

Burn treatment calls for 'constant' feeding

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Dr. Larry Jones explains a high-protein, high-calorie supplement to Troy Patchin, a patient in the burn center at The Ohio State University Wexner Medical Center. Jones` team aggressively feeds severe burn patients, giving them 3-4 times the amount of protein and up to 140 percent more calories per day than normal. The extra nutrients help burn wounds heal faster and get patients home sooner. Credit: The Ohio State University Wexner Medical Center

For someone recovering from severe burns, eating is often the last thing they want to do. However, burn specialists at The Ohio State University Wexner Medical Center say nutrition is so vital to their patients' recovery that they make it a quality indicator for patient care.

"The metabolism goes into hyper drive, trying to heal the wounds, and the body looks for nutrients wherever it can," said Dr. Larry Jones, director of The Ohio State University Comprehensive Burn Center. "If the patient doesn't take in enough calories and protein, it can cause muscle loss and slow healing significantly."

Jones and his colleagues admit [patients](#) with significant burns to the surgical intensive care unit (SICU), where they begin high protein [nutrition](#) through a feeding tube within six hours of arrival. While they target patients with burns covering 20 percent or more of their bodies, Jones says even those with less than 20 percent involvement can pose a nutrition risk due to the depth of the burn, age, comorbidities or existing malnutrition.

Upon admission, burn team dietitian Sheela Thomas does a nutritional assessment to determine the energy and protein needs as well as the best mode of delivery. Nurses monitor daily weight and calorie counts and the team assesses and adjusts tube feeding rates weekly. Patients transition to oral diet by day and supplemental feeding overnight, and finally a high-protein oral diet.

"We talk about this daily, for each individual patient: how many calories they need, what they're taking, if they're not taking enough then how do we supplement, how we can encourage them to get the calories they need. It's a very important part of the recovery," Jones said.

The Comprehensive Burn Center was recently honored for this aggressive approach to treating its patients. Critical Care Nutrition at the

Clinical Evaluation Research Unit in Ontario, Canada, named the burn team among the "Best of the Best" in its International Nutrition Survey. Ohio State ranked sixth among more than 100 hospitals evaluated worldwide, and is the first hospital in the U.S. to rank in the top 10.

"This award is based on an audit of our ICU's nutritional delivery. They look at our protein and calorie delivery, the timing of feeding tube placement and the use of supplemental medications to help patients tolerate feeding," said Dr. David Evans, director of nutrition support services and medical director of Ohio State's Level 1 Trauma Center. "By looking at those and other metrics, they can evaluate whether we provide the optimum nutrition and improve outcomes for our patients. This award shows we're doing better with burn patients than most others in the world."

Now the team is going a step further. Jones and Evans hypothesize that nutrition support should continue even after the patient goes home and the burn wounds appear to be healed. They're studying whether nutritional support should stop once the wound is closed, or continue beyond that period.

"It takes a [burn](#) anywhere from 12 to 18 months to completely heal, microscopically. So the nutrition support, we feel, is important for at least that long," Jones said. Troy Patchin, 44, of Cuyahoga Falls, Ohio, understands the benefit of the [high protein diet](#) he's receiving. He suffered second- and third-degree burns over 40 percent of his body from a work-related accident. Patchin has spent nearly two months recovering in the hospital, with a [feeding tube](#) providing constant protein and nutrition.

"The doctor told me it's like eating about 15 hamburgers a day. It's helped, because when I first got here, my appetite was nothing, from the pain and everything," Patchin said.

The feeding solution contains proteins, vitamin D, omega-3 fatty acids and other nutrients to help heal wounds. Burn patients need about 140 percent of their normal calories and about four times the protein.

Evans says Ohio State's aggressive protocol to ensure patients meet those needs was formally adopted last year. He hopes it can be used in other hospitals to improve patient outcomes.

Provided by The Ohio State University

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