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

Zovirax 250mg vial

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

Aciclovir 250mg per 10mL - occasionally stocked depending on availability

Reconstitution

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

Infusion fluids

Sodium Chloride 0.9% preferred

Glucose 5% (unlicensed) [ref 1]

Methods of intravenous administration

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

Dilute with infusion fluid to a concentrationÂ not greater than 5mg/ml (0.5%w/v)		
Doses of 250 to 500mg	100ml infusion fluid	Administer required dose over 60 minutes Sixty minute infusion time reduces the risk of renal tubular damage
Doses between 501mg and 1000mg	250ml infusion fluid	
Fluid restricted patient (central line) [ref 1,3]	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 [ref 2]

Herpes simplex encephalitis

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

Herpes simplex infections (prophylaxis in immunocompromised) [ref 3]

- 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

Considerations in obesity

• **Contact Microbiology/ID or Antimicrobial Pharmacist for advice**
• **Limited data** available on aciclovir intravenous **dosing in obesity**
• Aciclovir does not distribute into adipose tissue- so calculations based on **Total Body Weight (TBW)** may result in excessive dosage
• 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**
• **If a patients TBW exceeds 120% of Ideal Body Weight (IBW), an adjustment is generally advised** -see calculations below

Step 1:	**Calculate Ideal Body Weight (IBW)**	• **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)
Step 2:	**Calculate Adjusted Body Weight (ABW)**	• ABW= (IBW + 0.4 x [TBW-IBW])
Step 3	**Calculate dose**	• If patient exceeds IBW by 120%, it may be advisable to use ABW when calculating doses • This depends on clinical circumstances- a balance must be achieved between potentially under-dosing patients, or alternatively exposing to risk from excessive doses (renal, neurotoxicity)

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Example:	**Male patient, 124kg, 178cm** • **IBW**= 50kg + (0.9 x (178-152)) = 73.4kg • **TBW** (124kg) is greater than 120% of IBW (73.4kg) - so need to work out ABW • **ABW** = (73.4 + 0.4 (124-73.4)) = 93.6kg Dose required 10mg/kg- 940mg
Explanatory notes	**BNF-** suggests using IBW- but this may result in underdosage for very obese patients **Sanford:** suggest using ABW in obesity (where TBW >120% IBW)

Renal impairment

eGFR	Dose
25 to 50ml/minute/1.73m^2	give recommended dose every 12 hours
10 to 25ml/minute/1.73m^2	give recommended dose once every 24 hours
less than 10ml/minute/1.73m^2	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^{0}C
- Do not refrigerate as precipitation may occur

References

Zovirax SPC March 2025

1. Injectable medicines administration guide accessed online via Medusa 17/06/2025

2: GAPP app

3. BNF accessed online via Medicinescomplete 16/06/2025

4. Sanford Guide to antimicrobial therapy accessed online 17/06/2025

Therapeutic classification

Antiviral agent

BNF
Viral infection