

# Gene Therapy Hastens Healing Process in Chronic Leg Ulcers

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(PhysOrg.com) -- Chronic wounds, including venous leg ulcers which are caused by poor circulation in the veins of the legs, are difficult and expensive to treat. Researchers at the University of Pennsylvania School of Medicine have developed the first targeted, short-term delivery method using gene transfer technology to effectively treat venous leg ulcers.

The standard treatment for venous [leg ulcers](#), lower limb compression, takes up to six months to heal and is unsuccessful in 30 -70 percent of cases. The new treatment involved injecting venous leg ulcers with a non-replicating adenovirus that expresses platelet-derived growth factor- $\beta$  (PDGF- $\beta$ ). This prompted the wound healing process; endothelial precursor cells were attracted to the wound and new tissue formed.

“By temporarily increasing the production of (PDGF- $\beta$ ), wounds decreased in size in 93 percent of clinical trial participants within 28 days of the injection,” said David Margolis, MD, PhD, lead author and professor of Dermatology and Epidemiology at the University of Pennsylvania School of Medicine. “Using gene transfer technology, the growth factor penetrated the wound, reached the target cells and initiated the wound healing process.”

The phase I study, which followed 15 patients for 24 weeks, appeared in The American Society of Gene & Cell Therapy. No further studies are planned at this time.

Provided by University of Pennsylvania School of Medicine ([news](#) : [web](#)  
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