

MSDII Testing – Ease of Application

Team: P15001: Active Ankle Foot Orthotic

Engineer: Geni Giannotti – Biomedical Engineer

Related System: AA- Apply AFO (easily)

This test will provide our team with information regarding average time for application/removal of the working prototype. This information will allow the team to quantify the difficulty of applying/removing the AFO and determine whether or not to make adjustments to allow for easy application.

Engineering Requirements:

rqmt. #	Importance	Source	Engr. Requirement (metric)	Unit of Measure	Ideal Value	Marginal Value	Direction of improvement	Mapping to Functional Decomposition
ER13	3	C3	Average Time to Put on AFO	min	3	5	▼	(AA) Apply AFO (easily)

Testing Plan

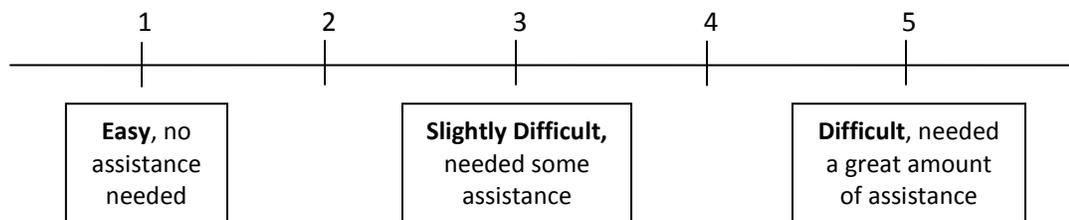
A total of at least 10 volunteers will be asked to apply/remove the AFO and answer the following questions:

- 1.) How long did it take you to put on the device? How long to remove it? Record times in the provided spaces below. *Note: we will time each event for you.*

Application: _____ minutes, _____ seconds

Removal: _____ minutes, _____ seconds

- 2.) Using the scale below, please rate the difficulty of device application (circle a number)



- 3.) Are there specific parts/areas of the device that make it difficult to put on? Please be specific and feel free to offer suggestions for improvement.

Overall, each volunteer will be timed for the duration of application and an average time will be calculated at the end of testing. This test will take approximately 5 minutes for each volunteer to complete. A table displaying the device and project information will be set up in one or more academic building(s) on campus. We will select individuals who express interest, in the study, at the booth. Due to the small nature of the device, ideal participants will be those with a women shoe size of approximately US8-10 and men shoe size of approximately US6-8. We will only allow participants who are over the age of 18 to participate.

Start Date: 03/16/2015

End Date: 03/27/2015

Budget

Equipment	Price	Quantity
Working Prototype with Air Tank	-	1
Total:	-	1