

# Aciclovir Intravenous Infusion for Adults

## Who can administer

May be administered by registered competent doctor or nurse/midwife

## Important information

- Must ensure **adequate hydration** and give over **recommended time** (to avoid potential renal tubular damage)
- See under 'Dose' for adjustments required in **renal** impairment
- See under 'Dose' for considerations in **obesity**

## Available preparations

Aciclovir 250mg POWDER for solution for injection (Bowmed Ibisqis Ltd)

Aciclovir 250mg per 10ml vial (out of stock)

Zovirax 250mg vial (out of stock)

## Reconstitution

<b>Aciclovir (Bowmed. Ibisqis, Hikma)</b>	<b>Water for injection or Sodium chloride 0.9%</b> 10ml per 250mg vial <b>Dilute further prior to administration</b>
<b>Aciclovir</b>	Already in solution <b>Dilute further prior to administration</b>
<b>Zovirax brand</b>	<b>Water for injection or Sodium chloride 0.9%</b> 10ml per 250mg vial <b>Dilute further prior to administration</b>

## Infusion fluids

Sodium Chloride 0.9% preferred

Glucose 5% (unlicensed) <sup>(ref 1)</sup>

## Methods of intravenous administration

**Intermittent intravenous infusion (administer using an electronically controlled infusion device)**

<b>Dilute with infusion fluid to a concentration not greater than 5mg/ml (0.5%w/v)</b>		
<b>Doses of 250 to 500mg</b>	100ml infusion fluid	Administer required dose over 60 minutes Sixty minute infusion time reduces the risk of renal tubular damage
<b>Doses between 501mg and 1000mg</b>	250ml infusion fluid	
<b>Fluid restricted patient (central line) (ref 3)</b>	May be infused at a concentration of 25mg/ml - ie 250mg per 10ml	

# Dose in adults

## Herpes simplex infections (other than encephalitis) (treatment)

- Give 5mg per kg every eight hours
- Higher dose may be required in severe infection/immunocompromised. Discuss with Microbiology or Infectious Diseases <sup>(ref 2)</sup>

## Herpes simplex encephalitis

- Give 10mg per kg every eight hours (for 14 to 21 days)

## Herpes simplex infections (prophylaxis in immunocompromised) <sup>(ref 3)</sup>

- Give 5mg per kg every eight hours

## Varicella zoster (chickenpox) or Herpes zoster (shingles) infections

- **NOT immunocompromised:** give 5mg per kg every eight hours
- **Immunocompromised, or severe /complicated infections:** give 10mg per kg every eight hours

## Obesity

- **Limited data** available on aciclovir intravenous **dosing in obesity** (BMI greater than or equal to 30 kg/m<sup>2</sup> )
- **Ideal Body Weight (IBW)** has been used, as dosing based on **Total Body Weight** can result in **overdosing and subsequent toxicity**
- However, use of IBW in morbidly obese patients (BMI greater than or equal to 40 kg/m<sup>2</sup> ) can result in **underdosing. Use of Adjusted body weight (Adj BW) in these patients may be considered** - see calculations below <sup>(ref 4)</sup>
- Take **type and severity of infection and patients renal function into** account when choosing dose in obese patients
- **Monitor patient for nephrotoxicity or neurotoxicity when using large doses**
- Contact Microbiology or antimicrobial pharmacist for advice if necessary
- The GAPP [gentamicin calculator](#) can be used to calculate ideal and **adjusted body weight (=Dosing weight)** for your patient. Alternatively, the calculations may be done manually using the following formulas
  - **Ideal body weight (IBW) calculations** <sup>(ref 2)</sup>
  - **Male** 50kg + (2.3 x inches over 5 feet) **or** 50kg + (0.9 x cm over 152 cm)
  - **Female** 45.5kg + (2.3 x inches over 5 feet) **or** 45.5kg + (0.9 x cm over 152 cm)
  - **Adjusted body weight (Adj BW) = (IBW + 0.4 x [TBW-IBW])**
  - (where TBW = total body weight or actual weight)

Renal impairment	
eGFR	Dose
25 to 50ml/minute/1.73m <sup>2</sup>	give recommended dose every 12 hours
10 to 25ml/minute/1.73m <sup>2</sup>	give recommended dose once every 24 hours
less than 10ml/minute/1.73m <sup>2</sup>	give 50% of recommended dose every 24 hours
Dialysis	consult specialist literature or pharmacy

## Monitoring

- Monitor renal function regularly
- Ensure adequate hydration
- Monitor for neurological side-effects

## Storage

- Store below 25<sup>0</sup>C
- Do not refrigerate as precipitation may occur

## References

Zovirax SPC Sept 2021

1. Injectable medicines administration guide accessed online via Medusa 14/03/2022
- 2: Gapp app
3. BNF accessed online via Medicinescomplete 24/03/2022
4. Sanford Guide to antimicrobial therapy accessed online 24/03/2022

## Therapeutic classification

Antiviral agent

**BNF**

Viral infection