



**SNS COLLEGE OF NURSING**



Saravanapetti (p.o) , Coimbatore- 35

**AFFILIATED TO THE TAMIL NADU DR .M.G.R. MEDICAL UNIVERSITY,  
CHENNAI**

**COURSE: B.SC (N)- I YEAR**

**SUBJECT:NURSING FOUNDATION**

**Unit XII: ADMINISTRATION OF MEDICATIONS**

**Topic: Parenteral route**

**M.SC(N)**

**MRS.P.ARIVARASI**

**ASSISTANT PROFESSOR**

## PARENTERAL ROUTE

- Parenteral route refers to medications that are given by injection or infusion. In other words, it means giving therapeutic agents outside the alimentary tract ( para + besides , enteron + intestine). It is the forcing of fluid into the cavity, a blood vessel or a body tissue through a hollow tube or needle. Advanced injection techniques consist of injecting medications into artery, the peritoneum , heart tissue , the spinal canal and bones.
- Medications given by parenteral route are absorbed more rapidly and completely than medications given by other routes.

## TYPES OF INJECTIONS

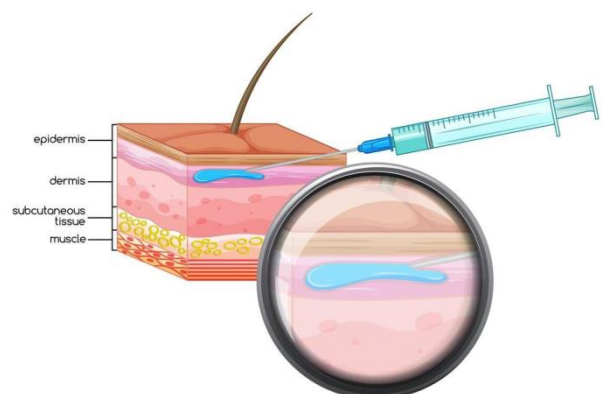
### Hypodermal or subcutaneous injections:

✓ Medicines when introduced into the subcutaneous tissue or areolar tissue ( just below the skin ), it is called hypodermic or subcutaneous injections.

### Hypospray :

✓ The hypospray permits drugs to be sprayed through the skin without a needle .

✓ pressure of about pounds is created in a device, which forces the drug into the tissues without pain and without a visible mark.



### Infusions:

• When a large quantity of medicines are introduced into the body , it is usually done intravenously or

**Intradermal :** •  
introduced into



quantity of medicines to be introduced into the body . This is called infusion .

subcutaneously.

Medicines when introduced into the dermis (

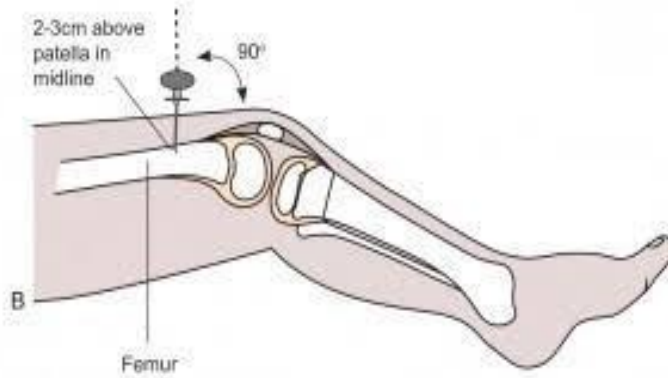
under the epidermis ), it is called intradermal injection.

**Intramuscular injection :**

• Medicines when injected into the muscles it is called intramuscular injection.

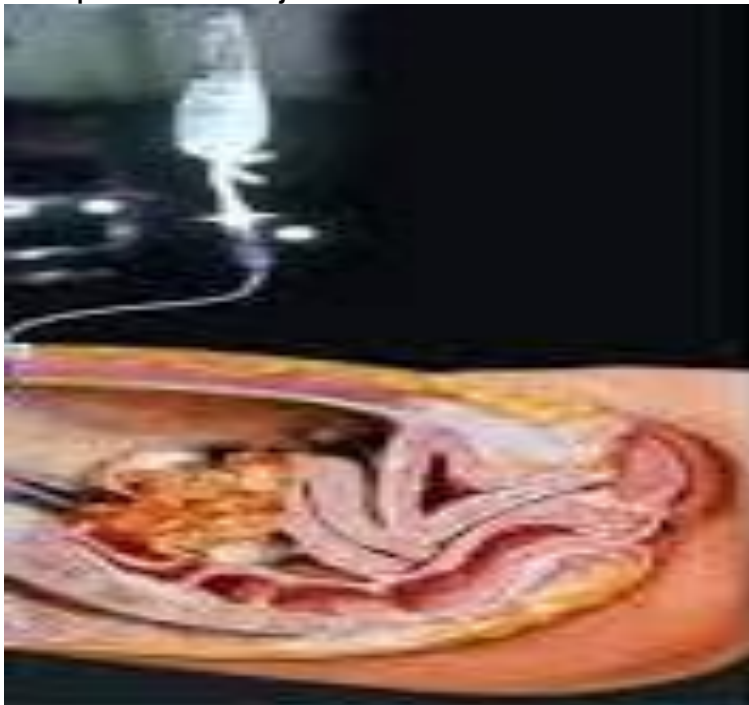
**Intraosseous injections :**

• When drugs or fluids are introduced into the bone marrow , then it is called intraosseous injection.



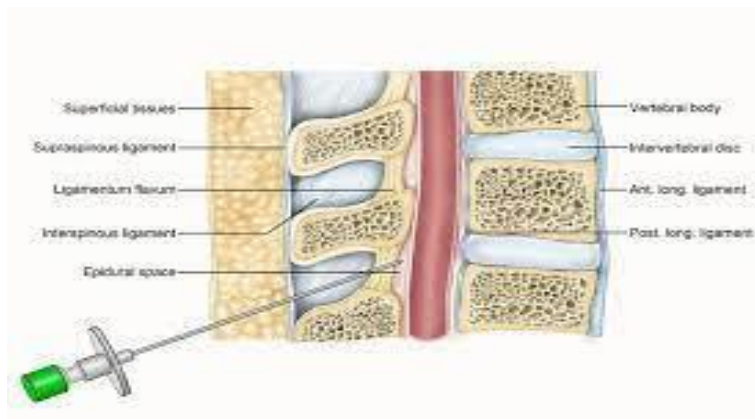
**Intraperitoneal injection :**

• Medicines when introduced into the peritoneal cavity , it is called intraperitoneal injection.



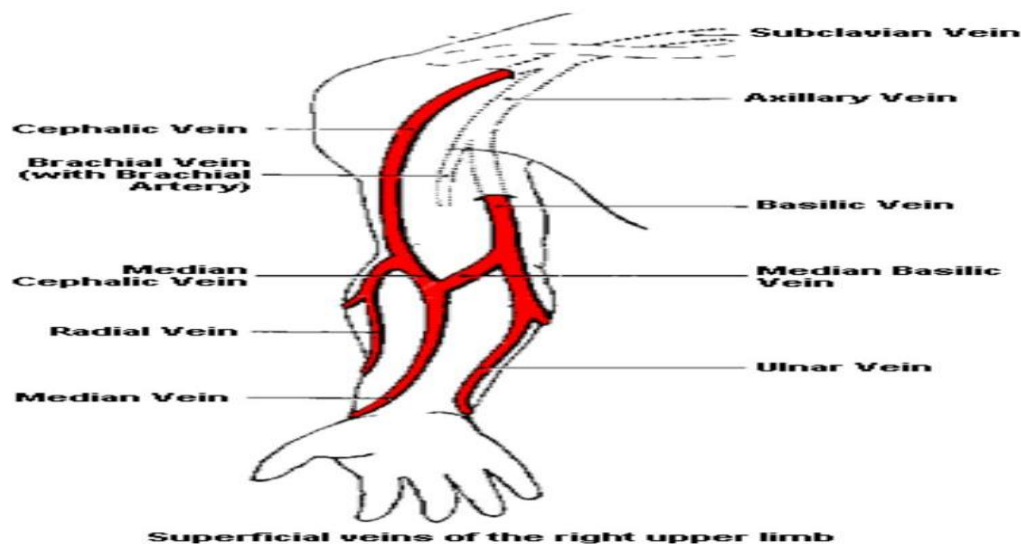
**Intraspinal or intrathecal injections :**

• Medicines when introduced into the spinal cavity are called intraspinal or intrathecal injections



### Intravenous and intra-arterial injection:

- Medicines and fluids when introduced into a vein, it is called intravenous injection and when introduced into the arteries is called intra – arterial injection.



### Venesection or cut down :

- Opening a vein and introducing a tube or wide – bore needle And introducing medicines and fluids or taking out blood is Called venepuncture or Venesection.
- This is done in emergencies.



### **Transfusions:**

- It is the introduction of whole blood or plasma into vein or artery to supply actual volume of blood or to introduce constituents as clotting factors or antibodies which are deficient in the client.



### **PURPOSE OF INJECTIONS**

- To get a rapid and systemic effect of the drug. Drugs given by mouth take time for their absorption , hence comes the delay.
- To provide the needed effect even when the client is unconscious , unable to swallow due to neurological or surgical alterations affecting the throat and mouth or when the client is not cooperative.

### ***PURPOSE OF INJECTION.....***

- Provides the only means of administration for medications that cannot be given orally.
  - Some medications are rendered ineffective in the gastrointestinal tract by the action of the digestive juices, e.G., Insulin.
  - Some are not retained in the intestine for a sufficient period for its absorption due to diarrhea , vomiting or gastric suction.
  - When the medicines are poorly absorbed from the g.I tract. When the drug is toxic and irritating to the gastrointestinal mucosa.

- ❑ To restore blood volume by replacing the fluid , e.g., in shock conditions.
- ❑ To give nourishment when it cannot be taken by mouth.
- ❑ Assures that the total dosage will be administered and the same will be absorbed for the systemic actions of the drug. When taken by mouth the absorption may not be complete due to many reasons.

## **PRINCIPLES INVOLVED IN THE ADMINISTRATION OF INJECTIONS**

### **1. Anatomy And Physiology Of The Body Is Essential For The Safe Administration Of The Injection**

2. If Carelessly Given, Injections Are Means Of Introducing Infection Into The Body

3. Drugs That Change The Chemical Composition Of The Blood, Will Endanger The Life Of The Client , If Not Used Cautiously.

4. Organization And Any Unfamiliar Situation Produces Anxiety planning Results In The Economy Of Time, Material And Comfort.

5. Any Unfamiliar Situation Produces Anxiety

6. Once A Drug Is Injected It Is Irretrievable. Antidote May Be Available For Particular Medications But The Best Antidote Is Prevention.

## **References**

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**THANK YOU**