Intravenous - ADULT

Sodium glycerophosphate concentrate (Glycophos)

'HELP' text is available for most monograph headings; click the monograph heading or the icon.

MEDICINE NAME:
Sodium glycerophosphate 21.6%

TRADE NAME(S):
Glycophos®

PRESENTATION OF MEDICINE:

Vials containing 20mmol of phosphate and 40mmol sodium in 20mL. Concentrate solution.(1)

The vial may be labelled as Glycophos® or as sodium glycerophosphate 21.6%.

METHOD OF ADMINISTRATION

For treatment of hypophosphataemia

IV infusion: Dilute and give via an infusion pump over at least 8 hours(1) (or follow local protocols).
Concentrated solutions (e.g. 20mmol in 50mL) must be given via a central venous access device due to high osmolarity.(10)

INSTRUCTIONS FOR DILUTION AND SUITABLE DILUENT

ALWAYS dilute before administration using glucose 5% or sodium chloride 0.9% to one of the following recommended standard concentrations:(12)
For administration via a central venous access device:
- 20mmol phosphate in 50mL (0.4mmol/mL)
- 20mmol phosphate in 100mL (0.2mmol/mL)

For peripheral administration:
- dilute to a maximum concentration of 0.1mmol phosphate in 1mL.(12) As a suggestion dilute 40mmol phosphate (2 vials) in 500mL .

FLUSHING:

Flush with sodium chloride 0.9% or glucose 5%.

ADVERSE EFFECTS WHICH MAY BE CAUSED BY INJECTABLE ADMINISTRATION AND SUGGESTED MONITORING:

Adverse effects: Pain and phlebitis at the injection site. Electrolyte disturbances (hyperkalaemia, hypernatraemia, hypocalcaemia, hyperphosphataemia), hypotension, tetany, cardiac arrhythmias.
Monitoring: Monitor serum electrolytes (i.e. calcium, phosphate, potassium, sodium), renal function, fluid balance, acid-base balance, ECG, blood pressure.

EXTRAVASATION:

Concentrated solutions (20mmol in 100mL or less) have a high osmolarity and are likely to cause tissue damage if extravasation occurs.

COMPATIBILITY INFORMATION USEFUL IN CLINICAL PRACTICE:

Compatible infusion fluids: Glucose 5%, 20% and 50%,[1] sodium chloride 0.9%, glucose 4% + sodium chloride 0.18%.[11]
Incompatible infusion fluids: Compound sodium lactate (Hartmann's solution), Ringer's solution for injection.[11]

Medicines and infusions which are always incompatible

OTHER COMMENTS:

1. May be used when other IV phosphate preparations are unsuitable in patients with hyperkalaemia. However, note high sodium content (40mmol/20mL).
2. Licensed indication for sodium glycerophosphate is as a supplement to parenteral nutrition.
3. Store vials at room temperature (25ºC or below). Do not freeze.[1]

How is acute hypophosphataemia treated in adults? Specialist Pharmacy services guideline

PRODUCTS THAT POSE A HEIGHTENED RISK OF ERROR DUE TO SIMILARITY IN PRESENTATION/PACKAGING OR UNCLEAR LABELLING:

The product supplied before November 2019 may be labelled as Glycophos®.
As of November 2019 the manufacturer has re-labelled the product and called it sodium glycerophosphate 21.6%.
PICTURE OF CONTAINER (photograph of product supplied before November 2019).

LATEX STATUS:

Natural rubber latex is not used as a material in the manufacture of this product or in the container or packaging. Contact with natural rubber latex during or after manufacture cannot be excluded (Nov 2019).[9]

SODIUM CONTENT (mmol):

40mmol in 20mL vial.[1]

OSMOLARITY / OSMOLALITY:

2540 mOsm/L undiluted. [9]
473mOsmol/L (20mmol in 250mL sodium chloride 0.9%)
655mOsmol/L (20mmol in 100mL glucose 5%).

pH:

7.4 (undiluted).[9]

INFUSION PUMP TO USE FOR THE INFUSION THERAPY CATEGORY:

Infusion is 'Therapy Category' B. The infusion pump used should be appropriate for a 'therapy category' B or higher infusion.[7]

PRODUCT RISK FACTORS FOR COMMONLY PREPARED PRODUCTS:

Risk factors for phosphate (as sodium glycerophosphate) diluted with glucose 5%: Therapeutic risk; Use of concentrate, Use of part/multiple container; Use of infusion pump.

1 2 6 7 **TOTAL RISK FACTORS:** 4 **OVERALL RISK RATING:** Amber

CURRENT SUPPLIERS:

Fresenius Kabi Limited
Package Leaflet for Sodium glycerophosphate 2.16% concentrate for solution for infusion
SmPC Sodium glycerophosphate 21.6% concentrate for solution for infusion

DELETED SUPPLIERS:

Torbay & South Devon NHS Foundation Trust
This manufacturer no longer produces this drug but the record is retained so the manufacturer notes are not lost. It is only visible to authors and QA checkers and will not appear on the live monograph.

LINKS TO EXTERNAL RESOURCES:

Search for Sodium glycerophosphate in BNF (NICE NHS Evidence)
Search for Sodium glycerophosphate in BNFc (NICE NHS Evidence)
Search for Sodium glycerophosphate in NICE (internet) (includes BNF and BNFc)
Search for Sodium glycerophosphate in NICE (NHS) (includes BNF and BNFc)

LINKS TO QA REPORTS:

QA Sodium glycerophosphate Aug10
QA Sodium glycerophosphate concentrate Jun17
QA Sodium glycerophosphate Nov19

OTHER RELEVANT LINKS:

Other relevant links can be found on the Documents and links page

REFERENCES:

1. Summary of Product Characteristics, Sodium glycerophosphate 21.6% concentrate for solution for infusion. Fresenius Kabi. Last revised December 2018
2. 'Martindale: The Complete Drug Reference' accessed via MedicinesComplete February 2017 (no information)
3. AHFS 'Drug Information' accessed via MedicinesComplete February 2017 (no information)
4. ASHP 'Handbook on Injectable Drugs' accessed via MedicinesComplete February 2017 (no information)

5. British National Formulary Online accessed on 05/02/2017
6. British National Formulary for Children Online accessed on 05/02/2017
   a) Evelina London Paediatric Formulary
7. MHRA guidance for healthcare professions on using and managing infusion systems - 20 December 2013
   a) Specimen High Risk Injectable Medicines List – November 2016
8. Development of the UK Vessel Health and Preservation (VHP) framework: a multi-organisational collaborative; 2016
9. Drug company name: Fresenus Kabi. Date contacted: 06/02/2017; 09/09/2019; 26/11/2019.
10. Minimum infusion volumes for fluid restricted critically ill patients, 4th Edition. UKCPA
11. Thames Valley Y-Site Intravenous Drugs Compatibility Chart (March 2011)
12. Medication Concentrations in Adult Critical Care Areas guidelines; Intensive Care Society and Faculty of Intensive Care Medicine (2017)
13. Lexicomp (USA) 1978-2019 sodium glycerophosphate paediatric monograph.

MEDICINE NAME INDICES:

Monograph name: Sodium glycerophosphate (Glycophos) (Drug: Sodium glycerophosphate (Glycophos))

Generic name: Sodium glycerophosphate (Glycophos)

Other name: Phosphate - sodium glycerophosphate

Trade name: Glycophos

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BNF CLASS: 9.3

Monograph for use in adults	**Monograph for use in paediatrics**
Licensed	**Not discontinued**

QA HOSPITAL:

East Anglia MI Service, Ipswich

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