



MONOGRAPH

Etoposide PHOSPHATE

Etoposide should not be confused with Etoposide PHOSPHATE – these two medications are not interchangeable.

Scope (Staff):	Medical, Pharmacy, Nursing
Scope (Area):	All Clinical Areas

Child Safe Organisation Statement of Commitment

CAHS commits to being a child safe organisation by applying the National Principles for Child Safe Organisations. This is a commitment to a strong culture supported by robust policies and procedures to reduce the likelihood of harm to children and young people.

This document should be read in conjunction with this [DISCLAIMER](#)

! HIGH RISK MEDICINE !

QUICKLINKS

Dosage/Dosage Adjustments	Administration	Compatibility	Monitoring
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DRUG CLASS

Podophyllotoxin.¹ Etoposide PHOSPHATE is a prodrug of etoposide.^{2, 3}

Etoposide PHOSPHATE is a [High Risk Medicine](#).

Etoposide PHOSPHATE is a [Cytotoxic Medicine](#).

Extravasation: Etoposide PHOSPHATE is an irritant. Refer to [Extravasation of Antineoplastic \(Cytotoxic\) Agents Policy](#).

Emetogenic Rating: Variable by dose or combination with other agents. Refer to [Chemotherapy Induced Nausea and Vomiting \(CINV\) Guideline](#).

INDICATIONS AND RESTRICTIONS

- Etoposide PHOSPHATE can only be prescribed by oncologists or haematologists as per the specific treatment protocol for the treatment of malignancy.

CONTRAINDICATIONS

- Hypersensitivity to etoposide, etoposide PHOSPHATE or any component of the formulation.^{1, 3, 4}
- Severe hepatic or renal dysfunction^{3, 5}
- Severe bone marrow failure (white blood cell count of less than 2,000 cells/mm³ or platelet count less than 75,000 cells/mm³) not due to malignant disease^{3, 5}
- Etoposide PHOSPHATE must not be given by intra-cavity injection.³

PRECAUTIONS

Etoposide should not be confused with Etoposide PHOSPHATE – these two medications are not interchangeable.

- Anaphylactic reactions manifest by chills, fever, tachycardia, bronchospasm, dyspnoea and hypotension^{3, 5}
- Hypotension may occur with rapid administration; infuse slowly over at least 30 to 60 minutes. Slow infusion rate if hypotension occurs (to a maximum infusion time of 4 hours)^{3, 5, 6, 7}
- Low serum albumin – increased risk of etoposide-associated toxicities³
- Injection site reactions may occur during administration.³ Closely monitor the infusion site for possible infiltration during drug administration, given the possibility of extravasation.³
- Etoposide PHOSPHATE is a cytotoxic medication and must be handled with care. See [PCH Medication Management Manual – Cytotoxic and/or Biotherapy Agents Safety](#).
- Supportive care should be prescribed as per patient's protocol and/or institutional guidelines.

FORMULATIONS

Listed below are products available at PCH, other formulations may be available, check with pharmacy if required:

- 100 mg vial (contains 113.6 mg of etoposide PHOSPHATE equivalent to 100 mg etoposide)^{1, 7}
- 1000 mg vial (contains 1136 mg of etoposide PHOSPHATE equivalent to 1000 mg etoposide)^{1, 7}

Imprest location: [Formulary One](#)

DOSAGE & DOSAGE ADJUSTMENTS

Dosage as per treatment protocol.

Renal impairment:

- Consider dose reduction in renal impairment – consult treatment protocol^{1, 3, 4, 5, 8}
- [eGFR calculator](#)

Hepatic impairment:

- Consider dose reduction in hepatic impairment – consult treatment protocol. Manufacturer contraindicates use in severe impairment^{1, 4}

RECONSTITUTION & ADMINISTRATION

Etoposide PHOSPHATE must be compounded in a cytotoxic drug safety cabinet by pharmacy personnel who have appropriate training and validation in aseptic and cytotoxic drug reconstitution and handling techniques.

Intravenous infusion:

- To form a 10 mg/mL solution of etoposide:
 - reconstitute 100 mg vial with 10 mL water for injection⁷ OR
 - reconstitute 1000 mg vial with 100 mL water for injection⁷
- Dilute prescribed dose with a compatible IV fluid to a concentration of 0.1 mg/mL of etoposide or greater.⁷
- **Intravenous injection:** inject slowly over at least 5 minutes⁷
- **Intravenous infusion:** Infuse diluted solution over 5 - 210 minutes. Slow the rate of infusion if hypotension occurs. Administration time can be extended to 240 minutes^{6, 7}

COMPATIBILITY (LIST IS NOT EXHAUSTIVE)**Compatible fluids:**

Glucose 5%; Hartmann's; Sodium Chloride 0.9%⁷

Compatible and INCOMPATIBLE drugs:

Antineoplastic therapies are not routinely administered with other medications. Consult two or more drug references ([Compatibilities of IV drugs](#)) or pharmacy when there is a requirement to be given concurrently.

MONITORING

- Monitor blood pressure and pulse every 15 minutes for the first hour, then hourly thereafter if the infusion is administered over 2 hours.
- For longer infusions, monitor with regular 4 hourly observations as per the age-appropriate Observation and Response Chart or as clinically indicated.

- Hypotension usually responds by stopping the infusion and administering fluids and supportive care; consider restarting infusion at a slower rate.^{1, 3, 5}
- Monitor for hypersensitivity and anaphylactic reactions manifested by chills, fever, tachycardia, bronchospasm, dyspnea and hypotension.⁸
- Monitor complete blood count with differential and platelets, bilirubin, liver function tests and renal function as per protocol.^{1, 3, 5, 8}

ADVERSE EFFECTS

Common:

Nausea, vomiting, diarrhoea, myelosuppression (anaemia, leukopenia), alopecia, oral mucositis, anorexia, diarrhoea, hypersensitivity reactions, abdominal pain, weakness, malaise, hypotension (with rapid infusion)^{1, 8}

Infrequent:

Peripheral neuropathy¹

Rare:

Rash, urticaria, Stevens-Johnson syndrome, inflammation and/or necrosis due to extravasation, anaphylaxis (chills, fever, tachycardia, dyspnoea, bronchospasm, hypotension), transient hypotension during infusion, hepatotoxicity, chest pain, thrombophlebitis, congestive heart failure, dystonia, ovarian failure, amenorrhoea, anovulatory cycles, hypomenorrhoea, onycholysis of nails, secondary malignancy^{1, 8}

STORAGE

Vial: Store below 2 to 8°C. Protect from light.⁷

Reconstituted solution: Stable for 24 hours at 25°C and 7 days at 2 to 8°C⁷

Diluted solution: Stable for up to 7 days when protected from light and stored between 2 to 8°C⁹

INTERACTIONS

This medication may interact with other medications; consult PCH approved references (e.g. [Clinical Pharmacology](#)), a clinical pharmacist or PCH Medicines Information Service on extension 63546 for more information.

Please note: The information contained in this guideline is to assist with the preparation and administration of **Etoposide Phosphate**. Any variations to the doses recommended should be clarified with the prescriber prior to administration

Related CAHS internal policies, procedures and guidelines

[Cytotoxic Biotherapy Agents Administration](#)

[Cytotoxic Biotherapy Agents Extravasation](#)



[Cytotoxic Biotherapy Agents Safety](#)

[Chemotherapy Induced Nausea and Vomiting Management](#)

References

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