

QUICK LINKS**Use of Antiviral Drugs for Influenza—TRAVELER INFORMATION**

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Traveler Information

USE OF ANTIVIRAL DRUGS FOR INFLUENZA**INTRODUCTION**

Vaccination is the best prevention against influenza. However, not all travelers are able to receive influenza vaccine, and, in some circumstances, the vaccine may not be well matched to the circulating influenza virus strains. Antiviral drugs can be used to treat or prevent infection in persons who have not been vaccinated or are at high risk.

Several types of antivirals are available, but the neuraminidase inhibitors (NI) oseltamivir (Tamiflu), zanamivir (Relenza), and peramivir (Rapivab), are currently preferred. These drugs are available by prescription only.

- Oseltamivir comes in packs of 10 pills (75 mg each) and is the easiest to use. It is approved for treatment of influenza in person aged 2 weeks and older. It has few serious side effects and is probably safest for most travelers.
- Zanamivir is taken by inhalation and therefore may be more complicated to use; it is supplied in a circular double-foil pack (Rotadisk) containing 4 "blisters" of drug per disk (5 mg/blister) and a Diskhaler inhalation device. Zanamivir can be used in persons aged 7 years and older for treatment of influenza.
- Peramivir, which is given IV, is licensed for treating persons aged 18 years and older with acute, uncomplicated influenza who have had symptoms for less than 2 days and do not require hospitalization. Efficacy against severe influenza requiring hospitalization or against influenza B has not been established.
- See also *Influenza*.

Some travelers may be advised to carry oseltamivir or zanamivir for stand-by treatment, especially if the traveler is at high risk for complications from influenza or was unable to be vaccinated before departure. Because peramivir is given IV, it is not recommended for self-treatment.

ANTIVIRALS TO TREAT INFLUENZA

Antivirals can be used by travelers who become ill with fever and influenza-like symptoms.

- Before taking the antiviral, the traveler should make every effort to contact his or her regular medical provider, because fever could also be a sign of malaria.
- Use of antivirals is not a substitute for seeking immediate medical care.
- To be most effective, antivirals should be started within 2 days of the time symptoms first appear, if possible. (The drug can be started at any time during the illness, however.)

Treatment dosages:

- Oseltamivir: Persons aged 13 years and older should take 1 pill (75 mg) twice daily (1 pill in the morning and 1 pill in the evening) for 5 days. The pediatric dose for children aged 2 weeks through 12 years is based on weight.
- Zanamivir: Persons aged 7 years and older should take 10 mg (2 blisters) inhaled twice daily (for a total of 20 mg or 4 blisters per day) for 5 days. (One Rotadisk contains 4 blisters.)
- Peramivir: Persons aged \geq 18 years receive a single 600-mg dose given IV over at least 15 minutes.
 - Persons with renal impairment receive 200 mg if creatinine clearance is 30-49 mL/min or 100 mg if creatinine clearance is 10-29 mL/min.
 - If used off-label for treatment of hospitalized persons, the dose is 200-600 mg/day.

Oseltamivir is preferred for treatment of influenza in pregnant women during any trimester and women within 2 weeks of giving birth. Zanamivir is preferred for women who are breastfeeding (except those with pre-existing respiratory problems).

Carrying a pack of 10 tablets of oseltamivir or 5 Rotadisks (20 blisters) of zanamivir will provide the required 5 days of treatment.

Travelers to malarious areas should remember that a fever could be caused by malaria, which is a medical emergency. Thus it is vital that travelers with flu-like symptoms contact a health care provider before taking antivirals.

See antiviral table, below.

ANTIVIRALS TO PREVENT INFLUENZA

When used for prevention, the antiviral must be taken (after medical consultation) for as long as potential exposure exists and should continue for 7 days after the last exposure.

Doses for prevention (see table below):

- Oseltamivir: 1 pill (75 mg) by mouth once daily for persons aged 13 years and older (the dose is weight-based for younger persons)
- Zanamivir: 2 blisters (10 mg per blister) inhaled once daily for persons aged 5 years and older.
- Peramivir is not licensed for prevention.

Zanamivir is preferred for influenza prevention in women who are breastfeeding and for most pregnant women, but oseltamivir is preferred for pregnant women with pre-existing respiratory illness.

Antiviral	Age	Weight	Dose / route	Duration for Treatment	Duration for Prophylaxis
Oseltamivir					
	Adult	—	75 mg orally	Twice daily for 5 days	Once daily for 7 days ²
	Children age 1 year and older	40 kg or more 24-39 kg 16-23 kg 15 kg or less	75 mg orally 60 mg orally 45 mg orally 30 mg orally	Twice daily for 5 days	Once daily for 7 days ²
	<i>Treatment:</i> Children age 2 weeks ¹ up to 12 months <i>Prevention:</i> Children age 3 months to 12 months	—	3 mg/kg orally	Twice daily for 5 days	Once daily for 7 days ²
Zanamivir	Adult	—	10 mg (2 inhalations)	Twice daily for 5 days	Once daily for 7 days ²
	<i>Treatment:</i> Children aged 7 years and older <i>Prevention:</i> Children aged 5 years and older	—	10 mg (2 inhalations)	Twice daily for 5 days	Once daily for 7 days ²
Peramivir	<i>Treatment:</i> ≥ 18 years <i>Prevention:</i> Not licensed for prevention	—	600 mg IV ³	A single dose given over 15 minutes	—

1. May be used in children less than 2 weeks of age for treatment.
2. 7 days after last exposure
3. Dosage shown is for persons who are not hospitalized and do not have renal impairment.

DIFFERENTIATING BETWEEN INFLUENZA AND A COLD

Influenza

Seasonal influenza symptoms are usually more severe than cold symptoms. Influenza is a major viral respiratory illness that affects the whole body. It usually starts abruptly with high fever, severe body aches, extreme tiredness, headache, and a dry cough. (Some people might get a stuffy nose and sore throat but these symptoms are more common with a cold.)

Avian influenza also starts with a fever and influenza-like symptoms but quickly becomes more severe. Severe pneumonia and acute respiratory distress may occur. Some people experience eye inflammation, severe diarrhea, brain inflammation, seizures, and/or coma.

Note: Persons traveling in malarious areas should be mindful that fever could be a symptom of malaria; thus, it is vital that travelers with influenza-like symptoms contact a health care provider before taking antivirals.

Colds

Colds are usually much milder than influenza. A cold is a minor viral respiratory illness that usually affects just the nose and throat. A cold begins slowly with a sore/scratchy throat, sneezing, and runny or stuffy nose; a few days later a mild cough develops. Fever is rare in adults and older children (infants and young children might have a fever), and extreme tiredness is not a symptom of a cold.

PRECAUTIONS AND SIDE EFFECTS OF ANTIVIRAL DRUGS

Oseltamivir (Tamiflu)

- Nausea or vomiting can occur, but taking the drug with food can lessen these symptoms.
- Some persons, mainly adolescents and adults in Japan, have experienced delirium or self-injury while taking this drug. Travelers noticing any abnormal behavior while taking oseltamivir should seek medical care immediately.

Zanamivir (Relenza)

- This drug should not be used by persons with lung diseases (such as asthma or chronic obstructive pulmonary disease).
 - Travelers who experience wheezing or breathing difficulties while taking zanamivir should seek medical attention and stop taking the drug.
- Some persons, mainly children in Japan, have experienced instances of delirium or self-injury while taking this drug. Travelers noticing any abnormal behavior while taking zanamivir should seek medical care immediately.

Peramivir (Rapivab)

- The most common adverse reaction is diarrhea.
- Rare cases of serious skin reactions, including Stevens-Johnson syndrome and erythema multiforme, have occurred.
- Some persons in Japan have experienced delirium or abnormal behavior while taking this drug. Travelers noticing any abnormal behavior while taking oseltamivir should seek medical care immediately.

Travax content represents decision-relevant, expert synthesis of real-time data reconciled with new and existing available advice from authoritative national and international bodies. National body recommendations such as ACIP/CDC may differ from the manufacturers' recommendations as found in vaccine package inserts. Travax recommendations may differ from those of individual countries' public health authorities.

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