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EADSG Guidelines: Insulin Storage and Optimisation of Injection Technique in Diabetes Management

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- Insulin therapy is key in management of diabetes, but the technique of injecting Insulin is poorly understood by many health care providers.
- The East Africa Diabetes Study Group (EADSG) sought a consensus on the recommendation of Insulin injection technique in low resource settings.
- A meeting of experts in managing diabetes, healthcare providers (professionals & workers), and patients with diabetes from the East African region met in Kigali, Rwanda and made recommendations for insulin injection technique, which were based on recommendations from “Forum for Injection Technique and Therapy Expert Recommendations (FITTER)”, Italy 2015.
- The summary of recommendations are given on slide # 2 and being explained in pictorial format in slide # 3.

- Insulin should be transported safely, with no shaking and at temperature of 2 – 8°C.
- Proper instructions to patients should be given on the administration of Insulin. Insulin in use should be kept at room temperature and should never be kept immersed in water to avoid contaminations.
- Shortest possible needles (4-mm for pen and 6-mm for insulin syringe) should be advised for patients; slanting of the needle to be avoided in order to prevent “tattooing” of the skin & scarring. If lifting for a skin fold (pinching of skin) is to be done, patients should be taught the technique of doing so and observed performing the technique appropriately by healthcare provider.
- Re-use of needles and syringes is not recommended, unless extremely necessary.
- Disposal of syringes and needles and other sharps to be done in designated containers, and to be kept in pre-defined areas.

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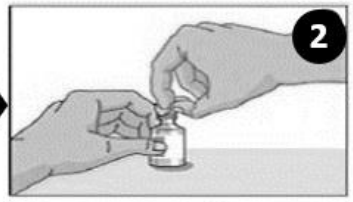
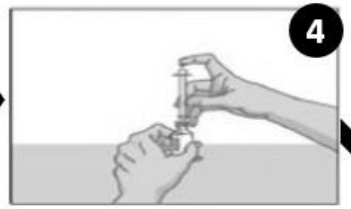
Wash hands, check insulin for lumps, crystals or discoloring. Gently roll between Hands until uniformly cloudy. Never shake insulin.



Wipe the top of the insulin bottle with an alcohol swab.

Pull the plunger down to let units of air into the syringe. The units of air should equal the units of insulin that will be drawn.



Push the air into the insulin bottle. Leave the needle in the bottle.

Turn the insulin bottle and syringe upside down. Be sure the needle is in the insulin, not in the airspace inside the bottle. Pull the plunger down to get right units of insulin in the syringe.

Look for air bubble in syringe. If there are bubbles, push insulin back into bottle. Start again from step 5. When you have the right insulin units with no air bubbles, pull syringe out of the bottle.

Push needle into skin at 90° angle.

Push plunger to inject insulin. Count from 0-30 (30 seconds) before withdrawing the needle.

Place the used syringe in a sharps container. Do not reuse the syringe if possible; limit re-use to maximum five times.

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Disclosures

Bahendeka Silver, Kaushik Ramaiya, Swai Babu Andrew, Otieno Fredrick, Sarita Bajaj, Sanjay Kalra, Bavuma Charlotte and Karigire Claudine have nothing to disclose.

Compliance with Ethics Guidelines

This guideline is based on previously conducted studies and does not contain any studies with human participants or animals performed by any of the authors. In drawing up the East Africa Diabetes Study Group (EADSG) Guidelines: Insulin Storage and Optimisation of Injection Technique in Diabetes Management, the authors adhered to the international and ethical standards in compliance with the Uganda National Council of Science and Technology (UNCST) for developing clinical practice guidelines (CPG).

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