

# Medication Safety Today



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## Memantine (Ebixa) oral solution - risk of tenfold overdose

Memantine (Ebixa®) oral solution was previously available as oral drops with each drop equivalent to 500 micrograms. The manufacturer has changed the dosage delivery system to a pump device with each pump activation equivalent to 5mg; ten times the dose in each drop of the previous product.

The new pump presentation was introduced in April 2010 however it is possible that some of the previous oral drop presentation may still be available. There is a risk that staff, patients or their carers who are familiar with the previous presentation may assume that a pump activation is equivalent to a drop, leading to a tenfold overdose. In addition, the initial outer packaging of the pump presentation described pump activations on one side and oral drops on the front. This outer packaging has since been updated to state pump activations on all sides.



Initial new outer packaging



Updated outer packaging

### Safety tips

- ✓ Find out the presentation of memantine currently being used in the trust and by the patient.
- ✓ Check the number of drops or number of pump activations required for the prescribed dose.
- ✓ In hospitals, endorse the Kardex according to the presentation in use with either the number of drops or pump activations that are equivalent to the prescribed dose.
- ✓ Counsel the patient as to how they will obtain their dose of memantine oral solution depending on the presentation being used.

## A fair swap?

Not all medicines are 'bioequivalent' where the same dose is used for different formulations. Therefore some medicines require a dose adjustment when changing between different formulations, for example from tablets to suppositories.

Can you identify what dose adjustments are required when switching between different formulations of the following medicines?

1. Tegretol® (carbamazepine) tablets to suppositories
2. Sodium fusidate tablets to fusidic acid suspension
3. Epanutin® (phenytoin) capsules to liquid
4. Digoxin tablets to elixir
5. Ciprofloxacin infusion to tablets

Answers overleaf

## It's in the box



Well no, not always. Some patients' medicines are dispensed in a monitored dosage system (MDS), which may be brought into hospital with them. The MDS may be a useful source of information for a medication history however it may not contain all the medicines a patient is currently on. For example, inhalers, patches, sprays, drops and liquids will obviously not be in a MDS. Be aware that other medicines may also not be in a MDS for example, tablets which are sensitive to moisture, medicines taken on an 'as required' basis or medicines with a variable dose such as warfarin.

### Safety tip

- ✓ Always remember to check if the patient is on any other medicines than those contained in a MDS.

If you have any comments on this newsletter, please contact Sharon O'Donnell, Medicines Governance pharmacist on Ext: 2634 at Belfast City Hospital or by e-mail at [sharon.odonnell@belfasttrust.hscni.net](mailto:sharon.odonnell@belfasttrust.hscni.net) Further copies of this newsletter and past editions can be viewed at [www.medicinesgovernanceteam.hscni.net](http://www.medicinesgovernanceteam.hscni.net) or on your Trust intranet.



# Insulin safety

Just over 15,000 incidents involving insulin were reported to the National Patient Safety Agency between November 2003 – August 2006. Insulin safety has been highlighted in several publications over the last 5 years, the most recent a NPSA Rapid Response Report<sup>1</sup>. This report recommends that policies, procedures and training need to be in place to support the safer use of insulin.

The report also highlights a number of simple steps that everyone can take to improve the safe use of insulin

1. Always use an insulin syringe to measure doses from an insulin vial. IV syringes must never be used for insulin administration.
2. Use the term 'Units' in all contexts. Abbreviations such as 'IU' or 'U' are never used.
3. All clinical areas that treat patients with insulin should keep a stock of insulin syringes.
4. When preparing an insulin infusion, always use an insulin syringe to measure the dose. Ideally a ready to administer infusion should be used e.g. prefilled syringe of fast acting insulin 50 units in 50ml sodium chloride 0.9%.

[http://www.dhsspsni.gov.uk/hsc\\_sqsd\\_12\\_10\\_safer\\_administration\\_of\\_insulin-2.pdf](http://www.dhsspsni.gov.uk/hsc_sqsd_12_10_safer_administration_of_insulin-2.pdf)

## Do you know...



...what an injection displacement value is?

Dry powder injections need to be reconstituted with a diluent before they are used. Sometimes the final volume of the injection will be greater than the volume of liquid that was added to the powder. This volume difference is called the injection's displacement value.

For example by adding 10mls of water to a 500mg vial of medicine X the final solution obtained will be 500mg/10.4mls. This is because medicine X has a displacement value of 0.4ml/500mg.

**Displacement values will depend on the medicine, the manufacturer and its strength.**

For most patients this does not matter because the whole vial is administered however it can be very important when you want to give a dose that is less than the total contents of the vial – a frequent occurrence in paediatrics and neonatology.

The volume of the final solution must be considered when calculating the amount to withdraw from the vial. For example, 125mg of medicine X is contained in 2.6mls of the final solution.

Information on a medicine's displacement value is included in the product information leaflet in injection packs, the Intravenous Medicine Administration Guide or can be obtained from your Pharmacy Department.

## Book Club



The NPSA have published a review of incidents involving anti-cancer medicines, available at: <http://www.nrls.npsa.nhs.uk/resources/patient-safety-topics/medication-safety/?entryid45=75475>

The findings are summarised:

- A total of 4,829 patient safety incident reports involving anti-cancer medicines were reported to the NPSA between 1 November 2003 and 30 June 2008.
- The majority of patient safety incident reports, 94 per cent (4,557), relating to anti-cancer medicines were associated with low harm or no harm to patients.
- Seven patient safety incident reports resulted in validated fatal outcomes, nine resulted in severe harm, and nine resulted in moderate harm outcomes.
- Incident reports involving errors in the administration of anti-cancer medicines were the largest category when analysed by medicine use process (43 per cent).
- The taxanes (docetaxel and paclitaxel) were the most commonly reported group of medicines (9 per cent) and cisplatin was the most commonly reported single medicine (8 per cent), followed by etoposide (8 per cent) and capecitabine (8 per cent).
- Reports involving wrong/unclear dose, strength, frequency or quantity of medicine were the most common type of incident (32 per cent).

This publication also includes a series of recommendations as suggestions for improving care and minimising risk in relation to anti-cancer medicines and is a useful resource for all involved in the use of anti-cancer medicines.

## Update

 National Patient Safety Agency

DHSSPS has issued a Rapid Response Report from the National Patient Safety Agency.

- **Preventing fatalities from medication loading doses**

<http://www.dhsspsni.gov.uk/hsc-sqsd-17-10-preventing-fatalities-from-medication-loading-doses.pdf>

Answers

1. 100mg Tegretol<sup>®</sup> (carbamazepine) tablet is approximately equivalent to 125mg suppository
2. 500mg sodium fusidate tablet is approximately equivalent to 750mg fusidic acid suspension
3. 100mg Epanutin<sup>®</sup> (phenytoin) capsule is approximately equivalent to 90mg liquid
4. 62.5microgram digoxin tablet is approximately equivalent to 50microgram elixir
5. 200mg ciprofloxacin infusion is approximately equivalent to 250mg tablet