CONTRALATERAL LIMB REDUCTION USING ORTHORONIC MOBILITY SYSTEM DURING RAMP AND STAIR DESCENT

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INTRODUCTION
Compared to conventional Stance Control Orthoses (SCO) technology Orthotronic Mobility Systems (OMS) offer the reduction of load of the contralateral limb during ADLs such as stair and ramp descent. In this instance the C-Brace is compared to hip activated SCOs. Contralateral limb reduction is important for maintain balance as well as reducing the effects of overuse syndrome. By allowing mimetic knee flexion yielding on the involved limb, OMS reduce need for overloading the contralateral limb.

METHOD
6 users were fit with custom OMS: C-Brace and SCO: E-MAG Active and performed stair and ramp descent, level walking, and static measurement. One day one user data was collected and user was fit with custom C-Brace. After a 24 hour accommodation period, data collection was performed with C-Brace. Dynamic measurements were performed using the VICON 460/KISTLER system and for static measurement the LASAR Posture was used.

RESULTS
In 5 of 6 users, knee flexion yielding of the involved limb was noted and limb symmetry improved while in the C-Brace v. SCO. All users were able to perform stair descent and none could perform during SCO trials.