

Guidance on Antiviral Prescribing for treatment and prophylaxis of uncomplicated influenza

Antivirals should only be prescribed when the CMO indicates that influenza levels have escalated to a level that triggers prescribing at NHS expense. Prescribing should be in accordance with NICE guidance [TAG 168 for treatment](#) and [TAG 158 for prophylaxis](#), [Public Health England guidance](#) AND the current CMO alert

Current prescribing advice: GPs and other prescribers working in primary care should no longer prescribe antiviral medicines, for the prophylaxis and treatment of influenza on an FP10 prescription form.

Uncomplicated influenza: influenza presenting with fever, coryza, generalised symptoms (headache, malaise, myalgia, arthralgia) and sometimes gastrointestinal symptoms.

Treatment of influenza (see pages 2-6 for guidance on prescribing antivirals)

Oseltamivir (Tamiflu®) and zanamivir (Relenza®) are recommended, for the treatment of influenza in adults and children if **ALL** of the following circumstances apply:

- National surveillance indicates that influenza virus is circulating.
- The person is in an 'at risk' group (see below) **or if the person is not in an at-risk group, the prescriber believes that the person is at risk of developing medical complications of influenza if not treated**
- The person presents with an influenza-like illness and can start treatment within 48 hours (or within 36 hours for zanamivir) of the onset of symptoms. There may however be some benefit in providing antivirals up to 5 days after symptom onset (use in such context is unlicensed and should be based on an individual clinical decision)

Prophylaxis of influenza (see page 2-6 for guidance on prescribing antivirals)

Oseltamivir (Tamiflu®) and zanamivir (Relenza®) are recommended, within their marketing authorisations, for the post-exposure prophylaxis of influenza if **ALL of the following circumstances apply:**

- National surveillance indicates that influenza virus is circulating.
- The person is in an 'at risk' group (see below)
- The person has been in close contact with a person in the same household or residential setting who has had recent symptoms of influenza.
- The person is able to begin prophylaxis within 36 hours of contact with the index case for zanamivir and within 48 hours of contact with the index case for oseltamivir. There may however be some benefit in providing antivirals up to 5 days after symptom onset (use in such context is unlicensed and should be based on an individual clinical decision)
- The person has not been effectively protected by vaccination (this is defined as people who have not been vaccinated since the previous influenza season, those in whom vaccination is contraindicated, or in whom it has yet to take effect (the vaccine takes around 14 days to work), and those vaccinated with a vaccine that is not well matched to the circulating strain of influenza virus).

'At risk' groups [People 'at risk' are defined as those who fall into one or more of the following clinical risk groups:](#)

- Chronic respiratory disease (including asthma and COPD)
- Chronic heart disease
- Chronic liver disease
- Chronic renal impairment
- Chronic neurological conditions
- Severe Immunosuppression
- Diabetes mellitus
- Pregnancy
- People who are aged 65 years or older
- Children under six months of age
- Morbid obesity (BMI ≥40)

Treatment choice

Oseltamivir (Tamiflu®) should be used first line.

Oseltamivir 6mg/ml suspension should be reserved for use in children under 1 year of age.

Adults and children over 1 year of age who are unable to swallow capsules may receive appropriate doses of oseltamivir by opening the capsule and pouring the contents into a suitable, small amount (1 teaspoon maximum) of sweetened food product such as regular or sugar-free chocolate syrup, honey, light brown or table sugar dissolved in water, desert toppings, sweetened condensed milk, apple sauce or yogurt to mask the bitter taste. The mixture should be stirred and the entire contents given to the patient who should take it immediately after its preparation. The mixture must be swallowed immediately after its preparation.

Zanamivir (Relenza®) should be reserved for oseltamivir resistance.

Antiviral prescribing guidance for treatment of suspected uncomplicated influenza & post exposure prophylaxis: Adults (including pregnant women) and children OVER 1 year of age

Oseltamivir (Tamiflu®)

TREATMENT DOSAGE SCHEDULE

Adults & Adolescents (13 to 17 years of age): The recommended oral dose is oseltamivir (Tamiflu®) 75mg TWICE daily for 5 days, 10 days in immunocompromised adult patients. Suspect renal impairment in adults ≥65 years where blood results are not available or are ≥ 6 months (dose as guide on page 6)

Children 1 to 12 years of age: See table below. (oseltamivir (Tamiflu®) 30 mg and 45 mg capsules are available.)

Body Weight	Age	Dose	Number of capsules swallowed or opened
10kg to 15 kg	1 year to ≤3years	30 mg TWICE daily	ONE 30mg capsule swallowed whole or opened and contents taken as advised (see yellow box below) TWICE daily for FIVE days
>15 kg to 23 kg	>3 years to ≤ 7 years	45 mg TWICE daily	ONE 45mg capsule swallowed whole or opened and contents taken as advised (see yellow box below) TWICE daily for FIVE days
>23 kg to 40 kg	>7 years to <13 years	60 mg TWICE daily	TWO 30mg Capsules swallowed whole or opened and contents taken as advised (see yellow box below) TWICE daily for FIVE days
> 40 kg	≥13 years	75 mg TWICE daily	ONE 75mg capsule swallowed whole or opened and contents taken as advised (see yellow box below) TWICE daily for FIVE days
Adult – extremes of weight*	>23 kg to 40 kg: dose as above Obese patients: no dose adjustment necessary		*10 days for immunocompromised <u>adult</u> patients

Oseltamivir (Tamiflu®)

POST EXPOSURE PROPHYLAXIS DOSE SCHEDULE

Adults & Adolescents (13 to 17 years of age): The recommended dose for post exposure prophylaxis is oseltamivir (Tamiflu®) 75mg ONCE daily for 10 days. Suspect renal impairment in adults ≥65 years where blood results are not available or are ≥ 6 months (dose as guide on page 6)

Children 1 to 12 years of age: See table below (oseltamivir (Tamiflu®) 30 mg and 45 mg capsules are available.)

Body Weight	Age	Dose	Number of capsules swallowed or opened
10kg to ≤15 kg	1 year to ≤3years	30 mg ONCE daily	ONE 30mg capsule swallowed whole or opened and contents taken as advised (see yellow box below) ONCE daily for TEN days
> 15 kg to 23 kg	>3 years to ≤ 7 years	45 mg ONCE daily	ONE 45mg capsule swallowed whole or opened and contents taken as advised (see yellow box below) ONCE daily for TEN days
> 23 kg to 40 kg	>7 years to <13 years	60 mg ONCE daily	TWO 30mg Capsules swallowed whole or opened and contents taken as advised (see yellow box below) ONCE daily for TEN days
> 40 kg	≥13 years	75 mg ONCE daily	ONE 75mg capsule swallowed whole or opened and contents taken as advised (see yellow box below) ONCE daily for TEN days
Adult – extremes of weight	>23 kg to 40 kg: dose as above Obese patients: no dose adjustment necessary		

Oseltamivir suspension should be reserved for children under 1 year of age (see dosage guide page 4)

Adults, adolescents and children over 1 year of age who are unable to swallow capsules may receive appropriate doses of Oseltamivir (Tamiflu®) by opening capsules and pouring the contents into a suitable, small amount (1 teaspoon maximum) of sweetened food product such as regular or sugar-free chocolate syrup, honey (only for children two years or older), light brown or table sugar dissolved in water, dessert toppings, sweetened condensed milk, apple sauce or yogurt to mask the bitter taste. The mixture should be stirred and the entire contents given to the patient. The mixture must be swallowed immediately after its preparation.

Zanamivir (Relenza®)

Zanamivir should be used when the dominant circulating influenza strain has a higher risk of oseltamivir resistance e.g. Influenza A(H1N1). For information on the dominant circulating strain go to:

<https://www.gov.uk/government/statistics/weekly-national-flu-reports>

As A(H1N1) is known to be the dominant circulating virus this season, it is recommended that zanamivir is prescribed as the first line antiviral for treatment and prophylaxis in severely immunosuppressed patients.

Zanamivir should only be used for adults and children **age 5 years and older**

Zanamivir should **NOT** be used for patients with **Asthma or COPD**

Treatment doses: Adults and children age 5 years and over:

The recommended dose of Zanamivir is 10mg (inhalation of **TWO** 5mg blisters) **TWICE daily** for **FIVE** days.

Post Exposure Prophylaxis: Adults and children age 5 years and over:

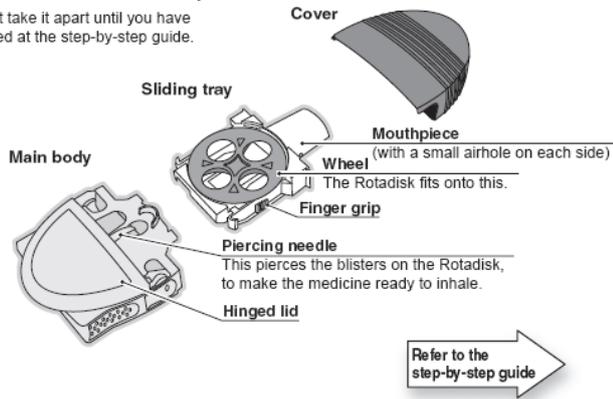
The recommended dose of Zanamivir is 10mg (inhalation of **TWO** 5mg blisters) **ONCE daily** for **TEN** days.

Zanamivir (Relenza®) is a powdered medicine which is orally inhaled using a Diskhaler device. The powder is contained in blisters on a Rotadisk (A foil disk of four blisters which is loaded into the Diskhaler.)

[Use step-by-step guide to counsel use of Relenza®](#)

The Diskhaler has three parts:

Don't take it apart until you have looked at the step-by-step guide.



The Rotadisk fits into the Diskhaler



The Rotadisk fits onto the wheel of the Diskhaler. Each of the four blisters on the Rotadisk contains a single dose of Relenza.

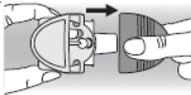
- Important:**
- Don't pierce any of the blisters on the Rotadisk before you load it onto the Diskhaler.
 - You can keep a Rotadisk on the Diskhaler between doses, but don't pierce a blister until just before you inhale your dose.
 - Keep the Diskhaler clean. Wipe the mouthpiece with a tissue after you use it, and replace the blue cover between uses.

Step-by-step guide to using your Relenza Diskhaler

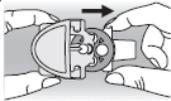
To load a Rotadisk into the Diskhaler:

1 Remove the blue cover.

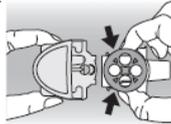
Check that the mouthpiece is clean, inside and outside.



2 Hold the white sliding tray as shown and pull it out until it stops.

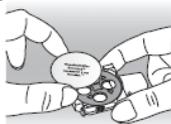


3 Gently squeeze the finger grips on the sides of the white tray. Remove the tray from the main body. The white tray should come out easily.



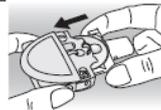
4 Place a new Relenza Rotadisk on the wheel.

Make sure the printed side is up, with the blisters facing downwards. The blisters fit into the holes in the wheel.



5 Push the white tray back into the main body.

If you're not ready to inhale a dose of Relenza straight away, replace the blue cover.



To get your dose ready to inhale:

Don't do this until just before you inhale a dose.

6 Hold the Diskhaler horizontally. Flip the lid up as far as it will go.

The lid must be fully vertical, to make sure that the blister is pierced completely.



Keep the Diskhaler horizontal

Push the lid back down.

Your Diskhaler is now ready for use. Keep it horizontal until you have inhaled your dose.

If you use other inhaled medication, make sure you read 'Using Relenza with inhaled medication for breathing problems' in Section 2 of this leaflet.

To inhale your dose of Relenza:

7 Don't put the Diskhaler into your mouth yet. Breathe out as far as is comfortable, keeping the Diskhaler away from your mouth. Don't blow into the Diskhaler. If you do, you'll blow the powder out of the Rotadisk.

Place the mouthpiece between your teeth. Close your lips firmly around the mouthpiece. Don't bite the mouthpiece. Don't block the airholes on the side of the mouthpiece.

Take one quick, deep breath in through the mouthpiece. Hold this breath for a few seconds.

Remove the Diskhaler from your mouth.

Carry on holding your breath for a few more seconds or as long as is comfortable.

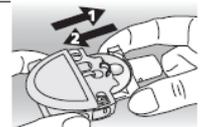


Keep the Diskhaler horizontal

To prepare the next blister (the second part of your dose):

8 Pull the white tray out as far as it will go (don't remove it completely), then push it back in again. This will turn the wheel so the next blister will appear. Repeat if necessary until a full blister is positioned under the piercing needle.

Repeat steps 6 and 7 to inhale the medicine.



9 After you've inhaled the full dose (normally two blisters):

Wipe the mouthpiece with a tissue and replace the blue cover. It's important to keep the Diskhaler clean.

To replace the Rotadisk:

10 When all four blisters are empty, remove the Rotadisk from the Diskhaler and insert a new one, using steps 1 to 5.

Antiviral Prescribing Guidance for treatment of suspected influenza & Post Exposure Prophylaxis of Influenza: Children UNDER 1 year of age

OSELTAMIVIR 6mg/ml ORAL SUSPENSION should be used for children UNDER 1 year of age

TREATMENT DOSAGE SCHEDULE

Aged from	TREATMENT DOSE
0 – 12 months	3mg/kg TWICE DAILY for 5 days

See tables on page 5 for specific dosage requirements for children under 1 year of age.

POST EXPOSURE PROPHYLAXIS DOSAGE SCHEDULE

Oseltamivir (Tamiflu®) is **not licensed** for post exposure prophylaxis in children under one year of age outside a pandemic situation (NB: we are not in a pandemic situation), although it is supported by the BNF for children. Prescribers should consider very carefully the benefits and risks of prophylactic antiviral medicine for children under one year of age.

Aged from	PROPHYLAXIS DOSE
0 – 12 months	3mg/kg ONCE DAILY for 10 days

See tables on page 5 for specific dosage requirements for children under 1 year of age.

Prescribers must write the child's weight and required dose on the prescription form.

Oseltamivir suspension will need to be given by a graduated oral syringe. A 3ml oral syringe should be supplied with the reconstituted suspension to ensure doses can be accurately administered.

After reconstitution, the suspension should be stored below 25°C for a maximum of 10 days

The reconstituted suspension should be well shaken before use.

Remember:

- **Liquid antiviral formulations should only be used in children UNDER 1 year of age.**
- **The pack includes a 3ml oral dispenser with 0.1ml graduations and a 10ml oral dispenser with 0.5ml graduations**
- **The required dose must be stated in mls.**

Antiviral TREATMENT Dosage for children UNDER 1 year of age

Dosage based on use of Osetamivir 6mg in 1ml Suspension

Dosing table of osetamivir for children aged from 0 – 12 months: 3 mg/kg twice daily		
Body weight	Recommended dose for 5 days	Amount of oral suspension to be taken TWICE DAILY
3 kg	9 mg twice daily	1.5 ml twice daily
3.5 kg	10.5 mg twice daily	1.8 ml twice daily
4 kg	12 mg twice daily	2 ml twice daily
4.5 kg	13.5 mg twice daily	2.3 ml twice daily
5 kg	15 mg twice daily	2.5 ml twice daily
5.5 kg	16.5 mg twice daily	2.8 ml twice daily
6 kg	18 mg twice daily	3 ml twice daily
>6 - 7 kg	21 mg twice daily	3.5 ml twice daily
>7 - 8 kg	24 mg twice daily	4.0 ml twice daily
>8 - 9 kg	27 mg twice daily	4.5 ml twice daily
>9 - 10 kg	30 mg twice daily	5.0 ml twice daily

Antiviral PROPHYLAXIS Dosage for children UNDER 1 year of age

Dosage based on use of Osetamivir 6mg in 1ml Suspension

Dosing table of osetamivir for children aged from 0 – 12 months: 3mg/kg once daily		
Body Weight	Recommended dose for 10 days	Amount of oral suspension to be taken ONCE DAILY
3 kg	9 mg once daily	1.5 ml once daily
3.5 kg	10.5 mg once daily	1.8 ml once daily
4 kg	12 mg once daily	2 ml once daily
4.5 kg	13.5 mg once daily	2.3 ml once daily
5 kg	15 mg once daily	2.5 ml once daily
5.5 kg	16.5 mg once daily	2.8 ml once daily
6 kg	18 mg once daily	3 ml once daily
>6 - 7 kg	21 mg once daily	3.5 ml once daily
>7 - 8 kg	24 mg once daily	4.0 ml once daily
>8 - 9 kg	27 mg once daily	4.5 ml once daily
>9 - 10 kg	30 mg once daily	5.0 ml once daily

Antiviral Prescribing Guidance for treatment of suspected uncomplicated influenza & post exposure prophylaxis of Influenza: [Pregnancy/Breast feeding/Renal Impairment](#)

Pregnant Women ([PHE guidance](#))

Antivirals have been recommended for pregnant women due to the adverse clinical outcomes that have been observed for influenza infection in the group'

Treatment of pregnant women: Oseltamivir 75mg TWICE DAILY for FIVE DAYS.

Post exposure prophylaxis in pregnant women: Oseltamivir 75mg ONCE DAILY for TEN DAYS.

Zanamivir should be used when the dominant circulating influenza strain has a higher risk of oseltamivir resistance

Breast feeding ([UKMi guidance](#))

The amount of antiviral entering breast milk is probably too small to be harmful; use antivirals only if benefits outweigh risks

Treatment of breast feeding women: Oseltamivir 75mg TWICE DAILY for FIVE DAYS.

Post exposure prophylaxis in breast feeding women: Oseltamivir 75mg ONCE DAILY for TEN DAYS.

Zanamivir should be used when the dominant circulating influenza strain has a higher risk of oseltamivir resistance

Renal impairment or patients ≥ 65 years with results ≥ 6 months old or not available

Patients who regularly attend a specialist renal clinic for management of renal failure should have their dose considered by their usual renal team.

- Zanamivir requires no dose adjustment (see www.medicines.org.uk)
- Oseltamivir requires dose adjustment where GFR is ≤60(ml/min) - table below (ref [SPC](#) and [PHE guidance](#))

Creatinine clearance	Recommended treatment dose for 5 days (10 days in immunocompromised <u>adult</u> patients)	Recommended prophylactic dose for 10 days
≥ 60 (ml/min)	75 mg twice daily	75 mg once daily
≥ 30 to < 60 (ml/min) OR patients ≥ 65yrs with results ≥ 6 months old or results not available	30 mg twice daily	30 mg once daily
≥ 10 to < 30 (ml/min)	30 mg once daily	30 mg every 48 hours
<10 (ml/min)	30mg stat (single dose)	30 mg once, repeated after 7 days
Haemodialysis patients	30 mg once, and then 30mg after each haemodialysis session	30 mg once, and then 30mg after every second haemodialysis session
Peritoneal dialysis patients	30 mg stat (single dose)	30 mg once, repeated after 7 days

Antiviral treatment side effects (British National Formulary)

Oseltamivir

Side effects	Nausea, vomiting, abdominal pain, dyspepsia, headache, fatigue, insomnia, dizziness, pain
Less commonly	Rash
Also reported	Hepatitis, arrhythmias, neuropsychiatric disorders (in children and adolescents), visual disturbances, Stevens-Johnson syndrome, and toxic epidermal necrolysis.

Zanamivir

Very rarely	Rash, urticaria, bronchospasm, dyspnoea and throat tightness/constriction also reported neuropsychiatric disorders (especially in children and adolescents)
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