

Action Statement 4: ANKLE-FOOT ORTHOSIS (AFO) OR FUNCTIONAL ELECTRICAL STIMULATION (FES) TO IMPROVE DYNAMIC BALANCE

Action Statement	Clinicians SHOULD provide an AFO or FES for individuals with decreased lower extremity motor control due to acute or chronic post-stroke hemiplegia who have goals to improve DYNAMIC BALANCE <ul style="list-style-type: none"> Evidence quality: I Recommendation strength: strong 		
Outcome Measures	<ul style="list-style-type: none"> Functional Gait Assessment Berg Balance Scale Timed Up and Go 		
Evidence Summary	CLINICAL EFFECTS	AFO	FES
Acute AFO/FES (Level I= strongest level)	Immediate Effect	Level III	No evidence
	Therapeutic Effect	No evidence	No evidence
	Training Effect	No evidence	No evidence
	Combined Effect	Level II	No evidence
Evidence Summary	CLINICAL EFFECTS	AFO	FES
Chronic AFO/FES	Immediate Effect	Level I	Level I
	Therapeutic Effect	Level I	Level I
	Training Effect	Level I	Level I
	Combined Effect	Level I	Level I
AFO compared to FES	Acute No evidence		Chronic AFO \geq FES for immediate effect FES \geq AFO for training effect
Key Dose Considerations	<ul style="list-style-type: none"> Research for dose parameters remain variable In the chronic phase post stroke both AFO and FES may produce clinically meaningful effects when daily wear is combined with skilled PT intervention for 30-60 minutes 3-5x/wk over 4-6 weeks 		
Clinical Application/ Interpretations	<ul style="list-style-type: none"> Earlier and more individualized AFO provision may enhance improvements in dynamic balance in the acute phase AFO or FES use combined with skilled PT intervention/gait training produces the most meaningful improvements in dynamic balance The Functional Gait Assessment (FGA) is recommended to assess dynamic balance to reduce likelihood of a ceiling effect In acute or chronic phase post-stroke a custom AFO or AFO that <i>meets the needs of the individual</i> provides the best results The effect of an AFO on dynamic balance may be noted early after device provision, while the effects of FES can be noted following a period of wear or when combined with skilled PT intervention 		

