

Stanley J. Dudrick, M.D., F.A.C.S.

Father of intravenous feeding

Stanley J. Dudrick, M.D., F.A.C.S. As a boy growing up in Nanticoke, Stanley Dudrick, M.D., showed interest in plants and nutrition.

That interest led him to invent something that saved millions of lives around the world and earned him international recognition.

The 80-year-old medical director of the physician assistant program at Misericordia University and professor of surgery at the Commonwealth Medical College in Scranton is known as “the father of intravenous feeding.”

The American College of Surgeons in Chicago honored Dr. Dudrick recently for inventing intravenous feeding, a method of getting nutrients into the body through the veins.

He is included in a series of biographical videos called, “Heroes in Surgery: Our Legacy.” A nearly 25-minute video chronicles his life story from a coal mining town in Luzerne County to the Hospital of the University of Pennsylvania in Philadelphia, where his invention came to life.

During a recent interview at Misericordia University, Dr. Dudrick said his fascination in plants and nutrition began when he started working on farms at 10 years old. Both his

grandfathers came here from Poland and owned farms in addition to working in the coal mines. His father and uncles also worked in the coal mines starting at age 13.

When Dr. Dudrick went to Franklin and Marshall College in Lancaster, he conducted a project growing tomato plants. He would change the nutrients and study the effects it would have.

He graduated with honors with his Bachelor of Science and he received his medical degree from the University of Pennsylvania School of Medicine. From 1961-1967, he was a surgical resident at the Hospital of the University of Pennsylvania.

He had no intention of becoming an investigator or a researcher. He wanted to be a surgeon. When he lost three patients one weekend as an intern, he said he thought he wasn't good enough to be a surgeon. After talking to his boss, he learned that before the patients arrived, they previously had operations elsewhere, lost 30 to 50 pounds each, were weak and died because of malnutrition.

He also learned only five to 10 percent of patients with malnutrition survive because there was no way to feed them.

"I said, 'That's not good enough for me.' I don't want to lose 90 percent of my patients," Dr. Dudrick said. "I thought why do we let people die of malnutrition?"

No one had succeeded in feeding people through their veins. The medical profession initially thought it impossible. His boss encouraged him to see if he could develop an intravenous feeding system.

“I said, ‘I don’t think it’s impossible.’ I think we just needed to work on the technology and the techniques,” Dr. Dudrick said. “He said if I feel that strongly, he would let me go to the lab instead of quitting.”

That motivated Dr. Dudrick.

During the next two years, he read more than 600 papers, chapters and books and taught himself nutrition. He also talked to dietitians and biochemists and anyone who would answer his questions about nutrition. He said he knew it was feasible to feed by veins because fetuses are fed by the umbilical veins from their mothers’ placentas.

“I was shoveling sand against the tide. There was no one coming up to me trying to help me. They were all just waiting for me to fall on my face,” he said. “People would say it would never work. Then, they would say even if it works, it will be too expensive. Do you know what those same people said two or three years later? ‘I knew it was a great idea all along, Stan.’”

After putting together all the components of an intravenous feeding system and making it work, he proved the validity of his

idea on beagle puppies. He grew them by getting nutrients through their veins.

“I got the first set of puppies to grow for 257 days and the IV dogs grew just as well as the oral dogs,” Dr. Dudrick said. “That changed my life forever.”

By growing puppies, he continued to learn about which vitamins worked best.

Jack Paar, former host of The Tonight Show, became a motivating force with his joke, “The operation was a success but the patient died.”

It angered him that people laughed when Mr. Paar would say that.

“That motivated me,” Dr. Dudrick said. “I was going to show him that an operation can be a success and the patient won’t die. Whenever I got discouraged, I would think of that.”

While he was a surgical resident at the Hospital of the University of Pennsylvania from 1961-1967, he tested his intravenous feeding system on six patients considered “hopeless.” All six of those patients left the hospital.

Despite the fact that he saved the patients’ lives, he didn’t think he was doing anything special.

“I was just showing that it could be done. I never thought that I was some kind of savior,” he said. “I just think I’m somebody who tried to do the right thing and the best thing and what people would expect you to do if they’re going to trust you to be their physician. I still feel that way.”

After learning how Dr. Dudrick grew puppies by feeding them through their veins, a doctor at the Children’s Hospital in Philadelphia asked him to use his intravenous system to feed a baby who weighed about four pounds, had an abnormal blood supply and other complications. The doctor didn’t think she would survive.

By the end of the first day of intravenous feeding, the baby started moving. Every day, he added more to the solution. After 45 days of normal growth and development, it was the first example of successfully feeding a baby entirely by vein in the world.

Since then, he revolutionized the care of premature infants with low-birth weight. Most extremely low-weight babies would not have survived infancy without Dr. Dudrick’s perseverance and discovery, according to the American College of Surgeons. The organization credits him for saving millions of lives.

From 1970 to 2010, Dr. Dudrick said 10 million premature babies fed with his development of TPN (total parenteral

nutrition) lived in addition to about 20 million adults in the United States alone. Dr. Dudrick and his wife, Theresa, a Misericordia University alumna, have six children and 16 grandchildren and one great-grandchild. They have residences in Connecticut and Scranton. A hospital in Poland is named after Dr. Dudrick.

Russ Pottle, Ph.D., dean of the College of Arts and Sciences at Misericordia University, called Dudrick a “giant in his profession” and the source of knowledge and applications that have preserved millions of lives across the world.

“He is honored across the globe not simply for his achievements but also for his continuing dedication to medicine and medical science,” Dr. Pottle said. “Our program and its students — and the university at large — are extraordinarily privileged to be able to learn from Dr. Dudrick.”