

## North Staffordshire and Stoke-on-Trent Area Prescribing Committee

## Medicine Review Summary

## Magnaspartate® 243mg powder for oral solution for the treatment and prevention of magnesium deficiency

<b>Verdict:</b>	
<b>Formulary inclusion:</b>	Magnaspartate® 243mg powder for oral solution is to be included in the North Staffs Joint Formulary
<b>Formulary category:</b>	Green
<b>Restrictions:</b>	Acute treatment of mild to moderate hypomagnesaemia. For chronic hypomagnesaemia and for maintenance therapy, specialist advice should be sought.
<b>Reason for inclusion:</b>	The committee was satisfied with the evidence that supports the safety and efficacy of the aspartate salt of magnesium. Although trial evidence for magnesium replacement products is lacking their use in clinical practice is well established. The committee agreed that it's favorable cost and it's increased solubility vs the glycerophosphate salt make magnesium aspartate a suitable formulary choice. Magnesium glycerophosphate will be removed from the formulary.
<b>Link to formulary:</b>	Stoke-on-Trent CCG website: <a href="https://www.stokeccg.nhs.uk/stoke-governance/policies/medicines-optimisation/joint-formulary">https://www.stokeccg.nhs.uk/stoke-governance/policies/medicines-optimisation/joint-formulary</a> North Staffordshire CCG website: <a href="https://www.northstaffscg.nhs.uk/governance/policies/medicines-optimisation/joint-formulary">https://www.northstaffscg.nhs.uk/governance/policies/medicines-optimisation/joint-formulary</a> Secondary care: Trust Intranet → Clinicians → Support services → Pharmacy → North Staffordshire Joint Formulary
<b>Link to medicine review summary:</b>	Stoke-on-Trent CCG website: <a href="https://www.stokeccg.nhs.uk/stoke-governance/policies/medicines-optimisation/formulary-review-and-verdict-sheets">https://www.stokeccg.nhs.uk/stoke-governance/policies/medicines-optimisation/formulary-review-and-verdict-sheets</a> North Staffordshire CCG website: <a href="https://www.northstaffscg.nhs.uk/governance/policies/medicines-optimisation/formulary-review-and-verdict-sheets">https://www.northstaffscg.nhs.uk/governance/policies/medicines-optimisation/formulary-review-and-verdict-sheets</a> Secondary care: Trust Intranet → Clinicians → Support services → Pharmacy → Joint Formulary Related Documentation → North Staffordshire & Stoke-on-Trent Area Prescribing Committee Medicine Review Summary Verdict Sheets
<b>Link to full review:</b>	Stoke-on-Trent CCG website: <a href="https://www.stokeccg.nhs.uk/stoke-governance/policies/medicines-optimisation/formulary-review-and-verdict-sheets">https://www.stokeccg.nhs.uk/stoke-governance/policies/medicines-optimisation/formulary-review-and-verdict-sheets</a> North Staffordshire CCG website: <a href="https://www.northstaffscg.nhs.uk/governance/policies/medicines-optimisation/formulary-review-and-verdict-sheets">https://www.northstaffscg.nhs.uk/governance/policies/medicines-optimisation/formulary-review-and-verdict-sheets</a> Secondary care: Trust Intranet → Clinicians → Support Services → Pharmacy → Joint Formulary Related Documentation → New Medicine Committee (NMC) Medicines Reviews

**Review summary:****Formulary Application:**

Magnesium Aspartate (Magnaspartate®) was reviewed for inclusion in the North Staffordshire Joint Formulary for correction of hypomagnesaemia by the New Medicines Committee. It is one of two licensed oral magnesium preparations available. Magnesium Glycerophosphate (Neomag®) is the other licenced oral magnesium product. Magnesium Glycerophosphate supplement (Magnaphate®) (unlicensed) is currently recommended for use in Primary Care in the Joint Formulary. Dr Sathiavageeswaran (Consultant in Diabetes and Endocrinology) supported the application.

**Licensed indications <sup>1</sup>:**

Treatment and prevention of magnesium deficiency, as diagnosed by a doctor.

**Related Guidance:**

Evidence summary [ESUOM4]: Preventing recurrent hypomagnesaemia: oral magnesium glycerophosphate<sup>2</sup>  
<https://www.nice.org.uk/advice/esuom4/chapter/Key-points-from-the-evidence>

**Efficacy and safety:**

Use of magnesium preparations for treatment and supplementation is well established and adverse effects include gastro intestinal irritation and watery diarrhoea (a dose limiting side effect). Chronic use may result in electrolyte

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imbalance.<sup>3</sup>

There are no national guidelines for treatment of hypomagnesaemia and practice varies between trusts. The standard oral dose is 24mmol daily in divided doses.<sup>3</sup>

Magnaspartate® was granted a marketing authorisation under a bibliographic application; as such no new clinical or non-clinical efficacy studies were required by the Medicines and Healthcare products Regulatory Agency (MHRA) to support the application.

The applicant company (KORA Pharmaceuticals) additionally conducted a comparative aqueous solubility test comparing Magnaspartate® to magnesium glycerophosphate and magnesium oxide which demonstrated Magnaspartate® had the greater solubility<sup>4</sup>. Clinical relevance unknown.

**Costs:**

Brand	Pack size	UHNS (incl. VAT)	Primary Care (ed. VAT)
MAGNASPARTATE	10 sachets		£9.95
NEOMAG	50 tablets		£22.77
MAGNAPHATE	50 tablets		£19.87
MagnaPhos	200ml		£37.87

Drug	Brand/strength	Dose	Cost (Exc VAT)	Cost comparison Mg/dose (ex VAT)
Magnesium Aspartate	Magnaspartate 1 sachet = 10 mmol of magnesium	<b>Adults (&gt; 18 years):</b> 1-2 sachets daily (10-20 mmol magnesium)	£8.95/10 sachets	89.5 pence/dose (10mmol) = <b>£1.78 for</b> 20mmol (1 day course)
Magnesium Glycerophosphate	Neomag Each chewable tablet = 4mmol of magnesium.	<b>Adults (&gt; 18 years):</b> Starting doses 4-8 mmol (1-2 tablets) x 3 times a day = 12-24 mmol per day.	£22.77/50 tablets	45.5 pence/tablet (4mmol) = <b>£2.73 for</b> 24mmol (1 day course)
Magnesium Glycerophosphate	Magnaphate Each chewable tablet = 4mmol of magnesium	unlicensed 2 tabs TDS (8mmol TDS)	£19.87/50 tablets	40 pence/tablet (4mmol) = <b>£2.38 for</b> 24mmol (1 day course)

**References:**

<sup>1</sup> Summary of Product Characteristics – Magnaspartate®. Magnesium Aspartate 243mg (10mmol Magnesium) powder for oral solution. Accessed via <http://www.medicines.org.uk/emc/medicine/30238> on 07.12.2017 [date of revision of the text: 07/2016]

<sup>2</sup> Preventing recurrent hypomagnesaemia: oral magnesium glycerophosphate. Evidence summary [ESUOM4] Published date: January 2013. Access via: <https://www.nice.org.uk/advice/esuom4/chapter/Overview-for-healthcare-professionals>

<sup>3</sup> How is acute hypomagnesaemia treated in adults?; UKMI Medicines Q & A 17/07/2017; Accessed:12/12/2017 via: <https://www.sps.nhs.uk/articles/how-is-acute-hypomagnesaemia-treated-in-adults/>

<sup>4</sup> All Wales Therapeutics and Toxicology Centre; AWMSG Secretariat Assessment Report; Magnesium aspartate dehydrate (Magnaspartate®) 243mg powder for oral solution. Reference Number: 2596 Limited Submission Accessed Dec 2017 via <http://www.awmsg.org/awmsgonline/app/appraisalinfo/2596>

And Kora Healthcare. Form C; Limited Appraisal submission, Magnesium aspartate dehydrate (Magnaspartate®). Mar 2015 Accessed via Kora Healthcare <http://www.korahealthcare.com>