

Mayo Clinic News Network

P08 Wounded War Hero's Prosthesis

Intro: In every war there are heroes. Those who sacrifice to save others. The man you're about to meet was a Captain in the elite U.S. Army Ranger Regiment. He was honored with three Purple Hearts and a Bronze Star Medal. He left active duty after an ambush in Iraq resulted in a below the knee amputation. But a new device tested at Mayo Clinic has Captain Matthew Bacik walking, running and standing tall.

Video	Audio
TRT 3:06 Matthew Bacik Captain, US Army	"We would go to kill and capture high value targets. And en route to one of those. You know. Sometimes the enemy is ready for you"
Voice of Vivien Williams	In Iraq in 2005, U.S. Army Ranger Captain Matt Bacik's armored Humvee was hit by an IED. An improvised explosive device.
Matthew Bacik	"The guts of the truck came up and pinned my legs down so I could not move. Most of my heel and ankle were destroyed in the blast."
Voice of Vivien Williams	Fast forward to present day.
Brandon Sampson Limb Lab	"This is Captain Bacik's socket."
Voice of Vivien Williams	Brandon Sampson is co-owner of Limb Lab, a company that builds state of the art prosthetics.
Voice of Vivien Williams	The prosthetists at Limb Lab team up with experts at Mayo Clinic to study and create new devices so people like Captain Bacik

To Kenton Kaufman, Ph.D.	can function better. Dr. Kenton Kaufman is a professor of biomedical engineering at Mayo Clinic.
Kenton Kaufman, Ph.D. Mayo Clinic	“Our goals in working with amputees is to give them back their life, their function, as they knew it before they were injured.”
Dennis Clarke Limb Lab	“Anybody can make a leg. That’s not the idea. It’s to match the appropriate technology with the appropriate person to meet their goals and objectives.”
Voice of Vivien Williams	Captain Bacik is helping to test a new socket to see if it will increase stability and decrease pain.
Matthew Bacik	“Normally when I get out of the shower I kind of dry my leg off very carefully because it’s usually sore in 2 spots, and after wearing the test socket for 2 days I went to dry it off and it was so weird because it didn’t hurt at all.”
Vivien Williams	The addition of a newly designed flexible sleeve keeps the prosthetic in place so it stays in place and feels more natural. More like an extension of the body.
Brandon Sampson	“When he plants his foot on the ground, he can rotate his knee and it’s totally compliant”
Kenton Kaufman, Ph.D. Mayo Clinic	“We’re looking at the efficiency of the prosthetic device that he’s wearing. And that’s important because amputees require more energy to walk than non-amputees. So if we can make it more energy-efficient for him to walk, he’ll be able to walk more and be less fatigued at the end of the day.”
Matthew Bacik	“Normally these things get uncomfortable soon. And you end up changing your position a little bit, trying to sit differently or stand differently or walk differently throughout the day. I don’t feel I have any of those issues right now.”
Voice of Vivien Williams	For Captain Bacik, the newly designed prosthetic means he move, walk and run a little more like he did before he lost his foot in the explosion in Iraq.
Matthew Bacik	“Just wearing it now. It just feels like a foot and that’s pretty cool.”

Voice of Vivien Williams	For Dr. Kaufman, working to improve function is one way he and his colleagues can thank the wounded warriors who have sacrificed so much during their service.
	For the Mayo Clinic News Network, I'm Vivien Williams.

Anchor tag:

Much of Dr. Kaufman's work focuses on helping restore function for wounded warriors, but the devices he helps develop are also used by civilians. He says it's all about improving quality of life.

Since retiring from the Army, Captain Bacik is the CEO of Bacik Group, a company that provides technical services to the federal and private sector.

For more information, visit our website at ... [STATIONS: Per the licensing agreement, please provide a link from your station's website to <http://www.MayoClinic.org> or voice tag "MayoClinic.org" for more information.]