

Topical and Systemic Fluorides in Children with Renal Diseases

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Following the ingestion of fluoride, approximately 50% is normally excreted through the kidneys within 24 hours and most of the remainder is taken up by calcified tissues such as bones and teeth. Patients with renal dysfunction and especially young children may have an increased requirement for water intake. However, there is no evidence of any risks to children with renal disease from fluoride at the doses recommended for the fluoridation of water supplies.

Patients on renal replacement therapy requiring dialysis may be on haemodialysis or peritoneal dialysis. The fluids used in peritoneal dialysis are specially prepared and do not use local water supplies, so fluoridated water is not a factor. Patients on haemo dialysis are exposed to large amounts of water, three times a week. The dialysis equipment and facilities have very strict standards and controls and any fluoride in the water used is removed as part of these procedures. Maintenance of this equipment and the application of appropriate standards is important in controlling fluoride intake in patients on haemo dialysis.

There is no evidence that fluoride intake from sources other than water fluoridation, such as fluoride supplements, rinses and toothpastes, pose any risk to patients with renal disease, once the normal precautions applying to the use of these products are carried out.