



Advancements in Orthotic Technology for Physical Therapy Professionals

1. Introduction
2. Review acronyms and observational gait analysis in Orthotics
 - a. Orthotic Acronyms
 - b. Perry's gait, Rancho-style OGA
3. Categories of advanced technology
 - a. Ankle control
 - i. Carbon fiber prefab and custom
 - ii. Articulated control
 - b. Knee control
 - i. Positional control knee joints
 - ii. Gait activated knee joints
 - iii. Microprocessor controlled knee joints
 - c. Hip Control
 - i. Tension-based assists
 - ii. Exotendon control
 - d. FES
 - i. Surface-based electrodes (WalkAide, Bioness)
 - ii. Implanted electrodes
 - e. Exoskeletons/Powered Devices
4. For each category:
 - a. Examples
 - b. Strengths
 - c. Drawbacks
 - d. When is the trade-off worth it?
5. Patient Selection
 - a. Criteria of concern
 - b. Contraindications
6. Measuring effectiveness of component change in a trial
 - a. 10 MWT
 - b. TUG
 - c. L-test
 - d. ABC Scale
7. Breakout sessions with patient models and demonstration
 - a. Restricting motion vs. controlling motion
 - b. Describing differences, justifying change

Introduction	4:30 pm	10 min
Review acronyms and gait terminology in orthotics	4:40 pm	10 min
Categories of advanced technology	4:50-5:10 pm	30 min
	Ankle	
	Knee	
	Hip	
	FES	
	Exoskeletons/powered devices	
For each category:	5:10-5:45 pm	25 min
	Examples	
	Strengths	
	Drawbacks	
	When is the trade-off worth it?	
Supper Break	5:45-5:55 pm	
Patient Selection	5:55-6:10 pm	15 min
	Criteria	
	Contraindications	
Measuring effectiveness of component change in a trial	6:10-6:30 pm	20 min
	10 MWT	
	TUG	
	L-test	
	ABC Scale	
Case Studies/Developing Plan	6:30-6:50 pm	20 min
2-3 small group breakouts	SCO	
	Kickstart	
Self-assessment and Test, small groups	6:50-7:10 pm	20 min
Questions and discussion	7:10-7:30 pm	15 min