

In Diabetes

Practical Aspects of Insulin Administration

1. Insulin is available commercially commonly as
 - a. Short Acting Human Regular Insulin
 - b. Rapid Acting Insulin Analogs- Aspart, Lispro, Glulisine
 - c. Intermediate Acting – Neutral Protamine Hagedorn (NPH)
 - d. Long Acting – Glargine (U100 and U300), Detemir
 - e. Ultra Long Acting - Degludec
 - f. Premixed Insulins – Human (Regular[30%] + NPH[70%]), Analogs (Lispro[25%] + Lispro Protamine[75%]) (Aspart[30%] + Aspart Protamine[70%])
 - g. Co-Formulation – Degludec(70%) + Aspart(30%)
2. The commonly available concentration of Insulin vials are
 - a. 100 International Units(IU)/ml
 - b. 40 IU/ml



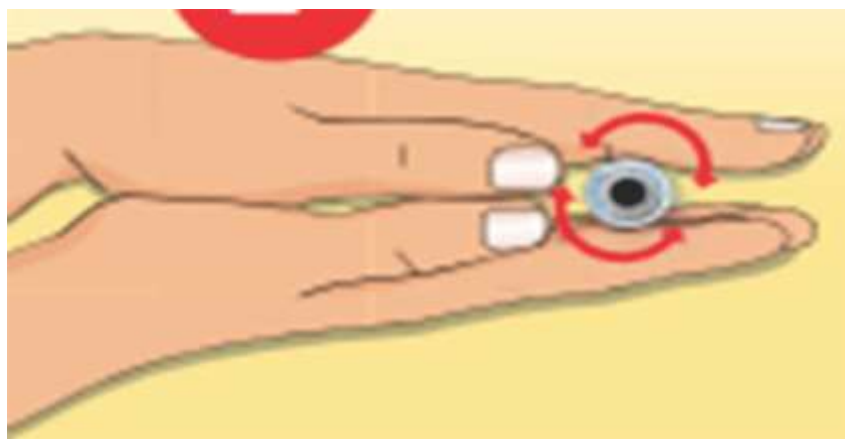
3. The commonly available Insulin Syringes include

- a. Red – 40 IU/ml
- b. Orange – 100 IU/ml

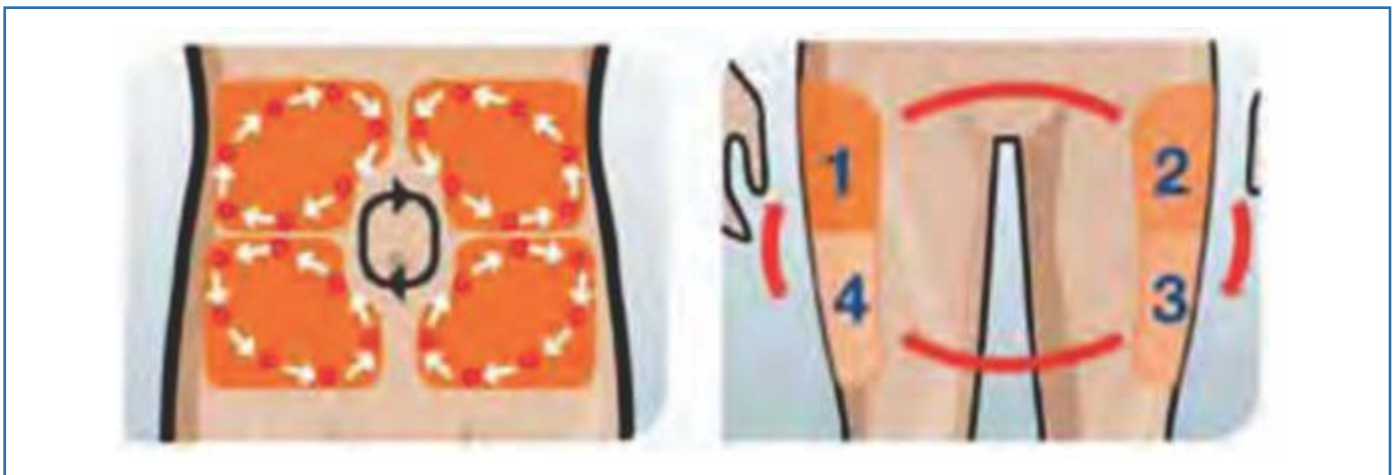


4. It is essential to correctly match the Insulin syringe and vial with their respective concentrations before administration otherwise it might lead to an error in dosage (Red syringe for 40 IU/ml vial and orange syringe for 100 IU/ml).

5. Insulin should be stored at room temperature (15 to 25 degrees centigrade). Never freeze it.
6. Resuspension of cloudy insulin eg NPH should be done by rolling the vial or pen and not by shaking. While mixing two insulins, the non-cloudy regular insulin should be drawn first followed by cloudy insulin NPH and not the reverse.



7. Insulin administration sites should be rotated systematically



The pictures have been taken from online Google Images search. Reference sources are duly acknowledged.

Dr. Boudhayan Das Munshi
Assistant Professor General Medicine,
AIIMS Kalyani