

Renal Dialysis: Night and Day

Kidneys filter the bloodstream 24/7, maintaining optimal levels of fluids and regulating chemical balance. For decades, “artificial kidneys,” or hemodialysis machines, have made life possible for

kidney disease patients, but a patient’s health ebbs and flows with each treatment. In-home nocturnal dialysis provides greater benefits at lower cost; still, not all patients can assume its many responsibilities.

CLINIC



FREQUENCY Three times weekly.

FACILITY The Barnes-Jewish Hospital Dialysis Center serves 32 patients at a time in a large room banked with dialysis machines.

PROCEDURE Patient travels to clinic, medical personnel attach lines to a blood access port, then monitor progress. During the three- to four-hour procedure patients may read, watch TV or sleep.

HEALTH EFFECTS The thrice-weekly regimen—first established in the 1960s—is far from ideal in that it puts kidney patients’ health on a roller coaster. Prior to treatment, the toxin and fluid buildup causes patients to feel increasingly fatigued, bloated, itchy and short of breath; immediately following, the patient’s body struggles to readjust to the sudden change. Homeostasis—an ongoing feeling of wellness—is never achieved.

SOCIAL ASPECTS Patients structure their lives around the endless cycle of clinical treatments. A sense of community develops among patients who spend hours at a time together in the clinic, and the medical personnel provide not only physical treatment but emotional support.

EXPENSE \$70,000 annually per patient.

HOME



FREQUENCY Six to seven nights per week.

EQUIPMENT Dialysis machine in patient’s bedroom; lines run to water purifier in basement. Setup kits include tubing, hookups, the dialyzer filter and saline.

PROCEDURE Patient initiates sterile hookup procedure which takes about 1/2 hour. The machine quietly works overnight while they sleep, or a patient may move as far as the lines allow, read or watch TV. It takes another 1/2 hour in the morning to disconnect.

HEALTH EFFECTS With ongoing nocturnal treatment, the body most nearly approaches its normal, healthy balance of fluids and chemicals. Still, the patient experiences some physical and mental changes as the blood toxins accumulate prior to bedtime.

SOCIAL ASPECTS The in-house patient still receives regular medical care, including monthly tests and quarterly in-home visits. Social workers monitor each case closely to help ensure a healthy outcome.

EXPENSE \$60,000 annually per patient.

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