
BIOFEEDBACK IN GAIT REHABILITATION

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MOBILITY DISORDERS IN CANADA

1 in 14
Canadian
s

Gait (walking pattern)
deviations



Stroke survivors - Falls



Lower limb
amputation - Joint degeneration
- Musculoskeletal
problems



Cerebral palsy - Independence
- Participation

GAIT REHABILITATION

Current state

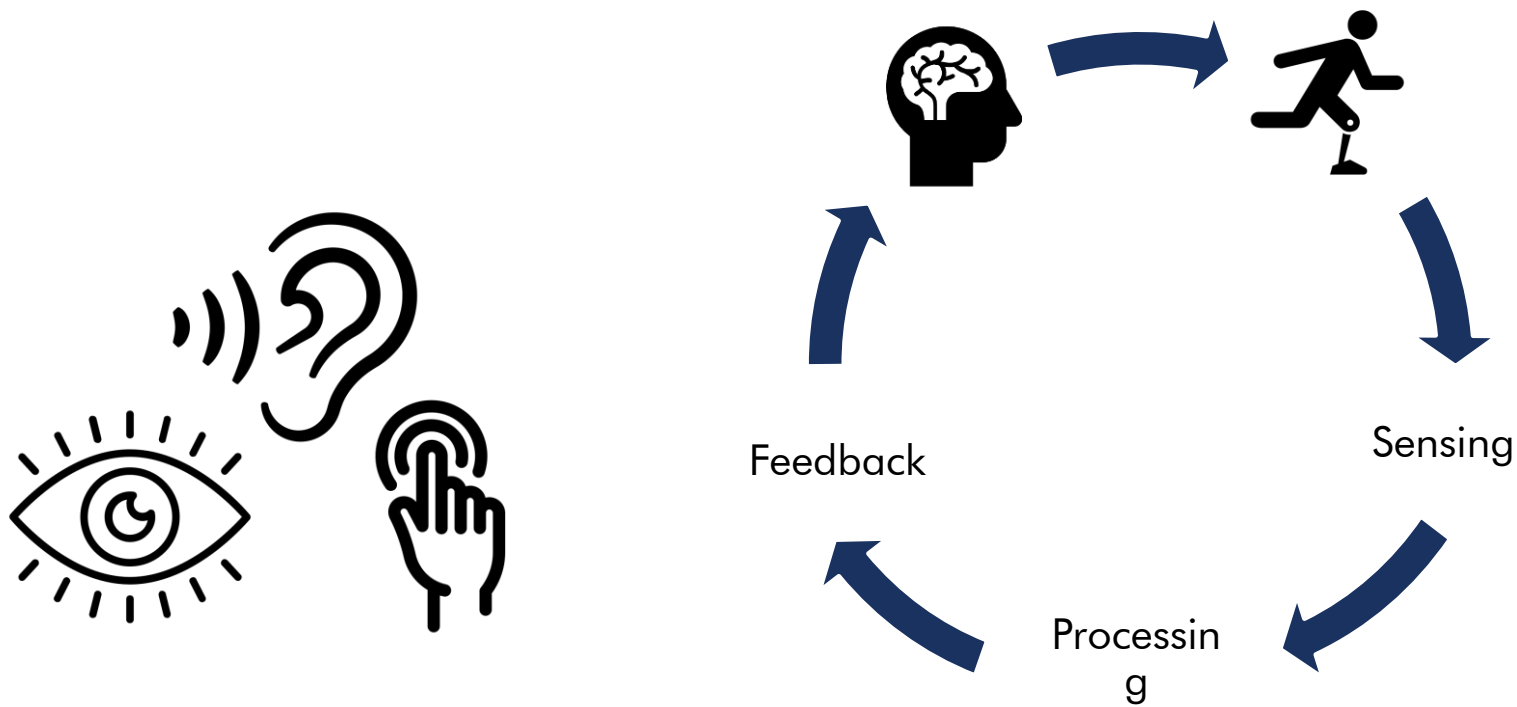
- Conventional gait training
- Body-weight supported treadmill training
- Robot assisted training

Problems

- Access to care is limited and costly
- Practice at home - repetition is key!
- Aging population



BIOFEEDBACK IN GAIT REHABILITATION



- Measurements

- Kinematic
- Kinetic
- Spatiotemporal

- Sensing

- Inertial sensors
- Force & pressure sensors
- Electrogoniometry

BENEFITS OF BIOFEEDBACK



Supplemental to gait training



Training at home

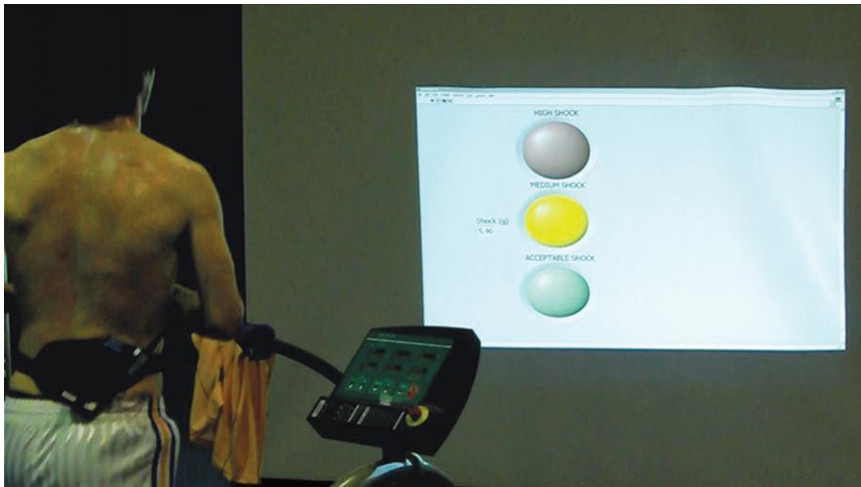


Everyone learns in a different way

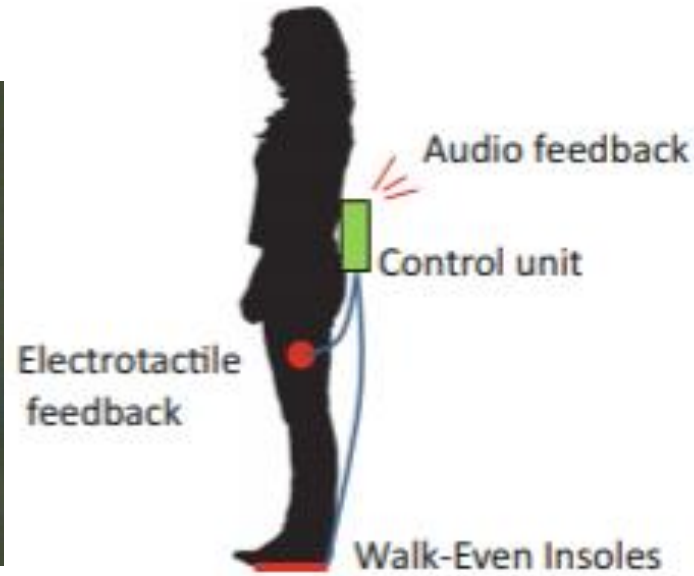


Reduce costs

BIOFEEDBACK TODAY



RUNNING



POST-STROKE



OTHER

UNKNOWN AND FUTURE OF BIOFEEDBACK



TRAINING
PROTOCOLS



EFFECTIVENESS
IN THE FIELD / AT
HOME



WHAT FEEDBACK
MODALITY IS THE
BEST?



DEVELOPMENT
OF WEARABLE
SYSTEMS



VR
TECHNOLOGIES



THANK YOU!



WHAT IS BIOFEEDBACK

