

Healing Wounds That Would Not Heal

“After dealing with this for over two years it had gotten to the point where I was just asking my doctors to take my legs off.”
– Dennis Reneau

Pain relief, end of infections and fast healing of chronic wounds with **Kerecis Omega3 Wound.**

Faced with a double amputation, former marine Dennis Reneau of California had all but given up hope when his doctor, Mark D. Suski M.D., FACS, decided to try Kerecis Omega3 Wound intact-fish-skin grafts to treat his deep, painful and infected foot ulcers that had gotten progressively worse over a two-year period. The turnaround was beyond anything Reneau expected, or even hoped for. In only eight weeks his wounds healed and he went from being wheelchair bound to walking again.



Before suffering chronic foot ulcers, Reneau ranked number one in bench pressing in the USA, lifting 727 lbs. at a 242 lbs. body weight.

It started with a small scratch on his leg. A usually inconsequential event that forensic computer analyst Dennis Reneau thought nothing of. It was maybe an inch long. It didn't bleed and it didn't bother him. This was June 2016 and he went about his life as usual—work, family and professional powerlifting. At the time, Reneau ranked number-one in the U.S. in bench pressing, lifting 727 pounds. at his 242-lbs. body weight.

No turning back

Then the wound began to bother him. Three months passed. It just didn't heal. It started to hurt more than a typical scratch and Reneau decided to see a doctor, the first one in a long line of physicians who eventually were involved in his case. The doctor saw nothing wrong with the scratch other than a possible infection and sent him home. Reneau went back to the doctor about a month later and got the first prescription to treat an infection. Another month went by. The wound hadn't healed and was starting to grow.

The pain intensified and, five months after the innocuous scratch appeared, Reneau—a stoic, 45-year-old former marine—wound up in the emergency room overcome with pain. This was how an almost three-year journey through intense pain, progressive wound formation and constant infections began.

Multiple doctors at a loss

After first being admitted to the emergency room, Reneau entered a period of time where he underwent extensive

The first wound that formed continued to grow.



examinations and met with several doctors, including general practitioners, vein specialists and wound specialists, all of whom had their own approach and diagnosis. Nothing worked.

"This continued, going back and forth between multiple doctors lasted about seven months until the wound opened to about the size of a quarter," says Reneau. "No matter what they did, my wound just didn't heal."

From healthy to horrified

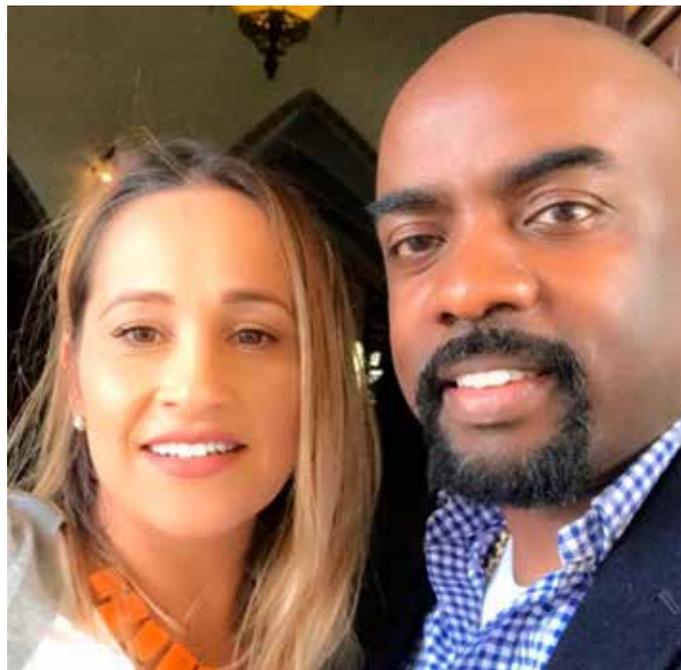
Reneau had neither a previous disease diagnosis nor any history of illnesses except occasional high blood pressure. He was a fit and healthy family man, married with three children. Yet his ulcers kept bothering him. He found a wound specialist in Ventura, California who did his best to treat him for the next seven months. Without success. The wound continued to grow. Another one formed on his foot, stretching across four toes.

Finally, the Ventura wound specialist referred Reneau to the USC Medical Center. A minor mistake during a bandage change resulted in yet another ulcer that did not respond to treatment.

Pain, immobility and just the smell of his wounds took a toll on Reneau and his family. His wife Faviola helped with wound treatment when he was home. "The swelling was excessive and the smell was horrible," says Reneau. "Dealing with the drainage was also an issue. We had to change my bandages multiple times a day. The necrotic tissue was really hard for me and brought me down even more, but my wife was a real help and changed bandages and applied medical bleach to keep the smell down."

A strong partner

Tolerance, persistence and determination got Reneau and his family through these tough times. His wife Faviola was by his side, supporting him, changing his dressings and taking care of the household while working. Yet things were getting even more difficult for Reneau. The wound on his right leg now reached from his knee to his ankle and was about five inches wide. The intolerable pain had Reneau at the end of his rope.



Dennis with his wife Faviola Reneau.

"I was brought down and definitely humbled by the experience," says Reneau. "During times like these you realize how much of a role your partner plays in your life because, again, I couldn't have done any of it without her."

Pain beyond measure

"The pain, I don't know how to explain it. I've never felt pain like it before. It was constant, but I also had zaps because it was nerve related," Reneau explains. "I would sleep in basically 45-minute sessions because the pain would wake me up. Dealing with that, it can make you buckle."

The wound continued to grow. Another one formed on his foot, stretching across four toes.



Reneau was prescribed multiple medications during the course of treatment. He was unresponsive to pain medications, antibiotics, steroids, anti-inflammatory and cancer medication.

The doctors at the USC Medical Center were doing their best to figure out what was causing the ulcers, treating the wounds and managing the pain. A pain specialist was called in as the situation had become so bad that even a sheet on top of Reneau's leg would hurt. "Nothing could touch me, but I was getting my wound cleaned every week and bandages changed every day and it was just unbearable," says Reneau. "The pain medication they were giving me, you name it, I was on it: Oxycodone, Oxycontin, the Fentanyl patch. All this stuff at the same time and nothing really worked to keep the pain under control."

Unknown etiology

The reasons for the ulcers remained elusive. The etiology was unknown but it was thought to be pyoderma gangrenosum, a rare condition that causes deep, painful ulcers that usually occur on the legs. Numerous biopsies were inconclusive and Reneau's wounds did not respond to treatment. He was unresponsive to corticosteroids, methotrexate and Remicade and the situation kept going from bad to worse.

A walking wound

In October 2017, three large ulcers had developed on his right leg with serious edema, necrotic tissue and excessive draining that all but debilitated him. Describing the wound is one thing but, as Reneau points out, his quality of life had become decidedly worse. "You almost feel like you are no longer a person," he describes. "Just a walking wound."

The worst was yet to come

Reneau had been able to get around on crutches but as his health deteriorated, he developed a Deep Vein Thrombosis (DTV) in his leg and he ended up in a wheelchair. It was yet another. "I had barely been able to walk with crutches and then I get a blood clot on top of all this other stuff," says Reneau. "I had to keep my leg up after the DTV formed because anytime my leg went down, within a minute, the pain was intense. I felt as if my foot was going to pop off. Just doing simple tasks around the house became impossible and I had to rely on my wife for a lot of things."

Another blood clot formed and the two DVTs became another complication, which resulted in multiple surgeries. He was eventually fitted with an IVC filter to prevent the blot clots from getting to his heart.

Critical condition

The toll on Reneau's body was immense. By November 2017, he had been treated with strong antibiotics and steroids for months as well as invasive cancer medication to try and stop the chronic infections. Nothing worked. This intense period culminated in blood pressure in the 190s over 160 and stage IV kidney failure. His organs couldn't take it anymore. Reneau was admitted to the hospital with sepsis and was there for three weeks.

Dr. Mark Suski takes over

That's when Reneau met plastic and reconstructive surgeon Dr. Mark D. Suski for the first time. Dr. Suski, who is the Medical

Director at the Center for Advanced Wound Healing at Los Robles Hospital and Medical Center, would eventually find the right treatment for Reneau.

"I admitted him to the hospital for emergent incisional debridement and ultimately protracted local wound care as well as intravenous antibiotics," says Dr. Suski. "He had an extensive vascular workup, which was essentially negative for arterial disease. He ended up undergoing multiple debridements during the course of his care with us."

Tendons start showing

By this time Reneau had met with more than a dozen doctors in the course of his treatment. Dr. Suski and his team kept treating him but, just when Reneau thought things could not get worse, he developed a new ulcer on his left foot that was even more painful than the ones he already had on his right. His ulcers continued to expand and none of them were healing. In January 2018,

the tendons in his right foot began to show. "We could see the tendons in my toes because the wound was so deep and it was exposed," says Reneau. "It was horrible."

Bacterial infections

Plagued by *Pseudomonas* bacterial infections, Reneau's wounds kept getting larger and deeper. The slough and drainage from the wounds created additional pain that was impossible to manage. Different antibiotic medications and the cancer medication Methotrexate had been used to try to keep the infections down. None of them worked.

"I would stay in the back room of my house because I didn't want to be in the front. My kids would come home and call out tentatively, 'Dad, Dad,' and listen for my answer because they were afraid that I was going to die," says Reneau. "They didn't want to come into the room unless they heard me respond. That was heartbreaking."

Pseudomonas bacterial infections kept coming back.



Plagued by *Pseudomonas* bacterial infections, Reneau's wounds kept getting larger and deeper.

Kerecis Omega3 Wound is an intact fish skin graft used for human tissue regeneration.



The fish skin graft is produced in Iceland by the company Kerecis, using proprietary methods that maintain the Omega3 fatty acids and the natural structure of the fish skin which supports the body's own abilities to regenerate.

Facing double amputation

Determined to find a solution to Mr. Reneau's condition, Dr. Suski took a wholistic approach. His team of specialists took a step back, analyzed the entire treatment program and looked into new ways of approaching the case. They stopped the immunosuppressant medication, removed the steroids and the antibacterial medication and kept him on blood thinners for the blood clots in his legs. After another six months of various attempts at conservative wound care that failed, Dr. Suski seriously considered below-knee amputation to be the only viable option for them.

Enter Kerecis Omega 3 Wound treatment

Before carrying out such drastic surgery, Dr. Suski decided to try one final thing. "About five or six months into his care we started using Kerecis Omega3 Wound intact fish skin grafts," says Dr.

Suski. "I had been introduced to Kerecis Omega3 Wound at the Northern Lights Wound Workshop in Iceland the previous year and found Dennis to be a suitable candidate."

Made from gently processed Icelandic cod skin

Kerecis Omega3 Wound is an intact fish skin graft used for tissue regeneration that is made from Icelandic cod. When grafted onto damaged tissue it recruits the body's own cells to regenerate tissue. It is processed gently in a way that maintains the natural structure of the fish skin and its Omega3 fatty acids, which are known to modulate inflammation. Since there are no viral or prion transfer risks from fish skin to humans, the fish-skin graft would, at least, not add to the already inflamed and infected status of the wound. Given the circumstances Dr. Suski thought it was worth a try.

Intact fish skin grafts applied once a week

"When Dr. Suski told me that he was going to try fish-skin grafts that only needed to be changed once a week I was immediately exited," says Reneau. "I said, great! Before that it was twice a day. Every dressing change brought me to tears. I consider myself to be tough but it hurt that bad. Just the thought of not going through that made me optimistic."

Less pain after the first application

Initially, Dr. Suski applied Kerecis Omega3 Wound to the largest wound, focusing on how Reneau's body would respond. The first thing Reneau noticed was that his pain went down. "Within the first 24 to 48 hours, my pain lowered substantially," explains Reneau. "Okay, this might be working."

"Dennis's pain was literally 10 out of 10 at the time of initial presentation," Dr. Suski explains. "And it remained that way throughout despite excisional debridement and control of his overall infection. So when Reneau told me that his pain had significantly improved after just one application, I was excited because this was an unsolicited comment on his part. It really got me thinking about some of the analgesic effects this particular product exhibits."



"When Reneau told me that his pain had significantly improved after just one application I was very excited."

– Dr. Mark D. Suski MD, FACS.





The wounds started healing. They closed as granulation and epithelialization were jump started by Kerecis Omega3 Wound.

Fast turnaround

Reneau's wound responded well to the fish-skin grafts and Dr. Suski decided to treat all the ulcers on both legs. He applied the fish skin grafts weekly. After three weeks he saw significant improvement. "We saw the wounds starting to shrink," says Dr. Suski. "The wounds' granulation, tissue contractions and epithelialization were really jump-started by Kerecis Omega3 Wound." The edema went down, the pain diminished and Reneau was able to "hobble about the house" for the first time in months. After three more applications of Kerecis Omega3 Wound the doctors started to see full healing as a real possibility. The entire treatment took eight weeks.

Positive reaction and diagnosis

"Reneau ultimately responded to multiple applications of Kerecis Omega3 Wound," says Dr. Suski. "It was exciting for us as his had been a complex case, and various multi-disciplinary approaches had yielded no results. Using this product and seeing it work for Reneau was the breakthrough we were looking for." The team at USC Medical Center were also able to distinguish the ideology of Reneau wounds, a previously undiagnosed hypercoagulable state.

The wounds finally heal

"My largest wound started to close and then the depth of the wound changed. Before it looked like someone just carved a piece of meat out of my leg. Then it started to fill in over the Kerecis

Omega3 Wound," says Reneau. "Today, the wound is healed and I can touch my leg. I couldn't do that for the longest time."

A new lease on life

Narrowly escaping double amputation, Dennis Reneau takes each day as it comes, appreciating the little things in life, and the basic things most people take for granted, like being able to walk.

He could not walk normally for more than two years and just the simple act of putting on shoes had become impossible. "I had a list of things I wanted to be able to do. It wasn't complicated. One was being able to walk. The other thing was being able to put on shoes. And the third was being able to walk barefoot on the beach," Reneau reveals. "Thanks to Kerecis Omega3 Wound I can walk and what's more, I can put on shoes. I do celebrate this simple fact. I have pictures of when I was wearing shoes again. That moment was a turning point in my recovery."

"I am very grateful for my doctors who always did their best for me. Dr. Suski and his team were determined to find a solution to my problems," says Reneau. "He brought Kerecis Omega3 Wound to the equation and it worked out. Thanks to him and Kerecis I can now move on with my life. Yes, it's different but I'm here, I can enjoy walks with my family and participate in life on my own terms."

“Being able to use this product and see it work for Reneau was the breakthrough we were looking for.” – Dr. Mark D. Suski



Dr. Mark Suski and Mr. Dennis Reneau presented their story at the 2019 Northern Lights Wound Workshop in Reykjavík, Iceland.

The Healing Process

Right leg ulcers – 5x3 cm and 13x10 cm



November 29, 2017

Upon presentation at the clinic. Chronic deep ulcers on the right leg with *Pseudomonas* bacterial infections, extensive slough, necrosis and cellulitis. Pain 10 out of 10.



September 12, 2018

After debridement and six applications of Kerecis Omega3 Wound over eight weeks. Infections stopped, the wound closed and the edema reduced significantly. Minimum scarring, contraction and discoloration. Pain reduced on first application.

Right foot ulcer – 6x3 cm



November 29, 2017

Tendons were showing with extensive slough, necrosis and cellulitis upon presentation at the clinic. Pain 10 out of 10.



September 12, 2018

After six applications of Kerecis Omega3 Wound over eight weeks. Granulation over the tendon started immediately and the infections went down. The wound closed with minimum scarring, contraction and discoloration.

Chronic leg and foot ulcers with Pseudomonas bacterial infections, significant slough, necrosis and cellulitis shown before and after treatment with Kerecis Omega3 Wound intact fish skin grafts. After over two years of various failed treatments, the patient's ulcers healed in 8 weeks using Kerecis Omega3 Wound.

Left leg ulcer – 5x3 cm



November 29, 2017

Upon presentation at the clinic. Extensive slough, necrosis and cellulitis.



September 12, 2018

After six applications of Kerecis Omega3 Wound over eight weeks. Wound closed, infections stopped and edema went down. Minimum scarring, contraction and discoloration.

Left foot ulcer – 4x3 cm



February 1, 2018

The fifth ulcers developed on the left foot after the patient started treatment at the hospital. Development identical to the ulcers on the right foot.



September 12, 2018

After six applications of Kerecis Omega3 Wound over eight weeks. Wound closed, infections stopped and edema went down. Minimum scarring, contraction and discoloration.

Supporting the Body's Own Ability To Regenerate

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