

FDA Guidance to Pharmacies on Advance Compounding of Tamiflu Oral Suspension to Provide for Multiple Prescriptions

Excerpted from: <http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm188629.htm>

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Note: The American Pharmacists Association has compiled this information into a printer-ready format for display in pharmacies.

Commercially manufactured Tamiflu for Oral Suspension (12 mg/mL) is the preferred product for pediatric and adult patients who have difficulty swallowing capsules. However, preparation of an oral suspension from the 75 mg Tamiflu Capsules, as described in the FDA-approved labeling resulting in a concentration of 15 mg/ml, may be necessary when the commercial suspension, Tamiflu for Oral Suspension (12 mg/ml), is not readily available in a timely manner because of an actual shortage of the product. If demand is high, it may make sense for pharmacies to compound the suspension (15 mg/ml) in advance of receiving prescriptions. FDA will not object if pharmacies compound the suspension from Tamiflu Capsules in advance of receiving prescriptions, if the amount compounded is commensurate with the number of valid prescriptions that the pharmacy can reasonably anticipate receiving within the next 24 hours. Based on mixing and stability considerations it is reasonable for pharmacists to compound the suspension (15 mg/ml) using up to 100 capsules at a time, to meet the number of anticipated prescriptions for the next day. Pharmacies should carefully review the instructions provided in the Tamiflu Capsule labeling for compounding the suspension (below). When compounding the suspension (15 mg/ml) for more than one patient, pharmacists need to:

- Assure that the suspension is thoroughly mixed and stable, which includes emptying the correct number of capsules, assuring that suspension vehicles identified in the labeling are used (other vehicles have not been studied, and certain sugars in the suspension may lead to a decrease in potency), and assuring that any mixer used is well maintained and cleaned.
- If a sufficient number of amber bottles are not available it is acceptable to use other types of glass or PET bottles.
- Pharmacists need to refrigerate the compounded product, assure that the product is stirred thoroughly before dispensing, and ensure that patients are advised to continue refrigerating the product at home.
- Patients should also be advised to gently shake the product before administration to ensure proper mixing of the suspension.
- Pharmacists and health care providers should also ensure that an appropriate dispensing device (i.e., one that measures volume in mL) is provided with the compounded suspension.

Directions for Emergency Compounding of an Oral Suspension from TAMIFLU Capsules (Final Concentration 15 mg/mL)

The following directions are provided for use only during emergency situations. These directions are not intended to be used if the FDA-approved, commercially manufactured TAMIFLU for Oral Suspension is readily available from wholesalers or the manufacturer.

Compounding an oral suspension with this procedure will provide one patient with enough medication for a 5-day course of treatment or a 10-day course of prophylaxis.

Commercially manufactured TAMIFLU for Oral Suspension (12 mg/mL) is the preferred product for pediatric and adult patients who have difficulty swallowing capsules or where lower doses are needed. In the event that TAMIFLU for Oral Suspension is not available, the pharmacist may compound a suspension (15 mg/mL) from TAMIFLU (oseltamivir phosphate) Capsules 75 mg using either of two vehicles: Cherry Syrup (Humco®) or Ora-Sweet® SF (sugar-free) (Paddock Laboratories). Other vehicles have not been studied. This compounded suspension should not be used for convenience or when the FDA-approved TAMIFLU for Oral Suspension is commercially available.

First, calculate the Total Volume of an oral suspension needed to be compounded and dispensed for each patient. The Total Volume required is determined by the weight of each patient. Refer to Table 7.

Second, determine the number of capsules and the amount of vehicle (Cherry Syrup or Ora-Sweet SF) that are needed to prepare the Total Volume (calculated from Table 7: 30 mL, 40 mL, 50 mL, or 60 mL) of compounded oral suspension (15 mg/mL). Refer to Table 8.

Third, follow the procedure below for compounding the oral suspension (15 mg/mL) from TAMIFLU Capsules 75 mg

1. Carefully separate the capsule body and cap and transfer the contents of the required number of TAMIFLU 75 mg Capsules into a clean mortar.
2. Triturate the granules to a fine powder.
3. Add one-third (1/3) of the specified amount of vehicle and triturate the powder until a uniform suspension is achieved.
4. Transfer the suspension to an amber glass or amber polyethyleneterephthalate (PET) bottle. A funnel may be used to eliminate any spillage.
5. Add another one-third (1/3) of the vehicle to the mortar, rinse the pestle and mortar by a triturating motion and transfer the vehicle into the bottle.
6. Repeat the rinsing (Step 5) with the remainder of the vehicle.
7. Close the bottle using a child-resistant cap.
8. Shake well to completely dissolve the active drug and to ensure homogeneous distribution of the dissolved drug in the resulting suspension. (Note: The active drug, oseltamivir phosphate, readily dissolves in the specified vehicles. The suspension is caused by some of the inert ingredients of TAMIFLU Capsules which are insoluble in these vehicles.)

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9. Put an ancillary label on the bottle indicating "Shake Gently Before Use". [This compounded suspension should be gently shaken prior to administration to minimize the tendency for air entrapment, particularly with the Ora-Sweet SF preparation.]
10. Instruct the parent or guardian that any remaining material following completion of therapy must be discarded by either affixing an ancillary label to the bottle or adding a statement to the pharmacy label instructions.
11. Place an appropriate expiration date label according to storage condition (see below).

STORAGE OF THE PHARMACY-COMPOUNDED SUSPENSION:

Refrigeration: Stable for 5 weeks (35 days) when stored in a refrigerator at 2° to 8°C (36° to 46°F).

Room Temperature: Stable for five days (5 days) when stored at room temperature, 25°C (77°F).

Note: The storage conditions are based on stability studies of compounded oral suspensions, using the above mentioned vehicles, which were placed in amber glass and amber polyethyleneterephthalate (PET) bottles. Stability studies have not been conducted with other vehicles or bottle types.

Place a pharmacy label on the bottle that includes the patient's name, dosing instructions, and drug name and any other required information to be in compliance with all State and Federal Pharmacy Regulations. Refer to Table 9 for the proper dosing instructions.

Note: This compounding procedure results in a 15 mg/mL suspension, which is different from the commercially available TAMIFLU for Oral Suspension, which has a concentration of 12 mg/mL.

APhA Note: Extended expiration dating of Tamiflu and Relenza: For any TAMIFLU® that is past its expiration date, you should look up the lot number at the following website to determine if FDA has authorized its use beyond the expiry date:

<http://www.fda.gov/NewsEvents/PublicHealthFocus/ucm154962.htm>.

If the lot number for expired TAMIFLU® appears on this website, you may inform recipients of the expired TAMIFLU that it has been authorized for use beyond its expiration date.

FDA made clarifications to the [Tamiflu Fact Sheet for Health Care Providers](#), the [Relenza Fact Sheet for Health Care Providers](#), the [Tamiflu Fact Sheet for Patients and Parents/Caregivers](#) and [Relenza Fact Sheet for Patients and Parents/Caregivers](#) to include this new information. The Tamiflu Fact Sheet for Health Care Providers was also updated to include dosing recommendations based on weight for children younger than 1 year of age.

Table 7: Volume of an Oral Suspension (15 mg/mL) Needed to be Compounded Based Upon the Patient's Weight

Body Weight (kg)	Body Weight (lbs)	Total Volume to Compound per patient (mL)
≤15 kg	≤ 33 lbs	30 mL
16 to 23 kg	34 to 51 lbs	40 mL
24 to 40 kg	52 to 88 lbs	50 mL
≥41 kg	≥89 lbs	60 mL

Table 8: Number of TAMIFLU 75 mg Capsules and Amount of Vehicle (Cherry Syrup OR Ora-Sweet SF) Needed to Prepare the Total Volume of a Compounded Oral Suspension (15 mg/mL)

Total Volume of Compounded Oral Suspension needed to be Prepared	30 mL	40 mL	50 mL	60 mL
Required number of TAMIFLU 75 mg Capsules	6 capsules (450 mg oseltamivir)	8 capsules (600 mg oseltamivir)	10 capsules (750 mg oseltamivir)	12 capsules (900 mg oseltamivir)
Required volume of vehicle				
Cherry Syrup (Humco) OR Ora-Sweet SF (Paddock Laboratories)	29 mL	38.5 mL	48 mL	57 mL

Table 9: Dosing Chart for Pharmacy-Compounded Suspension from TAMIFLU Capsules 75 mg

Body Weight (kg)	Body Weight (lbs)	Dose (mg)	Volume per Dose 15 mg/mL	Treatment Dose (for 5 days)	Prophylaxis Dose (for 10 days)
Note: 1 teaspoon = 5 mL					
≤ 15 kg	≤ 33 lbs	30 mg	2 mL	2 mL two times a day	2 mL once daily
16 to 23 kg	34 to 51 lbs	45 mg	3 mL	3 mL two times a day	3 mL once daily
24 to 40 kg	52 to 88 lbs	60 mg	4 mL	4 mL two times a day	4 mL once daily
≥41 kg	≥89 lbs	75 mg	5 mL	5 mL two times a day	5 mL once daily

Consider dispensing the suspension with a graduated oral syringe for measuring small amounts of suspension. If possible, mark or highlight the graduation corresponding to the appropriate dose (2 mL, 3 mL, 4 mL, or 5 mL) on the oral syringe for each patient. The dosing device dispensed with the commercially available TAMIFLU for Oral Suspension should NOT be used with the compounded suspension since they have different concentrations.

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