Human Factors

research and technology division

Autogenic Feedback Training Exercise (AFTE) in High-Stress Environments

Objective

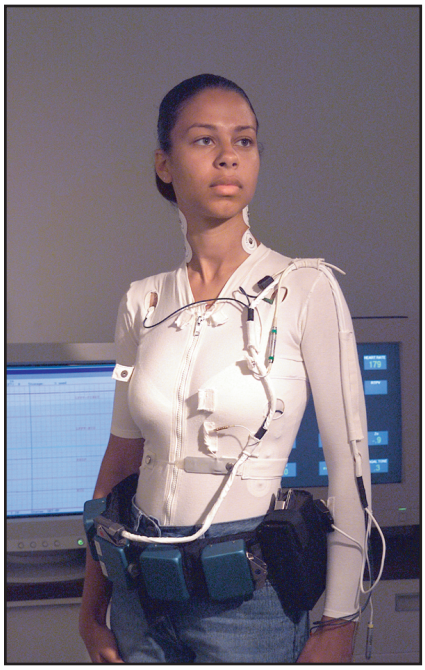
Enhance operator performance, health, and safety through psychophysiological monitoring and control of autonomic nervous system function.

Approach

Autogenic Feedback Training Exercise (AFTE) is used to train people to monitor and voluntarily control a range of their own physiological responses and to reduce symptoms of motion sickness and to improve orthostatic tolerance.

Impact

The training has facilitated adaptation to space and re-adaptation to Earth for astronauts and cosmonauts, and has improved Coast Guard pilot performance in C-130 aircraft and multi-crew helicopters during search-and-rescue missions. AFTE has also been demonstrated to relieve symptoms of nausea and fainting in patient populations. Autonomic nervous system monitoring has enabled U.S. Army tank & automotive command to assess the impact of motion sickness on soldier performance within armoured vehicles.



POC: Patricia Cowings, Ph.D., William Toscano, Ph.D.

URL: http://humanfactors.arc.nasa.gov/ihh/psychophysio/