

PRESENTATION

Ampoule containing 600 milligrams of benzylpenicillin as powder.

ACTIONS

Antibiotic active against a range of bacteria.

DOSAGE AND ADMINISTRATION

Administer en-route to hospital (unless already administered by GP etc).

Administer by slow IV injection.

If it is not possible to gain rapid vascular access, the drug should be given by the IM route, as detailed below, into the antero-lateral aspect of the thigh or upper arm – preferably in an area that is well perfused.

Route: IV (or IO <7 years)

Concentration – 600 milligrams dissolved in 9.6ml water for injections.

AGE	DOSE	VOLUME
<1 year	300 milligrams	5.0ml
1-<9 years	600 milligrams	10.0ml
9 years – adult	1.2 grams (2 vials)	20.0ml

Route: IM

Concentration – 600 milligrams dissolved in 1.6ml water for injections.

AGE	DOSE	VOLUME
<1 year	300 milligrams	1.0ml
1-<9 years	600 milligrams	2.0ml
9 years – adult	1.2 grams (2 vials)	4.0ml

INDICATIONS

The initial treatment of suspected meningococcal septicaemia. This is indicated by the presence of a non-blanching rash and signs/symptoms suggestive of meningococcal septicaemia (as below). **Some signs/symptoms may be absent and the order in which they appear may vary.**

The signs and symptoms are:

- respiratory rate and effort – raised
- heart rate – raised (relative bradycardia is a very late sign)
- capillary refill >2 seconds, skin cold to touch (especially in extremities). Skin may appear mottled (early in illness skin may be warm)
- oxygen saturation may be poor or unrecordable (due to poor perfusion)
- temperature – raised (peripheral shutdown or any anti-pyretics given may mask this)
- rigors
- vomiting/diarrhoea/abdominal pain
- rash – develops into petechial, bruise-like purpuric rash or blood blisters. May be no rash
- pain in joints, muscles and limbs
- seizures
- level of consciousness:
- early in shock – alert/able to speak
- as shock advances – babies become limp, floppy and drowsy; older children/adults may develop difficulty in walking/standing, drowsy, confused.

Meningococcal septicaemia is commonest in young children and young adults. It may progress rapidly and the sooner benzylpenicillin is administered the better the outcome.

CONTRA-INDICATIONS

Genuine penicillin allergy.

ADDITIONAL INFORMATION**Penicillin Allergy**

Antibiotic allergy – This will be a very difficult judgement for ambulance staff as many members of the public think that they have a penicillin allergy because of minor gastrointestinal upset or other minor symptoms.

DO NOT give penicillin if the history is suggestive of unconsciousness, collapse, swelling, difficulty in breathing or rash on previous administration of penicillin.

Penicillin **MAY** be given if the history is suggestive only of diarrhoea, vomiting or other gastrointestinal upset on previous administration as this is related to the side effects of penicillin rather than an allergy to it.

If in doubt do **NOT** give penicillin and ensure rapid transport to hospital with an appropriate alert message. Document your consideration of penicillin and your reasons for not administering it.

SIDE EFFECTS

In the context of meningococcal septicaemia the release of toxins into the blood stream may actually make the patient feel worse initially and can cause sudden hypotension. Where vascular access is available fluid therapy at 250ml for adults, up to 20ml/kg for children should be commenced **en route** unless the journey time is short.

Hypersensitivity reactions, including urticaria, fever, joint pain, angio-oedema, anaphylaxis and convulsions may occur.

Gastrointestinal upset (diarrhoea, vomiting etc) is a recognised side effect of high dose antibiotic therapy.