Commercially available activity-monitoring apps, Web sites, and wearable devices allow for easy self-management of health and wellness. This technology may be particularly helpful for older adults, who can improve their cognitive function through proper diet and exercise. Despite tracking monitors’ growing popularity and potential benefits, product designers rarely consider those over 65 to be a viable user group, and new human factors/ergonomics research indicates that the technology presents several usability challenges for this population.

“Many older adults have chronic conditions such as diabetes and hypertension that require them to self-manage their health,” said Kimberly Preusse, coauthor of “Activity Monitoring Technologies and Older Adult Users: Heuristic Analysis and Usability Assessment” and Georgia Tech engineering psychology graduate student. “Research has shown that they want to track their diet and exercise, but most don’t use activity-monitoring technologies to do so.”

In research presented at the 2014 International Symposium on Human Factors and Ergonomics in Health Care in April, authors Preusse, Tracy Mitzner, Cara Fausset, and Wendy Rogers designed a study assessing the usability of two popular Web-based and wearable activity trackers. Older adult participants were asked to track their diet and exercise over two weeks and report on usability issues they experienced, as well as their attitudes toward the technology. The authors also conducted a separate analysis of both trackers to uncover any design issues that could be problematic.

The researchers found a number of usability problems, including low color contrast between icons and the background screen, small fonts, and inconsistent navigation bars across Web sites. Study participants perceived the technology to be inaccurate when tracking step counts and sleep patterns. Many of them also reported difficulty remembering to log their information and use the device, which could be mitigated by more prominent reminder options.

“Activity-monitoring technologies can make tracking diet and exercise easier because they gather some data automatically and display trends over time,” said Preusse. “Companies should market their products directly to older adult
users so that they understand how the technology can be beneficial in managing their health.”

To receive a copy of the article for reporting purposes, contact HFES Communications Associate Cara Quinlan (310/394-1811; cara@hfes.org) or Communications Director Lois Smith (310/394-1811; lois@hfes.org).

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The Human Factors and Ergonomics Society is the world's largest nonprofit individual-member, multidisciplinary scientific association for human factors/ergonomics professionals, with more than 4,800 members globally. HFES members include psychologists and other scientists, designers, and engineers, all of whom have a common interest in designing systems and equipment to be safe and effective for the people who operate and maintain them. “Human Factors and Ergonomics: People-Friendly Design Through Science and Engineering”

Plan to attend the HFES 2014 International Annual Meeting, October 27-31, Hyatt Regency Chicago.

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