

Tips For Measuring Liquid Medicines Safely

Medicines that are in a liquid form can be prescribed by a doctor or purchased over-the-counter (OTC). Liquid medicines are sometimes referred to as elixirs, syrups, solutions, or mixtures. They are commonly used in children or adults who have difficulty



swallowing. In some cases, the drug itself is absorbed better in a liquid form, so even people who do not have difficulty swallowing might use liquid medicines.

One common error with liquid medicines involves tak-

ing the wrong dose. This occurs because of confusion between different dose measurements. For example, liquid medicines can be dosed in household measurements (teaspoons or tablespoons) or in the metric system (milliliters). If these measurements are confused with each other, too much or

too little of the medicine can be given.

If you are taking liquid medicines or administering them to a child, consider the following safety strategies to prevent errors.

For OTC liquids: Never

- Always use the dosing device that comes with the medicine, such as a syringe or a dosing cup. If a dosing device does not come with the product, ask a pharmacist to recommend one.
- **Never** use household measuring devices to give liquid medicines. They are inaccurate and may deliver more or less than prescribed. Today's OTC liquid medicines almost always have their own measuring devices.
- When administering OTC liquids to a child, be sure to know the child's current weight. To get the most accurate dose for a child, it is best if it is dosed according to weight, not age. Tables are often present on the product label to help guide proper dosing by weight.
- It's best to store both the medicine and dosing tool together. This way you will always have the correct measuring device on hand when you need it.
- When measuring the liquid medicine, always be sure to look at it at eye level. With dosing cups, measure on a flat surface and not while holding in one hand.
- Never measure liquid medicine in a dim room or when you are distracted.

- After measuring liquid medicine, **immediately** replace the cap. If small children either live in your home, or will be visiting, be sure child-resistant caps are on.
- If using a syringe with a special adapter that allows the medicine to be withdrawn directly from the bottle (figure 1), be aware it may not be child-resistant. When using these products, always be sure to remove the adapter and replace a child-resistant cap after measuring the liquid. **NEVER** store the syringe on the adapter (figure 2).
- Always store adult and child preparations of liquid medicine in separate areas. This will decrease the chance of mixing up the containers by accident.

For Prescription Liquid Medicines:

- When getting a prescription from a healthcare provider, listen carefully to the dosing instructions. Look at the prescription and be alert to the amount of liquid you are supposed to take. If your doctor is sending an electronic prescription to the pharmacy, request a hard copy for your records. This is for your reference when you pick up your prescription at the pharmacy. ▶

Figure 1



Syringe with bottle adapter on

EZY DOSE oral syringe with cork-style bottle adapter.



Figure 2

Do NOT store adapter on container



Do NOT leave syringe attached to adapter-container



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- ▶ When obtaining your prescription at the pharmacy, look closely at the dosing instructions. Be sure the volume of medicine called for on the prescription is exactly what appears on the label. Read it carefully. On occasion, an error can occur in which the pharmacist or pharmacy technician transcribes the incorrect volume or dosage instructions. For example, instead of, "Take 5 mL," the label may state, "Take 5 teaspoonfuls".
- If your liquid medicine does not come with its own dosing device, ask your pharmacist for help in choosing the best one to meet your need.
- Some liquids, especially prescription liquids, will require refrigeration. Be sure to read the label carefully to find out how your medicine should be stored. If your medicine must be stored in the refrigerator, always be sure to store it on a high shelf towards the back so that a child can't reach it.

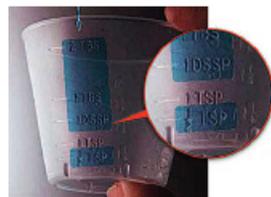
Other Liquid Medication Safety Tips:

- After administering the medicine, always be sure to wash the dosing device. If you fail to do so, bacteria can grow and cause contamination with any future use.
- If you wash a dosing device immediately before administration, be sure to dry it well. Leaving liquid residue on the device can interfere with dosing accuracy.
- If you overfill a cup or dosing syringe when measuring, discard the excess medicine down the sink. Don't try to pour any excess or unused medicine back into the container. Doing so will contaminate the medicine that is left in the container.
- To ensure accurate dosing, don't combine more than one liquid medicine in a dosing device at the same time. The medicines may not be compatible.
- Do not combine any medicine with foods or drinks unless product labeling specifically says it is OK.

Do **NOT** use these devices to measure liquid medicines



A child died after a cap was accidentally left on a hypodermic syringe used to administer oral liquids



Recommended devices for measuring liquid medicine

