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Cooling dialysate during in-center hemodialysis: Beneficial and deleterious effects

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**Abstract**

The use of cooled dialysate temperatures first came about in the early 1980s as a way to curb the incidence of intradialytic hypotension (IDH). IDH was then, and it remains today, the most common complication affecting chronic hemodialysis patients. It decreases quality of life on dialysis and is an independent risk factor for mortality. Cooling dialysate was first employed as a technique to incite peripheral vasoconstriction on dialysis and in turn reduce the incidence of intradialytic hypotension. Although it has become a common practice amongst in-center hemodialysis units, cooled dialysate results in up to 70% of patients feeling cold while on dialysis and some even experience shivering. Over the years, various studies have been performed to evaluate the safety and efficacy of cooled dialysate in comparison to a standard, more thermoneutral dialysate temperature of 37°C. Although these studies are limited by small sample size, they are promising in many aspects. They demonstrated that cooled dialysis is safe and equally efficacious as thermoneutral dialysis. Although patients report feeling cold on dialysis, they also report increased energy and an improvement in their overall health following cooled dialysis. They established that cooling dialysate temperatures improves hemodynamic tolerability

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