Ventilated Prostheses for Improved Residual Limb Microclimate

Minneapolis VA Health Care System

Why this research is important:
Lower-limb prostheses are hot and sweaty because they use non-ventilated sockets and liners that trap heat and moisture.

Summary:
The VA MADE Program and its collaborators are developing ventilated socket systems for lower-limb prostheses. Liner-socks with ventilated regions are placed within ventilated socket systems, allowing air to penetrate into the socket for evaporative cooling.

How the research will improve Veterans' lives:
Ventilated socket systems will be more comfortable for Veterans with lower-limb amputations. Reducing heat and moisture at the skin-socket interface will also reduce the number of skin problems experienced on the residual limb, allowing Veterans to remain active in their lives.