

Development of an Ankle-Foot Prosthesis to Improve Rehabilitation Outcomes



Minneapolis VA Health Care System

Why this research is important:

Problems with prosthetic socket fit are common for persons with lower-limb amputations and can lead to pain, skin issues, and reduced community participation. In particular, new amputees experience large changes in residual limb volume and are especially susceptible to issues related to socket fit.

Summary:

The VA MADE Program is developing a system that can detect when a prosthetic socket is too loose or too tight and can provide guidance to prosthesis users on improving their socket fit. This system is being designed using feedback from VA clinicians and Veterans with lower-limb amputations.

How the research will improve Veterans' lives:

The socket-fit sensor system will provide Veterans with an easy-to-use tool to help prosthetic sockets fit better. New amputees will benefit from using this system as they learn new self-management habits and strategies. Ultimately, this system will lead to improved socket comfort, prosthesis use, and community participation.



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