



Kathy (fitting her son Nelson with a skating costume in April) "is coming along real good," jokes her husband, Breen Hammons. "She's back to her old stubborn self."

KATHY HAMMONS, 42

Stem cells conquer lupus

She was working at her summer job in a restaurant when the college sophomore noticed that her hands had suddenly swollen up. Hammons was alarmed enough to rush to the nearby emergency room at the University of Michigan hospital in Ann Arbor. Even so, she was ill prepared for the diagnosis: lupus. The chronic inflammatory autoimmune disease, which affects 1.4 million people in the U.S., mostly women, causes the body to attack its own healthy tissue and organs. In the most severe cases, the notoriously unpredictable disease can be fatal. "A medical student told me I could expect to live 10 years," she says. "That's a long time, but not when you're 19."

Despite the grim prognosis, Hammons's disease was kept mostly at bay for nearly a decade with anti-inflammatory drugs, and

her most debilitating symptom was a lack of energy. So she happily got on with her life, marrying Breen Hammons, now 63, an auto-assembly-plant inspector, in 1980 and taking a job as a court reporter after finishing community college. In 1990, however, the lupus struck with a vengeance. She was forced to quit her job, and within a few years the disease had weakened her pancreas, lungs, the blood vessels in her brain and the sac surrounding her heart. Doctors tried conventional chemotherapy and high-dose steroids to control the lupus, yet the situation grew worse. "At the 17th month of my chemotherapy, the doctors said the treatment wasn't working," she recalls. "They sent me home while they tried to figure out what else they could do."

Near death, Kathy learned via the Internet that Chicago's Northwestern Memorial Hospital had

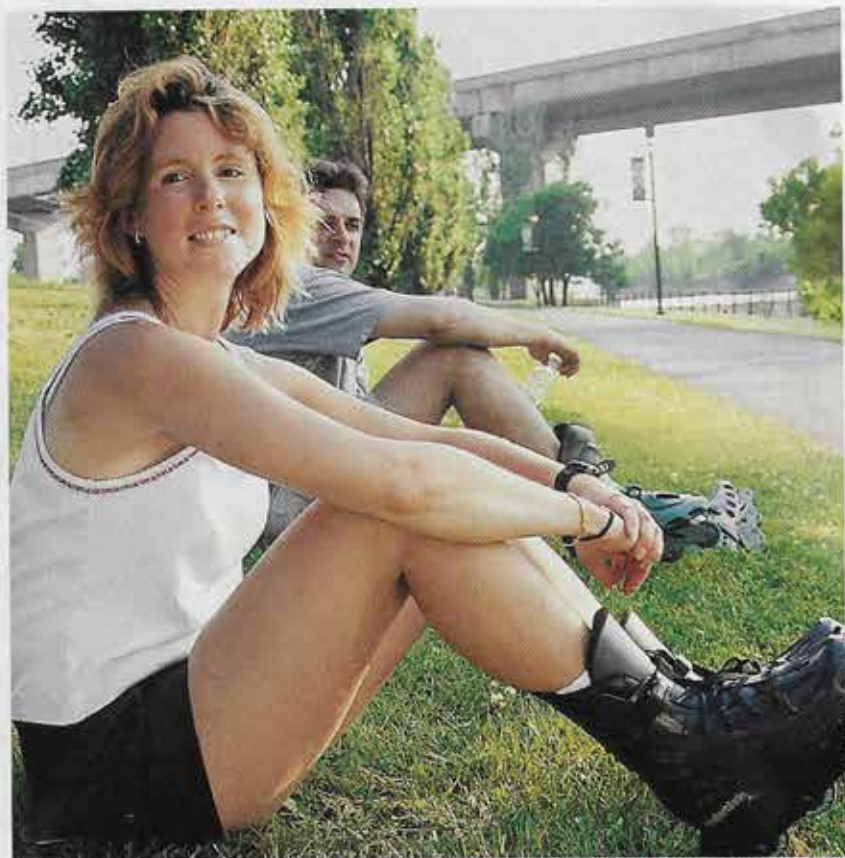
During her transplant, doctors "didn't make me feel like an experiment," says Hammons (at Northwestern in April '99).



begun treating lupus patients with an experimental stem cell transplant. In the procedure, a patient's own stem cells—vital cell precursors that develop into organs and tissues—are first removed from the blood, after which the patient's immune system is deliberately destroyed with chemotherapy. The stem cells are then returned to the patient in the hope that they will multiply and rebuild a healthy immune system. The hypothesis, says Dr. Ann Traynor, codirector of the stem cell program with Dr. Richard Burt, "is that if you turn back the clock and let the immune system heal itself, then the patient should have a chance of ending up without the disease."

For Hammons, who began treatment in January 1999, there were early complications. Normally, in a process called apheresis, stem cells are collected by a machine that separates them from a patient's blood. That failed, and her cells instead had to be harvested from bone marrow in her hips. In April her immune system was bombarded with the chemotherapy drug Cytoxan. For 11 days she remained in isolation, eating boiled food and allowed contact only with individual visitors swathed in sterile gowns and masks. The strategy began to work, but there was no sudden miracle cure. "As sick as I was before my transplant, after it I felt worse," she says. "The lupus was gradually going away, but the recuperation is horrible."

Still, of the 11 gravely ill lupus patients treated with the stem cell procedure at Northwestern, only two have had recurrences, and doctors believe that future trials will prove even more promising. Hammons, who now has the energy to ferry her 11-year-old son Nelson to his five-times-a-week skating lessons and recently completed a 7-mile bike ride to raise money for other lupus patients, already has all the proof she needs. "In 1999, 5,000 people died of lupus," she says, "and I was not one of them."



Photograph by Roger Lemoine

"I love life," says a relieved McNamara (in Montreal in June with boyfriend Derek Tahamont).

SUZAN MCNAMARA, 34

A cancer wonder drug

Two years ago, McNamara was too weak to climb stairs. She was rapidly losing her battle with chronic myelogenous leukemia, a rare and deadly blood cancer. Today, when she drives home to her Montreal apartment from Concordia College, where she studies molecular biology, she routinely stops at the gym to pump iron and jog on a treadmill. "I feel the best I've felt in my whole life," says McNamara.

She owes her revival to Gleevec, a new drug that has shown impressive remission rates in CML patients. Unlike traditional chemotherapy, it specifically targets cancer cells, leaving healthy ones alone. "It's the only drug in oncology that has fulfilled its promise," says her doctor Jaroslav Prchal. In early 1999 McNamara had read about Gleevec, but the drug was years from approval. So the shy Suzan turned activist, gathering 4,000 signatures on a petition asking Novartis, the manufacturer, to speed up the process. It worked. By January 2000 she was in a clinical trial, with immediate results. Gleevec is now being used by some 10,000 patients in 30 countries worldwide. Its long-term effectiveness is yet to be seen, but McNamara is jubilantly optimistic. "One minute I was looking at death," she says. "The next, I was looking at my whole life in front of me."

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