

Guidelines for the Pre-filling of Insulin Syringes

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For some insulin dependent diabetics, the drawing up of insulin into a syringe may be difficult due to problems associated with poor vision, decreased manual dexterity or cognition. As a result, the pharmacist may be called upon to prefill insulin syringes. The following guidelines are meant to assist the pharmacist with this task.

1. The consent of the patient, caregiver or physician should be obtained before prefilling insulin syringes.
2. Whenever possible, the insulin pen device should be recommended to the patient and physician instead of prefilled insulin syringes.
3. The pharmacist should ensure that the patient or caregiver understands the proper technique for administering insulin injections.
4. The pharmacist should ensure that the patient or caregiver has been instructed to check the dose immediately prior to administering the insulin.
5. The pharmacist should ensure that proper aseptic technique is used when drawing insulin into the syringe. CSHP Guidelines for the Preparation of Sterile Products in Pharmacies may act as a guide for proper technique.
6. Due to the lack of stability of many insulin mixtures, it is recommended that mixed insulins not be prefilled. Pharmacists should consult the manufacturer's product information for specific guidelines regarding the prefilling of insulin mixtures.
7. If clear and cloudy insulins are to be mixed, the clear insulin should be drawn into the syringe first.
8. Prefilled insulin syringes should be stored in the refrigerator, cap on and in an upright (needle up) position. This position will prevent insulin particles from clogging the needle. Unused prefilled syringes should be discarded after seven days.
9. Patients should be instructed not to expose prefilled syringes to extremes in temperatures or to sunlight.
10. When using prefilled syringes containing an insulin suspension (i.e. NPH or lente), the patient should be instructed in the proper technique for adequately resuspending the insulin. The product should be rolled between the palms of the hands for approximately 15 seconds.

11. Prefilled syringes should be dispensed in special rigid containers which will reduce movement of the syringe during transport and ensure proper storage.
12. Vials of insulin being used to prefill syringes should be kept in the pharmacy at all times.
13. Vials of insulin in use or not refrigerated should be discarded after thirty days.
14. Only syringes filled with the same insulin or the same combination of insulin should be dispensed in the same rigid container.
15. The container should be labelled as to:
 - a. patient's name
 - b. prescription number
 - c. directions
 - d. drug name
 - e. quantity (number of syringes and number of units per syringe)
 - f. physician's name
 - g. date
 - h. 7 day expiry date
 - i. lot number of insulin vial used
16. Each prefilled syringe should be clearly identifiable as to the contents. Color coding should be used for both the container and each syringe.

The pharmacist must ensure that the patient or caregiver can clearly distinguish the type and quantity of insulin contained in the syringe.

17. The vial of insulin should be labelled as to:
 - a. Patient's name
 - b. Prescription number
 - c. Date vial opened
18. A record should be kept of the date of dispensing of each set of syringes and the lot number of the insulin, in case of a recall.
19. The same size and brand of insulin syringe should always be used. This is of particular importance when prefilling insulin mixtures, as different syringe brands have variances in dead space ranging from 0 to 10 units.