

The graphic features the SecurA catheter logo at the top center, with the 'A' in orange. Below the logo, the text 'Reduce Infections' and 'Decrease Dislodgements' is displayed in large white font. A 'Learn More' link with a right-pointing arrow is positioned below the text. On the right side, there is a detailed illustration of the SecurA catheter device, which is orange and has 'LIFT' and 'HOLD' labels on its side, along with the SecurA logo and arrows indicating the correct handling technique. The background is a gradient of orange and brown, with a white diagonal line separating the top logo area from the main text area.

Reduce Infections

Decrease Dislodgements

Learn More ►



Intravenous literature: Yung, M. and Keeley, S. (2009) Randomised controlled trial of intravenous maintenance fluids. *Journal of Paediatrics & Child Health*. 45(1-2), p.9-14.

Abstract:

AIM: Traditional paediatric intravenous maintenance fluids are prescribed using hypotonic fluids and the weight-based 4:2:1 formula for administration rate. However, this may cause hyponatraemia in sick and post-operative children. We studied the effect of two types of intravenous maintenance fluid and two administration rates on plasma sodium concentration in intensive care patients. METHODS: A Factorial-design, double-blind, randomised controlled trial was used. We randomised 50 children with normal electrolytes without hypoglycaemia who needed intravenous maintenance fluids for >12 h to 0.9% saline (normal saline) or 4%

dextrose and 0.18% saline (dextrose saline), at either the traditional maintenance fluid rate or 2/3 of that rate. The main outcome measure was change in plasma sodium from admission to 12-24 h later. RESULTS: Fifty patients (37 surgical) were enrolled. Plasma sodium fell in all groups: mean fall 2.3 (standard deviation 4.0) mmol/L. Fluid type (P = 0.0063) but not rate (P = 0.12) was significantly associated with fall in plasma sodium. Dextrose saline produced a greater fall in plasma sodium than normal saline: difference 3.0, 95% confidence interval 0.8-5.1 mmol/L. Full maintenance rate produced a greater fall in plasma sodium than restricted rate, but the difference was small and non-significant: 1.6 (-0.7, 3.9) mmol/L. Fluid type, but not rate, remained significant after adjustment for surgical status. One patient, receiving normal saline at restricted rate, developed asymptomatic hypoglycaemia. CONCLUSION: Sick and post-operative children given dextrose saline at traditional maintenance rates are at risk of hyponatraemia.

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