

New form of expanded dialysis improves quality of life, study finds

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In a published study, a hospital research team from Lawson Health Research Institute has found that expanded dialysis, a new method that removes a broader range of toxins from the body, can improve quality of life in chronic kidney disease patients who struggle with the side effects of traditional dialysis.

In a clinical trial led by Dr. Chris McIntyre, Nephrologist at London Health Sciences Centre (LHSC) and Scientist at Lawson, [dialysis patients](#) at LHSC were administered expanded [dialysis](#) through a new dialyzer made by Baxter International Inc.

The dialyzer, called THERANOVA, has precisely-made pores that allow larger sized [toxic chemicals](#) to be filtered from the blood while retaining essential molecules such as albumin. "The chemicals that can now be filtered out can cause inflammation, malnutrition and the buildup of waste," explains Dr. McIntyre. "With traditional dialysis treatments, we haven't been as successful at removing those chemicals and some patients experienced significant side effects."

These larger molecules that the THERANOVA dialyzer is able to filter out are believed to be associated with inflammation, cardiovascular disease and chronic symptoms like fatigue. Study participant Robert Wahby has chronic kidney disease and has been on dialysis for about five years. He is no stranger to these symptoms. "I was hoping that trying this new dialyzer would help get rid of some of my symptoms. My appetite was down, I was a little weak and I was hoping I would sleep better."

As part of the clinical trial, Wahby started to immediately notice a positive difference when administered dialysis through the THERANOVA dialyzer. "I felt better, I was eating more and I had a better night's sleep."

His wife, Marlene Wahby, also noticed promising changes. "His sleeping patterns have gotten better and he feels better when he comes home. When he was on the traditional dialysis, he got very jumpy and didn't feel well at all after treatments."

This study was conducted for three months with 28 patients. Along with

receiving the expanded dialysis treatment, the research participants were monitored through the London Evaluation of Illness (LEVIL) app, developed by Dr. McIntyre with the help of patient input.

"One of our big research challenges is measuring the [quality of life](#) on dialysis," says Dr. McIntyre. "Conventional measures take time and may not be as accurate, so by asking questions through the app every day we were able to get a true idea of how patients were feeling."

By using the LEVIL app, the team was able to determine that patients that had a poorer quality of life at the start of the study significantly improved in the areas of general wellbeing, energy and sleep after approximately four to eight weeks of expanded dialysis.

Now that the first phase of this study has been completed and published in *Kidney Medicine*, the next phase will include 60 dialysis patients for up to six months of treatments using the THERANOVA dialyzer. This second phase will be a multicentered clinical study led by Lawson, University of Toronto and Humber College.

More information: Jarrin D. Penny et al, Impact of Expanded Hemodialysis Using Medium Cut-off Dialyzer on Quality of Life: Application of Dynamic Patient-Reported Outcome Measurement Tool, *Kidney Medicine* (2021). [DOI: 10.1016/j.xkme.2021.05.010](https://doi.org/10.1016/j.xkme.2021.05.010)

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