

Acknowledgements



Reference

Association of Diabetes Educators Singapore (2018). Forum for injection technique Singapore FIT-SG: Recommendations for best practice in injection technique. <https://ades.org.sg/assets/FITSG.pdf>

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Mixing Vial Insulin Injection

Instructions on Preparation for Injection and Storage



Step 1: Getting Ready



- A** Wash your hands after gathering requisites with soap and water, and dry thoroughly.



- B** Gather your supplies. Check the expiry date on the insulin bottle.



If your clear insulin does not appear clear and colourless, change to a new vial.



- C** Write the expiry date when you open up a new bottle of insulin.



Discard the bottle 4 to 6 weeks after opening, or as per manufacturer's instructions.



- D** Roll the cloudy insulin bottle between your palms at least 10 times to allow the suspension to mix well.



Do not shake the insulin bottle.

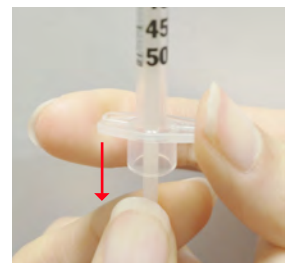


If your cloudy insulin is insufficiently mixed, repeat Step D again.



- E** Clean the rubber stopper with alcohol swab.

Step 2a: Inject Air into Cloudy Insulin (INSULATARD®)



- A** Pull the plunger to draw air into the syringe. The amount of air drawn should be the same as the amount of Insulatard® dose prescribed.



- B** Keeping the bottle upright, inject air into the bottle by pushing the plunger down completely. Remove the syringe from the vial.

Step 2b: Inject Air into Clear Insulin (ACTRAPID®)

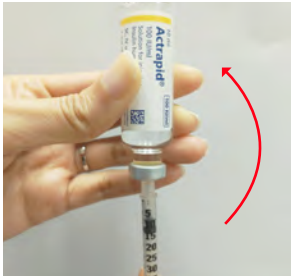


- A** Using the same steps as 2a, inject equal amount of air as the prescribed Actrapid® dose into the Actrapid® vial.

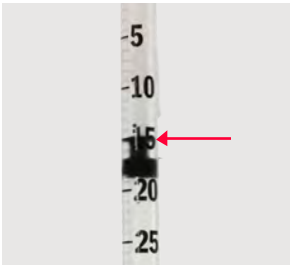


Do not remove the syringe after injecting air into this bottle.

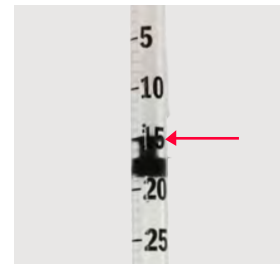
Step 3a: Draw Clear Insulin (ACTRAPID®)



- A Without removing the syringe from step 2b, turn the bottle and syringe upside down and bring it to your eye level. Draw out the required amount of insulin and remove syringe.



- B Read from the top of the black rubber ring (see arrow). Check for air bubbles. If present, Tap the syringe and push the bubbles back into the vial. Pull the plunger down again to the prescribed dose and remove the syringe.



- C Read from the top of the black rubber ring (see arrow).



If air bubble is present or you have drawn out more than required dose, discard the insulin solution and syringe, and start all over again. This is to ensure that you have injected the correct amount and types of insulin prescribed

$$\text{*Total Dose} = \text{ACTRAPID® dose} + \text{INSULATARD® dose}$$

Step 3b: Draw Cloudy Insulin (INSULATARD®)



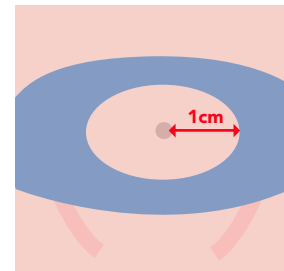
- A Insert the partially-filled syringe into the bottle of cloudy insulin.

! Do not push the plunger.



- B Turn the bottle and syringe upside down and bring it to your eye level. Draw out the required amount of cloudy insulin slowly to make up the total dose*. Drawing out slowly helps to minimise presence of air bubbles.

Step 4: Where to Inject Insulin



- A The most common site of injection is the abdomen.

Inject at least 2 finger width from belly button (1cm).

Each injection should be spaced 2 fingers apart from the previous site. You can inject in the blue area as shown in the diagram.

! Do not inject insulin at the same site repeatedly.

Step 5: How to Inject Insulin

- A** Insulin injection should be given into a clean site, cleansed with soap and water if needed. Discuss with your healthcare team if you need to disinfect with an alcohol swab. If alcohol is used, the skin must be allowed to dry completely before the injection is given.



- B** Lift a skin fold if needed. Children and slim patients using 6mm needle length may need to lift a skin fold for the insulin injection. Discuss with your healthcare team if needed.

- C** Hold the syringe with the other hand like a pencil. Inject at 90 degree angle to the skin. Push plunger all the way in. Remove syringe and release the skin fold.

- D** Apply gentle pressure over the injection site with a finger for 5 seconds. Apply pressure for a few more seconds if bleeding occurs.

! Do not rub the injection site.

Step 6: Disposal and Storage



- A** Throw used syringes into a home sharps box with a cover. Dispose the container when it is 3/4 full with the lid securely fastened.

! Do not re-cap or re-use the syringes.



- B** Keep opened insulin in a cool, dry area away from sunlight. Unopened insulin must be kept in the fridge.