Chamber:** clear and flexible for squeezing the solution from its container.
- ❖ **Micro Drip Needle:** for accurate flow of I.V solution.
- ❖ **I.V Tubing:** Clear, Kink resistant for I.V solution visibility flow to the access of circulatory system.
- ❖ **"Y" injection port:** for medicines injection.
- ❖ **Roller & Roller Body:** for enabling the required flow of I.V Solution.
- ❖ **Flow Regulator:** for enabling the required flow of I.V Solution.
- ❖ **Male fitting:** for fitting between Latex and I.V Needle.
- ❖ **Latex Bulb:** it has the specification of self-healing.
- ❖ **Male Leur:** For connection between I.V Needle and I.V tubing.
- ❖ **S.S Needle:** For Sharp Penetrating of vein.

- ❖ **Needle Cover:** to keep the sharpness and hygiene of Needle.

How Device Used:

- ❖ The device is used alone not combined to another device.

- **Product Classification:** Class IIa - Rule 7 (Annex-IX) in accordance Of the Council Directive MDD 93/42/EEC of 14 June 1993 amended by Directive 2007/47/EC, September 2007.

- **Ultramed I.V. Infusion Set procedure:**

1. Apply a constricting band two inches above the venipuncture site. The constricting band should be tight enough to occlude venous flow, but not so tight that distal pulses are lost.
2. Select and palpate a prominent vein.
3. Cleanse the skin with an alcohol swab using a spiral motion starting with the entry site and extending outward about two inches. Allow the site to dry.
4. Don gloves
5. Perform the venipuncture.
 - 5.1. Using your non-dominant hand, pull all local skin taut to stabilize the vein.
 - 5.2. With your dominant hand, position the distal bevel of the needle up and insert the cannula into the vein at approximately a 30 degree angle (figure 1-10).



Performing vein puncture.

- 5.3. Continue inserting the needle until blood is observed in the flash chamber.
- 5.4. Decrease the angle to 15 to 20 degrees and carefully advance the cannula approximately 0.5 centimeter farther (figure 1-11).



Conducting-vein puncture.

- 5.5. While holding the needle stationary, advance the needle into the vein with a twisting motion.
- 5.6. Place a finger over the vein and put pressure on the vein to prevent blood from flowing out.
6. Remove the constricting band.
7. Open the flow-regulator clamp and observe for drips in the drip chamber. Allow the fluid to run freely for several seconds.
8. Adjust to the desired flow rate.
9. Clean the area of blood, if necessary, and secure the hub of catheter with tape, leaving the hub and tubing connection visible.
 - Make a small loop in the IV tubing and place a second piece of tape over the first to secure the loop
10. Remove your gloves and dispose of them appropriately.