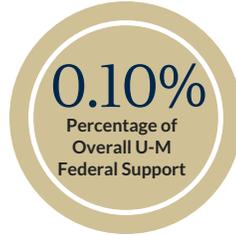




DEPARTMENT OF VETERANS AFFAIRS  
SUPPORTED RESEARCH AT THE



# UNIVERSITY OF MICHIGAN



The Department of Veterans Affairs (VA) supports U-M research in engineering, labor and employment, health, medicine, vehicle research, and other fields. Projects include mental and physical health and wellness, rehabilitation, and  
**FY 2016 Research Expenditures: \$759,385**

**Year-to-year, VA-supported projects involve about:**

Faculty Researchers.....	19
Postdoctoral Fellows.....	2
Graduate Student Researchers.....	1

**Examples of U-M projects supported by the Department of Veterans Affairs.**



**TECHNOLOGY ALLOWS PATIENTS, CAREGIVERS TO MANAGE CARE WITH LESS STRESS**

The U-M School of Public Health and Medical School, and the VA collaborated on a trial to with patients and informal caregivers.

Their goal was twofold: to see if structured support from the program and informal caregivers could improve patients' self-care and health status, and to determine if systematized feedback to caregivers could alleviate their burden and help them avoid burnout and mental health concerns. Many caregivers report emotional strain, depression and increased rates of chronic disease themselves. They conduct care with no training or access to resources, records or guides for consultation.

When caregivers received feedback about their loved one, the caregivers reported less strain and depression. Their patients reported better medication adherence, experienced fewer breathing problems and better interactions with their caregivers.



**ARTIFICIAL FOOT RECYCLES ENERGY FOR EASIER WALKING**

An artificial foot that recycles energy otherwise wasted in between steps could make it easier for amputees to walk.

"What amputees experience when they're trying to walk normally might be what I would experience if I were carrying an extra 30 pounds," said biomedical engineering and mechanical engineering professor Art Kuo. He published a paper called, "Recycling Energy to Restore Impaired Ankle Function during Human Walking," with a then U-M graduate student, funded by the National Institutes of Health and the Department of Veterans Affairs.

Compared with conventional prosthetic feet, the new prototype device significantly cuts the energy spent per step. Individuals with lower limb amputations, such as veterans of the conflicts in Iraq and Afghanistan or patients suffering from diabetes, often find walking a difficult task. The new design may restore function and reduce effort for their users.



**PROMISING FINDINGS EASE PTSD FOR VETERANS**

Brain changes seen in veterans with PTSD after mindfulness training offered surprising findings and suggest promise of mind-body techniques. Researchers from the U-M Medical School and the VA Ann Arbor Healthcare System saw brain changes that surprised even them. Veterans' brains changed in ways that may help them find their own "off switch" for that endless loop that some experience. The changes showed up on functional MRI, or fMRI, brain scans that can visualize brain activity as different areas of the brain "talk" to one another through networks of connections between brain cells. More study is needed.