

**Getting outside help**

**Kidney failure rate keeps dialysis machines increasingly busy cleaning blood**

By [David Bruce](#)

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Larry Moore is proud of his punctuality.

Every Tuesday, Thursday and Saturday afternoon at 3:30, Moore walks through the doors of Renal Care of Erie and sits in one of the clinic's soft blue recliners.

He said he hasn't missed a dialysis appointment in seven years, ever since his kidneys stopped working.

"Sometimes it's tough to sit in this chair for five hours," said Moore, 59. "If I'm in pain or I get a cramp, I can't move around. Most of the time it's OK; I just watch TV, or I'll sleep or talk with the other patients."

Moore has plenty of company. Nearly 320,000 Americans undergo dialysis on a regular basis, a number that increases about 6 percent a year.

Doctors say that number will continue to increase as more people are diagnosed with diabetes, a leading cause of kidney failure.

"Some of it has to do with a greater availability of dialysis units, but diabetes has been on a rampage over the last 30 years," said Asim Singh, M.D., a nephrologist with Bayfront Nephrology. "It can cause renal failure when it's not managed properly."

Kidneys are the body's cleaning crew. The fist-sized organs filter out excess water, minerals and toxins from the bloodstream.

Chronic high blood pressure caused Moore's kidneys to stop filtering blood properly in the late 1990s. His doctor put him on dialysis, which acts as an artificial kidney.

Three times a week, a nurse inserts two needles into Moore's upper left arm, where doctors created a special port for dialysis. For the next four to five hours, Moore's blood drains into a nearby machine that filters out the waste and toxins, then returns the cleaner blood to his body.

"Dialysis is great, but it doesn't do the job as well as the kidneys can," said Edward Clark, M.D., a Saint Vincent Health Center nephrologist. "The kidneys do other things than filter out poisons. That's why people who receive kidney transplants do better than those on dialysis."

The five-year survival rate for dialysis patients is 28 percent, and the 10-year rate is just 10 percent, while the 10-year survival rate for transplant patients is 77 percent, reported the National Center for Health Statistics.

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Those survival rates can be misleading, Singh said.

"In the United States, we often put older patients on dialysis who are very sick and whose life expectancies aren't high anyway," Singh said. "In Europe, they are much stricter about who gets dialysis."

Going through dialysis isn't easy. Dialysis patients must follow strict diets that limit potassium and phosphate, which accumulate in the blood and are difficult to remove.

They must also limit how much fluid they drink, because dialysis can remove only a certain amount of water from the blood.

"I don't drink any milk, and if I want ice cream, I'll have a little bit once every three months or so," Moore said.

When Moore started dialysis, his body responded well to the treatment. Now he has good days and bad days.

"It didn't used to affect me at all, but now there are days when I have lower-back pain, I feel fatigued, and there's weakness in my legs," said Moore, who teaches English at McDowell High School. "I wonder why, and I remember, 'Oh yeah, I had dialysis yesterday.'"

Most dialysis patients receive treatment three times a week, either Mondays, Wednesdays and Fridays or Tuesdays, Thursdays and Saturdays.

Treatment usually lasts about four hours, though Moore requires an additional 30 to 60 minutes because he weighs more than the average dialysis patient. Larger patients tend to eat more food, drink more liquid and therefore have more waste product in their blood, said Francis Foti, M.D., a Saint Vincent nephrologist.

Dialysis isn't cheap. It costs about \$50,000 a year per patient, though Medicaid and Medicare cover 80 percent of the costs, and most dialysis patients receive some type of government health insurance.

About 350 Erie County residents undergo routine dialysis at one of the county's three outpatient clinics: Renal Care of Erie, Gambro Healthcare Acute Dialysis Unit and Gambro Healthcare of Corry.

Each clinic schedules patients for one of three shifts: early morning, midday or late afternoon.

"Sometimes there is waiting list for a particular shift, but we have never had a patient whom we couldn't get on dialysis," Clark said.

"Right now, we're starting most patients on a Tuesday-Thursday-Saturday third shift."

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Patients don't have to visit a center to receive dialysis. Most qualify for peritoneal dialysis, a procedure in which you fill your abdominal area with special fluid three times each day to clean your blood, then withdraw the fluid several hours later.

Peritoneal dialysis can be done at home, once the patient or caregiver is taught how to do it. But less than 10 percent of U.S. dialysis patients undergo this type of dialysis.

"That's because the patient must be independent or have a strong support system at home," Singh said. "Also, many patients have had several surgeries on their belly and can't do this type of dialysis."

Moore said he didn't choose peritoneal dialysis because he didn't want to walk around with all that extra fluid in his belly all the time.

"I'm big enough. If I had all that fluid, it would look like I gained weight," he said. "I didn't want that."

Because Moore doesn't suffer heart disease or other life-threatening illnesses, he could be a candidate for a kidney transplant.

Doctors won't put him on a list, however, until he loses weight. Moore, a big man who weighs more than 200 pounds, said he has lost 66 pounds over the last couple of years and hopes to drop another 35 or so.

"I'm following my diet because I want to lose weight," Moore said. "If that helps me get a transplant, fine. But that's not why I'm doing it."

### **DIALYSIS CLINICS**

Erie and Crawford counties have four outpatient dialysis clinics:

- Renal Care of Erie — 1641 Sassafra St., 455-6455
- Gambro Healthcare Acute Dialysis Unit — 143 E. Second St., 453-7946
- Gambro Healthcare of Corry — 200 York St., Corry, (814) 664-7520
- Gambro Healthcare of Meadville — 19050 Park Avenue Plaza, Meadville, (814) 336-6044

**How dialysis works**

Dialysis is a method of removing toxic substances from the blood when the kidneys are unable to do so. **Two types of artificial kidney dialysis are used clinically:**

**Hemodialysis**  
Requires patient to go to a dialysis center three times a week.

- 1 The patient is connected to a dialyzer machine by a tube.
- 2 The blood is filtered in the machine, blood retains proteins and cells.
- 3 The blood is returned to patient's vein by a tube.

**Peritoneal dialysis**

- 1 Fluid is injected through a tube that is put into the abdominal cavity, which contains the stomach, small intestine, kidneys, bladder and other organs.
- 2 Solutions diffuse from the blood into the fluid.
- 3 The fluid is removed with a needle after several hours and is replaced with new fluid.

A physician creates a fistula, abnormal connection of an artery and a vein, to reduce blood clots forming inside the vein from the dialysis.

Artery (blood from heart) Vein (blood to heart)

Abdominal cavity Peritoneal dialysis catheter Dialysis solution bag Waste products bag

SOURCE: Kidney Dialysis Foundation CHRIS SIGMUND/Erie Times-News

How dialysis works: Dialysis is a method of removing toxic substances from the blood when the kidneys are unable to do so.