POTASSIUM DIHYDROGEN PHOSPHATE

SYNONYMS  Monopotassium phosphate, potassium acid phosphate, potassium dihydrogen orthophosphate

BRAND NAME  POTASSIUM DIHYDROGEN PHOSPHATE CONCENTRATED INJECTION DBL, PHEBRA

DRUG CLASS  Electrolyte

AVAILABILITY  Ampoule or vial contains 1.36 g/10 mL of potassium dihydrogen phosphate. Each 1 mL contains 1 mmol (1 mEq) of potassium and 1 mmol (1 mEq) of phosphate. Each 10 mL contains 10 mmol (10 mEq) of potassium and 10 mmol (10 mEq) of phosphate. The solution is clear and colourless.

This is a high-risk medicine, hyperkalaemia can develop rapidly and asymptotically and is potentially fatal. Check your local guidelines. There are three other products with different potassium and phosphate content available, check product selection carefully. Also see monographs for: POTASSIUM DIHYDROGEN PHOSPHATE AND DIPOTASSIUM HYDROGEN PHOSPHATE, SODIUM DIHYDROGEN PHOSPHATE, and SODIUM PHOSPHATE AND POTASSIUM PHOSPHATE.

To avoid toxicity from a large bolus dose, mix the infusion bag thoroughly by inverting and shaking several times.

pH  4–5

PREPARATION  Dilute before use.

STABILITY  Ampoule: store below 25 °C. Infusion solution: no information

ADMINISTRATION  IM injection  Not recommended

SUBCUT injection  Not recommended

IV injection  Contraindicated

IV infusion  Dilute up to 10 mmol (10 mL) to 250 mL with a compatible fluid for infusion through a large peripheral vein. Higher concentrations of potassium must be infused through a central venous catheter. Careful and thorough mixing after dilution is essential to prevent pooling of potassium. Squeezing the bag is not enough. The bag must be inverted and agitated and/or kneaded. Infuse up to 10 mmol of phosphate over 2 to 6 hours.

In critically-ill patients with severe hypophosphataemia and normal renal function, can be infused at a rate up to 10 mmol/hour for between 4 and 8 hours. Monitor serum calcium and phosphate and renal function hourly. Cardiac monitoring is recommended. Faster rates may be used in intensive care settings and are limited by the potassium content. Check your local guidelines. If given faster than 20 mmol/hour ECG and frequent serum potassium monitoring are essential.
COMPATIBILITY

**Fluids**  
Glucose 5%, glucose 10%, glucose in sodium chloride solutions, Plasma-Lyte 148 via Y-site, sodium chloride 0.45%, sodium chloride 0.9%, sodium chloride 3%  
See SPECIAL NOTES

**Y-site**  
No information

INCOMPATIBILITY

**Fluids**  
Solutions that contain calcium or magnesium: Hartmann’s, Ringer’s

**Drugs**  
Aciclovir, amiodarone, anidulafungin, calcium folinate, calcium salts, caspofungin, ceftobiprole medocaril, ciprofloxacin, dolasetron, iron salts, ketamine, lorazepam, magnesium salts, mivacurium, mycophenolate mofetil, rocuronium

SPECIAL NOTES

Monitor for signs of tetany i.e muscle cramps, spasms or tremors as this may indicate hypocalcaemia.  
Stop or slow the infusion if the patient shows signs or symptoms of hyperkalaemia: nausea, vomiting, abdominal discomfort, hypotension, paraesthesia of the extremities, listlessness, flaccid paralysis, mental confusion, weakness and heaviness of the legs. ECG changes including loss of the P-wave, tall peaked T-waves and prolongation of QT intervals are important indicators because potassium toxicity may develop rapidly and without the above clinical signs and symptoms.  
Monitor serum sodium, potassium, phosphate and calcium concentrations and renal function at least every 12 to 24 hours. If faster rates are used, monitor calcium, phosphate, potassium and renal function every hour and cardiac monitoring is recommended.  
Sodium chloride may be the preferred diluent when treating hypokalaemia, unless contraindicated, as glucose solutions decrease serum potassium levels.

REFERENCES

POTASSIUM DIHYDROGEN PHOSPHATE AND DIPOTASSIUM HYDROGEN PHOSPHATE

SYNONYMS
Potassium phosphate dibasic and potassium phosphate monobasic, potassium phosphates,

BRAND NAME
POTASSIUM DIHYDROGEN PHOSPHATE AND DIPOTASSIUM HYDROGEN PHOSPHATE CONCENTRATED INJECTION DBL

DRUG CLASS
Electrolyte

AVAILABILITY
Ampoule contains 540 mg/10 mL of potassium dihydrogen phosphate and 1.83 g/10 mL of dipotassium hydrogen phosphate.
Each 1 mL contains 2.5 mmol (2.5 mEq) of potassium and 1.45 mmol (1.45 mEq) of phosphate.1
Each 10 mL contains 25 mmol (25 mEq) of potassium and 14.5 mmol (14.5 mEq) of phosphate.1

The solution is clear and colourless.1

pH
7.51

PREPARATION
Dilute before use.

STABILITY
Ampoule: store below 25 °C.1
Infusion solution: no information

ADMINISTRATION
IM injection
Not recommended
SUBCUT injection
Not recommended
IV injection
Contraindicated
IV infusion
Dilute up to 10 mmol of potassium (4 mL) to 250 mL with a compatible fluid1 for infusion through a large peripheral vein. Higher concentrations of potassium must be infused though a central venous catheter.2
Careful and thorough mixing after dilution is essential to prevent pooling of potassium. Squeezing the bag is not enough. The bag must be inverted and agitated and/or kneaded.1
Infuse up to 10 mmol of phosphate over 12 hours.1
Faster rates may be used in intensive care settings and are limited by the potassium content. The rate of infusion should not be faster than 10 mmol/hour of potassium.2
Check your local guidelines.
If given faster than 20 mmol/hour of potassium ECG and frequent serum potassium monitoring are essential.2

WARNING
This is a high-risk medicine, hyperkalaemia can develop rapidly and asymptotically and is potentially fatal. Check your local guidelines.
There are three other products with different potassium and phosphate content available, check product selection carefully. Also see monographs for:
POTASSIUM DIHYDROGEN PHOSPHATE,
SODIUM DIHYDROGEN PHOSPHATE, and
SODIUM PHOSPHATE AND POTASSIUM PHOSPHATE.
To avoid toxicity from a large bolus dose, mix the infusion bag thoroughly by inverting and shaking several times.

Check your local guidelines.

There are three other products with different potassium and phosphate content available, check product selection carefully. Also see monographs for:
POTASSIUM DIHYDROGEN PHOSPHATE,
SODIUM DIHYDROGEN PHOSPHATE, and
SODIUM PHOSPHATE AND POTASSIUM PHOSPHATE.

To avoid toxicity from a large bolus dose, mix the infusion bag thoroughly by inverting and shaking several times.

Check your local guidelines.

WARNING
This is a high-risk medicine, hyperkalaemia can develop rapidly and asymptotically and is potentially fatal. Check your local guidelines.
There are three other products with different potassium and phosphate content available, check product selection carefully. Also see monographs for:
POTASSIUM DIHYDROGEN PHOSPHATE,
SODIUM DIHYDROGEN PHOSPHATE, and
SODIUM PHOSPHATE AND POTASSIUM PHOSPHATE.
To avoid toxicity from a large bolus dose, mix the infusion bag thoroughly by inverting and shaking several times.

Check your local guidelines.
COMPATIBILITY

Fluids  Glucose 5%, sodium chloride 0.9%. See SPECIAL NOTES

Y-site  No information

INCOMPATIBILITY

Fluids  Solutions that contain calcium or magnesium: Hartmann’s, Ringer’s

Drugs  Aciclovir, amiodarone, anidulafungin, calcium folinate, calcium salts, caspofungin, ceftaroline fosamil, ceftobiprole medocaril, ciprofloxacin, dolasetron, iron salts, ketamine, lorazepam, magnesium salts, mivacurium, mycophenolate mofetil, rocuronium

SPECIAL NOTES  Monitor for signs of tetany i.e muscle cramps, spasms or tremors as this may indicate hypocalcaemia. Stop or slow the infusion rate if the patient shows signs or symptoms of hyperkalaemia: nausea, vomiting, abdominal discomfort, hypotension, paraesthesia of the extremities, listlessness, flaccid paralysis, mental confusion, weakness and heaviness of the legs. ECG changes including loss of the P-wave, tall peaked T-waves, prolongation of QT interval are important indicators because potassium toxicity may develop rapidly and without the above clinical signs and symptoms. Monitor serum sodium, potassium, phosphate and calcium concentrations and renal function at least every 12 to 24 hours. If faster rates are used, monitor calcium, phosphate, potassium and renal function every hour and cardiac monitoring is recommended. Sodium chloride 0.9% may be the preferred diluent when treating hypokalaemia, unless contraindicated, as glucose solutions may decrease serum potassium levels.

REFERENCES

SODIUM DIHYDROGEN PHOSPHATE

SYNONYM  
Sodium dihydrogen phosphate dihydrate, monosodium phosphate

BRAND NAME  
SODIUM DIHYDROGEN PHOSPHATE INJECTION

DRUG CLASS  
Electrolyte

AVAILABILITY  
Vial contains 1.56 g/10 mL (15.6%) of sodium dihydrogen phosphate. Also contains hydrochloric acid and sodium hydroxide. The solution is clear and colourless.¹  
Each 1 mL contains 23 mg equivalent to 1 mmol (1 mEq) of sodium and 1 mmol (1 mEq) of phosphate.¹  
Each 10 mL contains 230 mg equivalent to 10 mmol (10 mEq) of sodium and 10 mmol (10 mEq) of phosphate.¹  
Availability may be limited. Consult the pharmacy if you cannot access this medicine.

pH  
4–5¹

PREPARATION  
Dilute before use

STABILITY  
Vial: store below 25 °C.¹  
Infusion solution: no information

ADMINISTRATION  

IM injection  
Not recommended

SUBCUT injection  
Not recommended

IV injection  
Not recommended

IV infusion  
Dilute up to 10 mmol (10 mL) in a convenient volume of a compatible fluid and infuse over 2 to 6 hours.  
In critically-ill patients with severe hypophosphataemia and normal renal function, can be infused at a rate up to 10 mmol/hour for between 4 and 8 hours. Monitor serum calcium and phosphate and renal function hourly.²  
Faster rates may be used in intensive care settings.³,⁴ Check your local guidelines.

IV use for infants and children  
Dilute to a maximum of 0.05 mmol/mL of phosphate for peripheral lines or 0.12 mmol/mL of phosphate for a central line and infuse at a rate of 0.06 mmol/kg/hour of phosphate or slower.⁵  
In emergencies faster rates may be used.⁶ The maximum rate is 0.2 mmol/kg/hour of phosphate.¹ The total dose should not exceed the maximum recommended adult dose.¹

COMPATIBILITY  

Fluids  
Glucose 5%, sodium chloride 0.9%, TPN solutions¹

Y-site  
No information

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WARNING  
There are three other products with different potassium and phosphate content available, check product selection carefully. Also see monographs for: POTASSIUM DIHYDROGEN PHOSPHATE, POTASSIUM DIHYDROGEN PHOSPHATE AND DIPOTASSIUM HYDROGEN PHOSPHATE, and SODIUM PHOSPHATE AND POTASSIUM PHOSPHATE.  
To avoid toxicity from a large bolus dose, mix the infusion bag thoroughly by inverting and shaking several times.
INCOMPATIBILITY

**Fluids** Solutions that contain calcium or magnesium: Hartmann’s, Ringer’s

**Drugs** Aciclovir, amiodarone, anidulafungin, calcium folinate, calcium salts, caspofungin, ceftaroline fosamil, ciprofloxacin, dolasetron, magnesium salts, mycophenolate mofetil

**SPECIAL NOTES** Monitor for signs of tetany i.e. muscle cramps, spasms or tremors as this may indicate hypocalcaemia. Thirst, fever, tachycardia, confusion and irritability may be signs of excessive sodium replacement. Monitor serum sodium, phosphate and calcium concentrations and renal function at least every 12 to 24 hours. If faster rates are used, monitor calcium, phosphate and renal function every hour. Cardiac monitoring is also advised.

REFERENCES

1. Sodium Dihydrogen Phosphate Injection. Product information. Lane Cove, NSW: Phebra; Updated 28/05/12.
**SODIUM PHOSPHATE AND POTASSIUM PHOSPHATE**

**SYNONYMS** Sodium phosphate dibasic dodecahydrate and potassium phosphate monobasic

**BRAND NAME** SODIUM PHOSPHATE AND POTASSIUM PHOSPHATE CONCENTRATED INJECTION DBL

**DRUG CLASS** Electrolyte

**AVAILABILITY** Ampoule contains 3.84 g/20 mL of dibasic sodium phosphate dodecahydrate and 348 mg/20 mL of potassium phosphate monobasic. The solution is clear and colourless.¹

Each 1 mL contains 5 mg equivalent to 0.13 mmol (0.13 mEq) of potassium
24.6 mg equivalent to 1.07 mmol (1.07 mEq) of sodium
63 mg equivalent to 0.67 mmol (0.67 mEq) of phosphate.¹

Each 20 mL contains 100 mg equivalent to 2.6 mmol (2.6 mEq) of potassium
492 mg equivalent to 21.4 mmol (21.4 mEq) of sodium
1260 mg equivalent to 13.4 mmol (13.4 mEq) of phosphate.¹

**WARNING**

This is a high-risk medicine, hyperkalaemia can develop rapidly and asymptomatically and is potentially fatal. Check your local guidelines.

There are three other products with different potassium and phosphate content available, check product selection carefully. Also see monographs for:

- POTASSIUM DIHYDROGEN PHOSPHATE,
- POTASSIUM DIHYDROGEN PHOSPHATE AND DIPOTASSIUM HYDROGEN PHOSPHATE, and
- SODIUM DIHYDROGEN PHOSPHATE.

To avoid toxicity from a large bolus dose, mix the infusion bag thoroughly by inverting and shaking several times.

**pH** 6.5–8¹

**PREPARATION** Dilute before use

**STABILITY** Ampoule: store below 25 °C.¹
Infusion solution: no information

**ADMINISTRATION**

- **IM injection** Not recommended
- **SUBCUT injection** Not recommended
- **IV injection** Not recommended
- **IV infusion** Dilute up to 13.4 mmol of phosphate (20 mL) in 250 mL of a compatible fluid for infusion through a large peripheral vein. Concentrations higher than 40 mmol/L of potassium must be infused through a central venous catheter.

  Careful and thorough mixing after dilution is essential to prevent pooling of potassium. Squeezing the bag is not enough. The bag must be inverted and agitated and/or kneaded.

  Infuse up to 10 mmol of phosphate over 2 to 6 hours.

  In critically-ill patients with severe hypophosphatæmia and normal renal function, can be infused at a rate up to 10 mmol/hour of phosphate for between 4 and 8 hours. Monitor serum calcium and phosphate and renal function hourly. Cardiac monitoring is recommended.²

  Faster rates may be used in intensive care settings and are limited by the potassium content.³,⁴ Check your local guidelines.

- **IV use for infants and children** Dilute to a maximum of 0.05 mmol/mL of phosphate for peripheral lines or 0.12 mmol/mL of phosphate for a central line and infuse at a rate of 0.06 mmol/kg/hour of phosphate or slower.⁵

  In emergencies faster rates may be used.⁶ Maximum rate is 0.2 mmol/kg/hour of phosphate.¹ The total dose should not exceed the maximum recommended adult dose.¹
COMPATIBILITY

**Fluids**  
Glucose 5%, sodium chloride 0.9%

**Y-site**  
No information

INCOMPATIBILITY

**Fluids**  
Solutions that contain calcium or magnesium: Hartmann’s, Ringers’s

**Drugs**  
Aciclovir, amiodarone, anidulafungin, calcium salts, caspofungin, ceftaroline fosamil, ciprofloxacin, dolasetron, magnesium salts, mycophenolate mofetil

SPECIAL NOTES  
Monitor for signs of tetany i.e. muscle cramps, spasms or tremors as this may indicate hypocalcaemia.  
Monitor serum sodium, potassium, phosphate and calcium concentrations and renal function at least every 12 to 24 hours. If faster rates are used, monitor calcium, phosphate, potassium and renal function every hour. Cardiac monitoring is also advised.

REFERENCES