

This information was up to date at the time of release to the Heads of Midwifery.

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Updating arrangements for the formulary should be decided upon and implemented at a local level.

Sodium Chloride 0.9%	
Legal status (GSL, P or POM on exemption list, or PGD)	<ul style="list-style-type: none"> ▪ POM - midwife may administer as medicine is on midwives exemptions list
Patient group	<ul style="list-style-type: none"> ▪ women requiring a flush of an intravenous (IV) catheter ▪ postnatal women requiring an oxytocin infusion ▪ women requiring resuscitation, including a sudden drop in blood pressure, with intravenous fluids following haemorrhage
Clinical indication	<ul style="list-style-type: none"> ▪ flushing of intravenous cannula ▪ diluent for oxytocin infusion in the management of postpartum haemorrhage in accordance with local guidelines ▪ sudden drop in systolic blood pressure ▪ replacement of fluid to maintain circulatory volume until blood is available as per local guidelines
Pharmacology (Onset and duration of action where appropriate)	<p>Sodium chloride 0.9% is an isotonic solution compatible with most drugs and is therefore suitable for flushing IV catheters and as a diluent for oxytocin.</p> <p>Sodium is one of the main extracellular cations essential in many physiological processes.</p> <p>It is used in maternal resuscitation post haemorrhage to initially replace fluid loss to increase the circulating blood volume.</p> <p>It replaces both water and sodium ions in the body, however as little as 10% will stay in the intravascular space.</p> <p>In the management of haemorrhage it may need to be followed by colloids or blood products.</p>
Pharmaceutical form, strength, route of administration	<p>Solution for injection sodium chloride 0.9% in plastic ampoules of various sizes. The most commonly used sizes are 5ml and 10ml. For intravenous injection.</p> <p>Solution for infusion of sodium chloride 0.9% in bags of various sizes most commonly used are 500ml and 1000ml. Each 1000ml contains: Na⁺ 154mmol Cl⁻ 154mmol For intravenous infusion.</p>

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<p>Dose, frequency and maximum number of doses or period of time for administration or supply</p>	<p>IV flush 5-10mls</p> <p>diluent for oxytocin infusion for PPH maximum of 500ml</p> <p>maternal resuscitation (including sudden drop in systolic blood pressure): 500ml or 1litre bag to be infused through a 14/16 gauge needle as quickly as possible</p> <p>maximum of 2 litres in case of haemorrhage (unless no colloid or blood is available and women still haemorrhaging - continue until help arrives) If giving for any other reason maximum of 1 litre. Ideally when given rapidly solution should be warmed to no more than 37°C.</p>
<p>Contra-indications/exclusion criteria</p>	<ul style="list-style-type: none"> ▪ known hypersensitivity to any component of the medicine ▪ hypernatraemia or hyperchloraemia
<p>Cautions and action that will be taken if a caution applies</p>	<ul style="list-style-type: none"> ▪ restrict intake in impaired renal function, cardiac failure, hypertension, peripheral or pulmonary oedema, pre-eclampsia, aldosteronism, or other conditions and treatment (e.g. corticosteroids) associated with sodium retention ▪ check and document any allergies ▪ check and document past medical and drug history and current medication to ascertain potential for overdose ▪ if a caution applies consult with a doctor before administration or supply ▪ record consultation in maternity record
<p>Medicine interactions and action that will be taken if a patient is taking a medicine that may interact</p>	<ul style="list-style-type: none"> ▪ no known drug interactions ▪ it is compatible with a wide range of medicines but if in doubt check compatibility- see local guidelines or product information for other medicine ▪ if there is a drug interaction, consult with a doctor/GP before administration or supply ▪ document consultation in maternity record ▪ refer to current BNF for latest information on interactions
<p>Potential adverse reactions and side effects including actions to be taken if adverse drug reaction is suspected</p>	<ul style="list-style-type: none"> ▪ <i>injection site reactions such as local pain or reaction, vein irritation, venous thrombosis or phlebitis extending from the site of the injection, extravasation, infection, febrile response</i> ▪ <i>large doses may give rise to hypervolemia, sodium accumulation, oedema, and hyperchloraemic acidosis</i> ▪ <i>on labour</i> Nil ▪ <i>on the neonate</i> Nil ▪ <i>on breast feeding</i> Nil ▪ <i>if a serious adverse reaction is suspected please report to the MHRA Yellow Card Scheme. http://yellowcard.mhra.gov.uk/</i>

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Overdose	<ul style="list-style-type: none">▪ signs of sodium excess include nausea, vomiting, diarrhoea, abdominal cramps, thirst, reduced salivation and lacrimation, sweating, fever, tachycardia, hypertension, renal failure, peripheral and pulmonary oedema, respiratory arrest, headache, dizziness, restlessness, irritability, weakness, muscular twitching and rigidity, convulsions, coma, and death▪ excessive administration of sodium chloride may cause hypernatraemia▪ hyperchloraemia may cause a loss of bicarbonate with an acidifying effect▪ if used as a diluent the signs and symptoms of over infusion may be related to medicine added▪ immediate assessment/ treatment is essential - refer to medical staff▪ management should be in accordance with established treatment guidelines or see BNF overdose section▪ for further advice contact National Poisons Centre 0844 892 0111
Action if patient declines	<ul style="list-style-type: none">▪ refer to authorised prescriber or doctor▪ document in maternity record
Additional advice and information	<ul style="list-style-type: none">▪ supply the manufacturer's patient information leaflet if requested
Patient monitoring arrangements during and after treatment and follow-up required	<ul style="list-style-type: none">▪ if used for sudden drop in blood pressure or postpartum haemorrhage urgent obstetric and anaesthetic help is required in accordance with local PPH guidelines▪ monitor serum urea and electrolytes and if for PPH full blood count and send blood for group and screen▪ position woman flat on one side▪ monitor pulse and BP
Particular storage requirements	Use only if the solution is clear, without visible particles and if the container is undamaged. Store below 30°C

References

1. Summary of Product Characteristics Sodium chloride 0.9% Infusion
Baxter Healthcare Limited. Text revision 24.12.2018 Accessed 23.12.2019
<http://www.medicines.org.uk/>
2. <http://www.bnf.org>