



## Iraq War Vet Becomes 1st To Receive Bionic Hand

**July 24, 2007, NEW YORK (CBS)** Retired U.S. Army Sergeant Juan Arredondo still remembers the devastating sight of his severed left hand still gripping the steering wheel of the vehicle he was driving in Iraq after an IED suddenly exploded through the door. Little would he know that that devastation would turn into a miracle, reports CBS station WCBS-TV in New York.

Arredondo, 27, lost his hand Feb. 28, 2005. A little more than two years later he's become one of the first recipients of the world's first bionic hand, called the i-Limb.

Made commercially available in the United States last week through Bethesda, Md.-based **Hanger Orthopedic Group**, the i-Limb offers a vast improvement to most prosthetic hands in that its fingers can be moved independently.

Arredondo was in Manhattan on Monday to show off his one-of-a-kind bionic hand. "I just go about my daily activities and then I'll find out something new I can do with my hand," he told WCBS-TV.



Incredibly, the i-Limb allows its patient to perform natural and independent bending motions through "joints" that flex like actual fingers, generated by electric signals controlled by the same muscles used to move the hand.

Because the brain thinks the hand is still connected to the body, the muscles still function as if the prosthetic is a real hand.

"They think they want to close the hand, the computer understands that and then closes the hand," Hanger spokesman Troy Farnsworth said.

Each finger contains its own motor that gives the patient the ability to fully grasp anything from a steering wheel to a baseball.

"Being able to catch a ball - those little things you take for granted when you have two hands," Arredondo said. "It just brings a smile to my face because this technology is going to help other people. People like me."

The i-Limb, invented by David Gow and manufactured by U.K.-based prosthetics developer Touch Bionics, also has the flexibility to open door knobs, pick up telephones, or even hold a drinking glass.

Prior to the i-Limb, the most advanced prosthetic hand or arm were called "myo-electric hands" which could only perform simple opening and closing motions. According to Hanger, "to a non-amputee, the former prostheses would be like having all four of your fingers glued together and only being able to move your thumb away from your fingers and back again in a pinching motion."

The i-Limb is now available to order and costs about \$50,000 each.



**Hanger Orthopedic Group, Inc.**, headquartered in Bethesda, Maryland, is the world's premier provider of orthotic and prosthetic (O&P) patient care services. Over its 143-year history, Hanger has established a tradition of excellence attributable to the dedication and clinical expertise of our providers; our steadfast support of research and development; and our unwavering commitment to patient satisfaction. Hanger has over 600 locations nationally.

### Mission Statement:

To provide our patients with the best value, most advanced clinically excellent orthotic and prosthetic services in a timely, pleasant and professional manner, while maintaining a rewarding atmosphere for our associates and investors.

### History of Hanger:

James Edward Hanger founded the company in 1861. When he was an 18 year-old soldier he became the first amputee of the Civil War. After losing his leg in the first land battle of the war, Hanger turned his personal tragedy into an invaluable service for mankind. He returned to his hometown in Virginia and developed an artificial leg from whittled barrel staves. His success prompted him to make the "Hanger Limb," as it became known, for other Confederate amputees in the area.

The State Legislature later commissioned him to manufacture artificial limbs for wounded veterans. Hanger patented his prosthetic device and established a thriving business headquartered in Richmond. His business expanded through his revolutionary developments, and at the time of his death in 1919, the J.E. Hanger Company had branches in Atlanta, London, Paris, Philadelphia, Pittsburgh and St. Louis.

In 1921 Congress created the Veterans Administration and authorized the Administration to operate hospitals and provide vocational rehabilitation for the disabled. This expanded further as veterans came back from World War I and World War II. The Depression of the 1930s caused the Federal Government to assist in the rehabilitation of the handicapped. The national health programs, Medicare and Medicaid, furthered this process, particularly for the aging and the underprivileged. Today, virtually any person who can benefit from prosthesis can be assured of superior service.

Each Hanger patient care facility is available for individual preoperative consultation to patients, families and therapists. With an established Quality Assurance Program and nationwide continuum of care, each referred individual receives personalized, customized attention throughout their lifetime. Hanger contracts with multiple, national Managed Care providers. The goal of the expert staff is to assist all persons in reaching their highest possible level of independence so that the quality of life is enriched on a daily basis.

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