

Motion Analysis Center

WALKING ASSESSMENT PATIENT EDUCATION GUIDE

About the Brooks Motion Analysis Center (MAC)

The MAC uses state-of-the-art 3D motion capture technology to deliver customized recommendations to promote recovery for individuals with walking disorders. Our programs focus on individuals with neurologic and orthopedic impairments. Measurements can include: muscle activity (timing and coordination), joint motion (range of motion occurring during each phase of gait), and forces produced by each leg.

Our team consists of physical therapists, biomechanical engineers, and skilled support staff. However, it is important to remember that you are the most important member of the team. Please read the following information about your session and how the information will be used. You may ask questions at any time.



WHAT TO KNOW BEFORE YOUR VISIT

To ensure the setup process goes as smoothly as possible, it is important that all patients come dressed appropriately for their assessment, as described below.



- Short-length shorts, loose or thin enough to be rolled up to expose the upper thigh
- Tank top or short sleeve shirt, loose enough to be rolled up to expose upper shoulders
- Well-fitting sneakers that expose the ankle
- Hair-bands if needed
- No lotion/body oil 24hrs before your appointment

Have questions? Email: BrooksMAC@BrooksRehab.org | P: (904) 345-8967 | F: (904) 345-8978

DURING YOUR ASSESSMENT

A typical visit lasts approximately 2 hours and is led by a trained physical therapist. It includes a clinical assessment (30-45 minutes), patient setup for motion capture (30-45 minutes), and the motion assessment (30 minutes).

During the clinical assessment, your therapist will measure joint mobility, strength, and muscle tone to better understand how you move and function. This also helps us interpret the rest of the data collected.

Patient setup involves attaching small reflective marker balls your skin with double sided tape to identify joints and specific landmarks on the body. The reflections are tracked by infrared cameras and help us learn how your joints move as you walk.

Surface electromyography (EMG) may also be used to detect your muscle activity during movement tasks. EMG signals are sensitive to your skin condition. The application process for EMGs requires removal of excessive leg hair and wiping the skin with an alcohol swab. The sensors are then wrapped with cohesive tape to ensure a high quality signal.

The motion assessment involves repeated walking trials of approximately 20ft in distance. Assistive devices such as walkers or canes can be used during the capture, and breaks will be allotted between bouts. The tasks you may be asked to perform include walking at various speeds, walking backward, standing from a sitting position, or stepping over an obstacle.



YOUR REPORT

Data collected during your motion capture, along with your clinical assessment and medical history, will be reviewed by our team to provide a comprehensive interpretation of your movements.



This report includes rehabilitation recommendations, and is shared with your referring healthcare provider to help determine appropriate treatment plans to improve functional movement and promote greater recovery.

Our Location

3901 University Blvd S, Suite 101, Jacksonville, FL, 32216

