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U.S. soldier 're-grows leg' after pioneering injection of pig bladder hormone

By [Daily Mail Reporter](#)

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A U.S. soldier who had most of his leg muscle blown off in Afghanistan has become the first to see it grow back in a pioneering experimental operation.

Marine Isaias Hernandez lost 70 per cent of his right thigh muscles when an enemy mortar exploded as he tried to carry out repairs to a truck in Afghanistan.

With such severe muscle damage Hernandez would ordinarily have had his leg amputated.

But a re-think in the way soldiers are treated led to the wounded warrior being injected with a growth promoting substance extracted from pig bladders.



Re growth: Corporal Isaias Hernandez, right, at Brooke Army Medical Centre has undergone pioneering surgery

The revolutionary treatment gives hope to the hundreds of maimed veterans returning from conflicts with severe limb trauma.

Stephen Badylak, the tissue engineering director at the McGowan Institute for Regenerative Medicine at the University of Pittsburgh said: 'It was a remarkable recovery.'

Since the experimental growth hormone was used, Hernandez has regained most of the strength in his right thigh.

The wounded Marine's recovery is particularly exciting for scientists as it involves the regeneration of skeletal muscle which ordinarily does not grow back.

The new treatment could in theory revolutionise how not just how soldiers are treated, but all potential amputees.

In preparation for the operation, corporal Hernandez was made to build up the remaining 30 per cent of muscle left on the damaged thigh.

Surgeons then sliced into the thigh, placing a thin slice of a substance called extracellular matrix.

The surgery is the result of a \$70 million investment by the U.S. military into regenerative medicine research.



Life-changing: Corporal Hernandez was injured in Afghanistan but has received the miraculous treatment in the U.S.



Honour: Hernandez saluting at the dedication of a monument marking the events of World War II during a ceremony in Texas

Marine Hernandez was 19 when he was gearing up his truck in Afghanistan ahead of a long journey.

As he approached the vehicle an enemy mortar exploded, throwing shrapnel into his exposed body parts.

Fortunately the Marine, he was carrying a TV which shielded the upper half of his body.

Speaking to The Australian, Corporal Hernandez said: 'Pretty much anything that wasn't covered, arms and legs, was hit.'



Wounded: The pioneering new treatment potentially allows for a revolution in how potential amputee victims are treated

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Wow. Shame you are not having as much success growing a brain and some common sense. - Nicky, Lincs, 20/6/2011 4:05 It was a news clip that was posted on YouTube, not some no name website with an unheard of author. Perhaps they can develop a treatment that'll regrow the brain tissue needed to make your personality tolerable.

- Brian, Philadelphia, USA, 20/6/2011 22:21

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My wife survived a total Mitral valve blowout (all the cords broke loose, causing the valve to flap in the blood stream) because the doctor replaced that defective valve with a COW valve. It is supposed to last 20 years, until she's 85. What made the operation even better is that it was done using the DeVinci Surgical Robot, so she didn't need to have her Sternum split open and wired back together.

- Jerry L, Lincoln, NE, 20/6/2011 20:59

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The term soldier refers to a person in a land based national military unit. It is commonly misused to refer to all military personnel. Airmen, Marines and Sailors are not soldiers by the proper definition though each branch of the military may include titles commonly associated with other branches. For example Naval pilots may be referred to as Airmen. Due to the multitude of specific job titles in modern military forces, the term soldier is sometimes used to refer to many military personnel. ... technically you're both correct...

- Dave, State College, PA, 20/6/2011 20:34

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"Since there is no reporters name and I couldn't email directly. A Marine is not a soldier. Neither is a sailor, or an airmen. We all have our titles and lumping us all in with the Army is horrible." I was a soldier, and I wasn't in the army. A soldier is a generic english language term for "somebody who fights for the military." Marines fight for the military. They are soldiers. They are marine soldiers. Get over yourself.

- David, Oklahoma, US, 20/6/2011 17:37

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What wonderful creatures are pigs. Not only can they provide organs and treatments, such as this one, for humans, what is not used is delicious. They are intelligent creatures too. If the rejection problems truly don't exist perhaps it would be possible to transplant the islets of Langerhans to Type 1 diabetics, thus enabling the recipient to produce their own insulin/glucagon etc, and it would save health services tens of millions every year. The

pharmaceutical companies might not be too happy though!

- Lorna, France, 20/6/2011 15:08

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The can fix Dr. House now!!!

- Ahmed Kazikian, NewHavenUSA, 20/6/2011 15:07

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