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Hyperosmolality in Small Infants Due to Propylene Glycol

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Propylene glycol (1,2-propanediol) is used in many drug preparations. Although propylene glycol is regarded as having low toxicity in adults, in humans and animals there have been reports of CNS, renal, hematologic, and cardiac toxicity.[1-5] The absorption of propylene glycol through large burn wounds has recently been documented as a cause of serum hyperosmolality.[6,7]

Investigation of the cause of unexplained hyperosmolality in a premature infant led to the finding that several infants in our nursery were hyperosmolar due to administration of propylene glycol in a multivitamin preparation used in parenteral nutrition. This finding raises concern about the relatively large dose of propylene glycol that may be received by very small infants, especially those receiving multiple medications.