

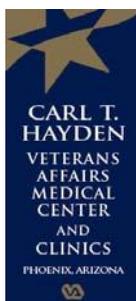
## VA Medical Research: A Legacy of Benefiting Veterans and Civilians

Veterans Health Administration (VHA) medical research contributes to the nation's knowledge about disease and disability, with emphasis on injuries and illnesses related to military service. This research has resulted in important medical advances that benefit veterans and the nation as a whole.

- VA pioneered the first effective therapies for **tuberculosis** in the 1940s. Veterans returning from the Pacific theater and POW camps in World War II were some of the first to receive these treatments.
- In the late 1970s and early 1980s, the VA supported research that led to the **Seattle Foot**, a prosthetic device for lower limb amputees. This revolutionary device allowed thousands of amputees from the Vietnam War to return to an active life and participate in activities like basketball, skiing, or running — all of which were impossible with traditional artificial limbs.
- VA was instrumental in the invention and use of the first **implantable cardiac pacemaker**.
- VA's basic science research contributed to the development of the computerized axial tomography (**CAT**) scan in the early 1970s and modern **radioimmunoassay diagnostic techniques** in the mid-1980s.
- **VA cooperative studies** in the 1960s, 70s, and 80s proved the value of such widely used therapies as coronary artery bypass and aspirin's ability to ward off heart attacks. More recent VA clinical trials have demonstrated the value of advanced cochlear implants in veterans with profound hearing loss and established effective treatments for post-traumatic stress disorder (PTSD).
- The National Center for PTSD was created in 1989 within the Department of Veterans Affairs to address the needs of veterans with military-related **post-traumatic stress disorder** and improve understanding of veterans with PTSD in American society.
- Improvements in body armor and battlefield medicine have resulted in greater survival among wounded soldiers, but also new combinations of critical injuries. VA is promoting new research in **polytrauma** and **blast-related injuries**, focusing on rehabilitation, psychological adjustment and community reintegration.
- VA is funding two new centers to develop **computerized state-of-the-art prosthetic limbs**, with the goal of using the latest advances in orthopedic surgery, tissue engineering, nanotechnology, and microelectronics to create prosthetics that look, feel, and act more like one's own limbs.
- VA investigators are examining **rehabilitation** for the visually impaired with artificial retinas, restoration of hearing and maximizing function for those with hearing loss, and natural mechanisms of neural regeneration to return function to paralyzed veterans and those with brain injuries.
- At the **Carl T. Hayden VA Medical Center in Phoenix**, clinicians are leading research in non-surgical treatment of skin cancer, the use of adult stem cells to help regenerate vascular tissue, computerized therapy for speech disorders, and a new protein-based drug to aid blood flow.



A combat-wounded veteran demonstrates the Power Knee. Part of the system is a transponder on his right leg, which monitors the natural leg's movement and signals the artificial knee to behave similarly. A VA study, 'Evidence-Based Amputee Rehabilitation,' is among the first where a functional measure is being used in the clinic to look at balance, power, strength and other outcomes.



#### Sources:

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History of the National Center for PTSD, available at [http://www.ncptsd.va.gov/ncmain/about/nc\\_overview/history.html](http://www.ncptsd.va.gov/ncmain/about/nc_overview/history.html)  
Department of Veterans Affairs, VA Research and Development: "Evidence-based Prosthetics is Focus of New Workshops," available at <http://www.research.va.gov/news/features/prosthetics-workshop.cfm>