

# Higher risk of infection and death in First Nations people on peritoneal dialysis

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First Nations people in Canada on peritoneal dialysis are at increased risk of peritonitis and death, irrespective of whether they live in a rural or urban location, found a study published in *CMAJ*.

The high prevalence of diabetes, obesity and hypertension in Canada's First Nations, or aboriginal, population is fuelling the rapid growth of [kidney disease](#) and [renal failure](#) and consequent need for care and dialysis.

Peritonitis is inflammation of the peritoneum (the inner lining of the abdominal and pelvic walls), often caused by infection.

Peritoneal dialysis (PD) uses the peritoneum through which to filter wastes and excess water compared with hemodialysis which filters these externally through a filter. [Hemodialysis](#) requires living close to a dialysis centre whereas peritoneal dialysis can be conducted by patients at home. In Canada, approximately 18% of dialysis patients are on peritoneal dialysis.

The study, by researchers from St. Boniface General Hospital and the University of Manitoba in Winnipeg, Manitoba, looked at 727 adults with end stage [renal disease](#) on peritoneal dialysis from 1997 to 2007 in Manitoba. Of this total, 161 were First Nations and 566 non-First Nations.

"In this large cohort of peritoneal dialysis patients, First Nations status

was associated with an increase in mortality and peritonitis after adjusting for baseline demographics, co-morbidities and peritoneal characteristics, and these findings were independent of residing in an urban or rural environment," writes Dr. Manish Sood with coauthors.

The authors suggest that the increase in mortality may be due to dialysis clearance, with underlying inflammation and failure to clear fluid, although they stress this needs to be investigated.

They note that while geographic isolation and distance from health care can be associated with increased risk of death in people on dialysis, there was no difference between urban and rural First Nations patients on peritoneal dialysis.

"As many First Nations people live in the remote north, it was reassuring that patients far from their health care providers did no worse than those closer," write the authors. "Many patients, after experiencing kidney failure and initiating dialysis, relocate to cities which isolates them from family, culture and community. Our findings suggest there is no need to relocate patients."

More research into improving outcomes for First Nations dialysis patients is needed.

**More information:** [www.cmaj.ca/cgi/doi/10.1503/cmaj.100105](http://www.cmaj.ca/cgi/doi/10.1503/cmaj.100105)

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