

ADDENDUM

 SOCIETY FOR ENDOCRINOLOGY
EMERGENCY ENDOCRINE GUIDANCE

Emergency management of acute hypocalcaemia in adult patients

 Jeremy Turner¹, Neil Gittoes², Peter Selby³ and the Society for Endocrinology Clinical Committee⁴
¹Norfolk and Norwich University Hospital, Colney Lane, Norwich, UK

²Centre for Endocrinology, Diabetes and Metabolism, University Hospitals Birmingham & University of Birmingham, Birmingham Health Partners, Birmingham, UK

³Department of Medicine, Manchester Royal Infirmary, Manchester, UK

⁴The Society for Endocrinology, Woodlands, Bradley Stoke, Bristol, UK

 Correspondence should be addressed to J Turner: jeremy.turner@nnuh.nhs.uk
Endocrine Connections
(2019) **8**, X1

In this addendum to the above paper, the Society for Endocrinology Clinical Committee and the original authors provide additional advice on the dose equivalence of calcium gluconate and calcium chloride.

The 'Severe hypocalcaemia' section, which appeared in the September 2016 issue of *Endocrine Connections* (volume 5, page G8, <https://doi.org/10.1530/EC-16-0056>) reads as follows:

Severe hypocalcaemia

Severe hypocalcaemia: serum calcium <1.9mmol/L and/or symptomatic at any level below reference range.

- **This is a medical emergency**
- Administer i.v. calcium gluconate
- Initially, give 10–20mL 10% calcium gluconate in 50–100mL of 5% dextrose i.v. over 10min with ECG monitoring. This can be repeated until the patient is asymptomatic. It should be followed up with a calcium gluconate infusion as follows:
 - Dilute 100mL of 10% calcium gluconate (10 vials) in 1L of Normal saline or 5% dextrose and infuse at 50–100mL/h. (Calcium chloride can be used as an alternative to calcium gluconate, but it is more irritant to veins and should only be given via a central line)
 - Titrate the rate of infusion to achieve normocalcaemia and continue until treatment of the underlying cause has taken effect

The Society for Endocrinology Clinical Committee and the original authors now provide this additional advice on the dose equivalence of calcium gluconate and calcium chloride, as follows:

Each 10mL vial of 10% calcium gluconate contains 2.2mmol of calcium. Calcium chloride for i.v. administration is available in a number of preparations including, commonly, 10mL of 7.35% calcium chloride (which contains 5mmol of calcium) and 5mL of 14.7% calcium chloride (which also contains 5mmol of calcium). Great care should be taken since other preparations are also available. If using calcium chloride in place of calcium gluconate, 4.4mL of 7.35% calcium chloride or 2.2mL of 14.7% calcium chloride for i.v. administration should therefore be used as equivalent to 10mL of 10% calcium gluconate. If other calcium chloride preparations are used, the required volume should be calculated, aiming to achieve 2.2–4.4mmol i.v. loading bolus followed by a 1.1–2.2mmol/h maintenance infusion.