

## *Supplementary Material*

**Supplementary Material 1.** Trexo Session Forms: “Trexo Session Tracking” forms will be completed by study researchers attending the Trexo physiotherapy intervention sessions. The “PT/PTA Summary Log Sheet” and “Session Activity Tracking Log” will be completed by treating PTs/PTAs. Each form is completed per session.

**Supplementary Material 2.** MRI Scan Parameters: structural, diffusion, and resting state functional scans.

	<b>3D T1</b>	<b>3D T2</b>	<b>dMRI</b>	<b>fMRI</b>
<b>Sequence</b>	3D MPRAGE	SPACE	Echo planar (b=1000,1600, 2600 mm <sup>2</sup> )	EPI BOLD
<b>Field of view (mm<sup>3</sup>)</b>	256	256	244	222
<b>Slice orientation</b>	Sagittal	Sagittal	Transversal	Transversal
<b>TE (ms)</b>	1870	409	73	30
<b>TR (ms)</b>	3.1	3200	3800	1500
<b>Flip Angle (°)</b>	9	-	-	70
<b>Voxel Size (mm isotropic)</b>	0.8	0.8	2	3
<b>Slice Thickness (mm)</b>	0.8	0.8	2	3
<b>Number of slices (contiguous)</b>	240	190	70	50
<b>Directions</b>	-	-	36, 46, 67	-
<b>Scan time</b>	5 min 03 s	7 min 22 s	2 min 35 s, 3 min 13 s, 4 min 33 s	5 min 10 s

**Supplementary Material 3.** Trexo Physical Adjustment Template: to be completed during the Trexo fitting/acclimation session(s), pre-intervention. This will include measurements and first steps in the Trexo to ensure comfort of fit.

Child's Study ID: \_\_\_\_\_ Recorder's Initials: \_\_\_\_\_

***Trexo Session Tracking, Continued***

Date: MM-DD-YY: \_\_\_\_\_ Session #: \_\_\_\_\_

**Trexo Session Tracking**

Staff present/role in the session: 1. \_\_\_\_\_ 2. \_\_\_\_\_  
3. \_\_\_\_\_ 4. \_\_\_\_\_

Session start-time: \_\_\_\_\_ Start time once set-up completed: \_\_\_\_\_ End of walking in Trexo time: \_\_\_\_\_

Individual session: \_\_\_\_\_ OR Gym/group session: \_\_\_\_\_ Location of session: \_\_\_\_\_

1. Start time: 0:00 \*Pace (steps/min): \_\_\_\_\_ Pace or other setting changes while moving: \_\_\_\_\_  
\*Stop time: \_\_\_\_\_ \*Total Steps Taken: \_\_\_\_\_ Reason for stop: \_\_\_\_\_ Time paused (from stop watch): \_\_\_\_\_  
Physical activity done: \_\_\_\_\_ Adjustments made while stopped: \_\_\_\_\_

2. Start time: 0:00 \*Pace (steps/min): \_\_\_\_\_ Pace or other setting changes while moving: \_\_\_\_\_  
\*Stop time: \_\_\_\_\_ \*Total Steps Taken: \_\_\_\_\_ Reason for stop: \_\_\_\_\_ Time paused (from stop watch): \_\_\_\_\_  
Physical activity done: \_\_\_\_\_ Adjustments made while stopped: \_\_\_\_\_

3. Start time: 0:00 \*Pace (steps/min): \_\_\_\_\_ Pace or other setting changes while moving: \_\_\_\_\_  
\*Stop time: \_\_\_\_\_ \*Total Steps Taken: \_\_\_\_\_ Reason for stop: \_\_\_\_\_ Time paused (from stop watch): \_\_\_\_\_  
Physical activity done: \_\_\_\_\_ Adjustments made while stopped: \_\_\_\_\_

4. Start time: 0:00 \*Pace (steps/min): \_\_\_\_\_ Pace or other setting changes while moving: \_\_\_\_\_  
\*Stop time: \_\_\_\_\_ \*Total Steps Taken: \_\_\_\_\_ Reason for stop: \_\_\_\_\_ Time paused (from stop watch): \_\_\_\_\_  
Physical activity done: \_\_\_\_\_ Adjustments made while stopped: \_\_\_\_\_

5. Start time: 0:00 \*Pace (steps/min): \_\_\_\_\_ Pace or other setting changes while moving: \_\_\_\_\_  
\*Stop time: \_\_\_\_\_ \*Total Steps Taken: \_\_\_\_\_ Reason for stop: \_\_\_\_\_ Time paused (from stop watch): \_\_\_\_\_  
Physical activity done: \_\_\_\_\_ Adjustments made while stopped: \_\_\_\_\_

6. Start time: 0:00 \*Pace (steps/min): \_\_\_\_\_ Pace or other setting changes while moving: \_\_\_\_\_  
\*Stop time: \_\_\_\_\_ \*Total Steps Taken: \_\_\_\_\_ Reason for stop: \_\_\_\_\_ Time paused (from stop watch): \_\_\_\_\_  
Physical activity done: \_\_\_\_\_ Adjustments made while stopped: \_\_\_\_\_

7. Start time: 0:00 \*Pace (steps/min): \_\_\_\_\_ Pace or other setting changes while moving: \_\_\_\_\_  
\*Stop time: \_\_\_\_\_ \*Total Steps Taken: \_\_\_\_\_ Reason for stop: \_\_\_\_\_ Time paused (from stop watch): \_\_\_\_\_  
Physical activity done: \_\_\_\_\_ Adjustments made while stopped: \_\_\_\_\_

Child's Study ID: \_\_\_\_\_ Recorder's Initials: \_\_\_\_\_ *Trexo Session Tracking, Continued* Date: MM-DD-YY: \_\_\_\_\_ Session #: \_\_\_\_\_

\*Total number of steps taken in this session: \_\_\_\_\_ \*Total session walk time on tablet: \_\_\_\_\_

\*Cumulative # of steps for all sessions: \_\_\_\_\_ \*User initiation % Left leg: \_\_\_\_\_ % Right leg: \_\_\_\_\_

Number of pauses for adjustments/repositioning during session (NOT stops done to allow a standing activity): \_\_\_\_\_

\*Support level: \_\_\_\_\_ Any changes in support level during session? No \_\_\_\_\_ Yes \_\_\_\_\_

If yes, please indicate new level and when this occurred in the session and comments on rationale for change:

Pacing Notes throughout session: \_\_\_\_\_

Endurance mode or Strength mode: \_\_\_\_\_

\* Left side ROM settings at start of session: Hip max ext \_\_\_\_\_ Hip max flex \_\_\_\_\_ Knee max flex \_\_\_\_\_ Knee min flex \_\_\_\_\_

Any left side ROM changes during session? No \_\_\_\_\_ Yes \_\_\_\_\_ If yes, specify new ranges and rationale for change:

NEW RANGE: Hip max ext \_\_\_\_\_ Hip max flex \_\_\_\_\_ Knee max flex \_\_\_\_\_ Knee min flex \_\_\_\_\_ Changed @ Session time: \_\_\_\_\_

\* Right side ROM settings at start of session: Hip max ext \_\_\_\_\_ Hip max flex \_\_\_\_\_ Knee max flex \_\_\_\_\_ Knee min flex \_\_\_\_\_

Any right side ROM changes during session? No \_\_\_\_\_ Yes \_\_\_\_\_ If yes, specify new ranges and rationale for change:

NEW RANGE: Hip max ext \_\_\_\_\_ Hip max flex \_\_\_\_\_ Knee max ext \_\_\_\_\_ Knee min flex \_\_\_\_\_ Changed @ Session time: \_\_\_\_\_

Comments about session pauses, tasks, communication, Trexo training challenges, session highlights, social interactions, fatigue

Recorder's name and Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Child's Study ID: \_\_\_\_\_

Treating PT's Initials: \_\_\_\_\_

Date: \_\_\_\_\_  
mm-dd-yyyy**Trexo PT Session Activity Log**

- Write each activity in that you did at this session. Then for each activity, place a '1' in the box that indicates the **focus of the activity** and a '2' in **ALL other boxes** that the activity relates to in your session.
- The **focus of an activity** can change from session to session.
- Activity details should include limb(s) (right/left) and joint(s) as appropriate. Also please note the location where activity took place

#	Activity Details (and location) Individual _____ OR Gym Class _____	Duration (min)	Trexo walking distance (endurance)	Trexo walking speed (fitness)	Functional use of Trexo	Directional control of the Trexo	Quality of Gait in Trexo	Neck, Trunk Control in Trexo
1								
			Focus on upper limb use in Trexo	Focused dual tasking while in Trexo	Other (specify in the box)			
			Details:					
		Duration (min)	Trexo walking distance (endurance)	Trexo walking speed (fitness)	Functional use of Trexo	Directional control of the Trexo	Quality of Gait in Trexo	Neck, Trunk Control in Trexo
2								
			Focus on upper limb use in Trexo	Focused dual tasking while in Trexo	Other (specify in the box)			
			Details:					

Child's Study ID: \_\_\_\_\_

Treating PT's Initials: \_\_\_\_\_

Date: \_\_\_\_\_  
mm-dd-yyyy

#	Activity Details (and location)	Duration (min)	Trexo walking distance (endurance)	Trexo walking speed (fitness)	Functional use of Trexo	Directional control of the Trexo	Quality of Gait in Trexo	Neck, Trunk Control in Trexo
3								
			Focus on upper limb use in Trexo	Focused dual tasking while in Trexo	Other (specify in the box)			
		Details:						
		Duration (min)	Trexo walking distance (endurance)	Trexo walking speed (fitness)	Functional use of Trexo	Directional control of the Trexo	Quality of Gait in Trexo	Neck, Trunk Control in Trexo
4								
			Focus on upper limb use in Trexo	Focused dual tasking while in Trexo	Other (specify in the box)			
		Details:						

PT's/PTA's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Study Number: \_\_\_\_\_

Session Date: \_\_\_\_\_

## Trexo: PT/PTA Summary Log Sheet

To be completed after each session

1. Positive aspects of the session:
  
  
  
  
  
  
  
  
  
  
2. Challenges encountered in the session:
  
  
  
  
  
  
  
  
  
  
3. Specific pain/discomfort/other issues associated with the session:
  
  
  
  
  
  
  
  
  
  
4. Ideas for next session:
  
  
  
  
  
  
  
  
  
  
5. Any follow-up action from today's session:
  
  
  
  
  
  
  
  
  
  
6. Home program ideas/changes
  
  
  
  
  
  
  
  
  
  
7. Other interventions (therapy or medical)/special physical activity since last session:

PT Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## TREXO PHYSICAL ADJUSTMENT TEMPLATE

*Note – settings may change over time.*

**Participant Profile:**  
(name on Trexo tablet)

**Baseline Range of Motion**

**Hip to Knee (cm):**

**Knee to Floor (cm):**

**Hip Width (cm):**

**Trexo Motor Width:**

**Foot Plate Size:**

**Shin Cuff Size:**

**Rifton Height:**

**Seat Height:**

**Considerations for Sessions:**

### LEFT LEG

HIP	Max Extension	Max Flexion
KNEE	Max Flexion	Min Flexion

### RIGHT LEG

HIP	Max Extension	Max Flexion
KNEE	Max Flexion	Min Flexion

**Trexo Support Force:**