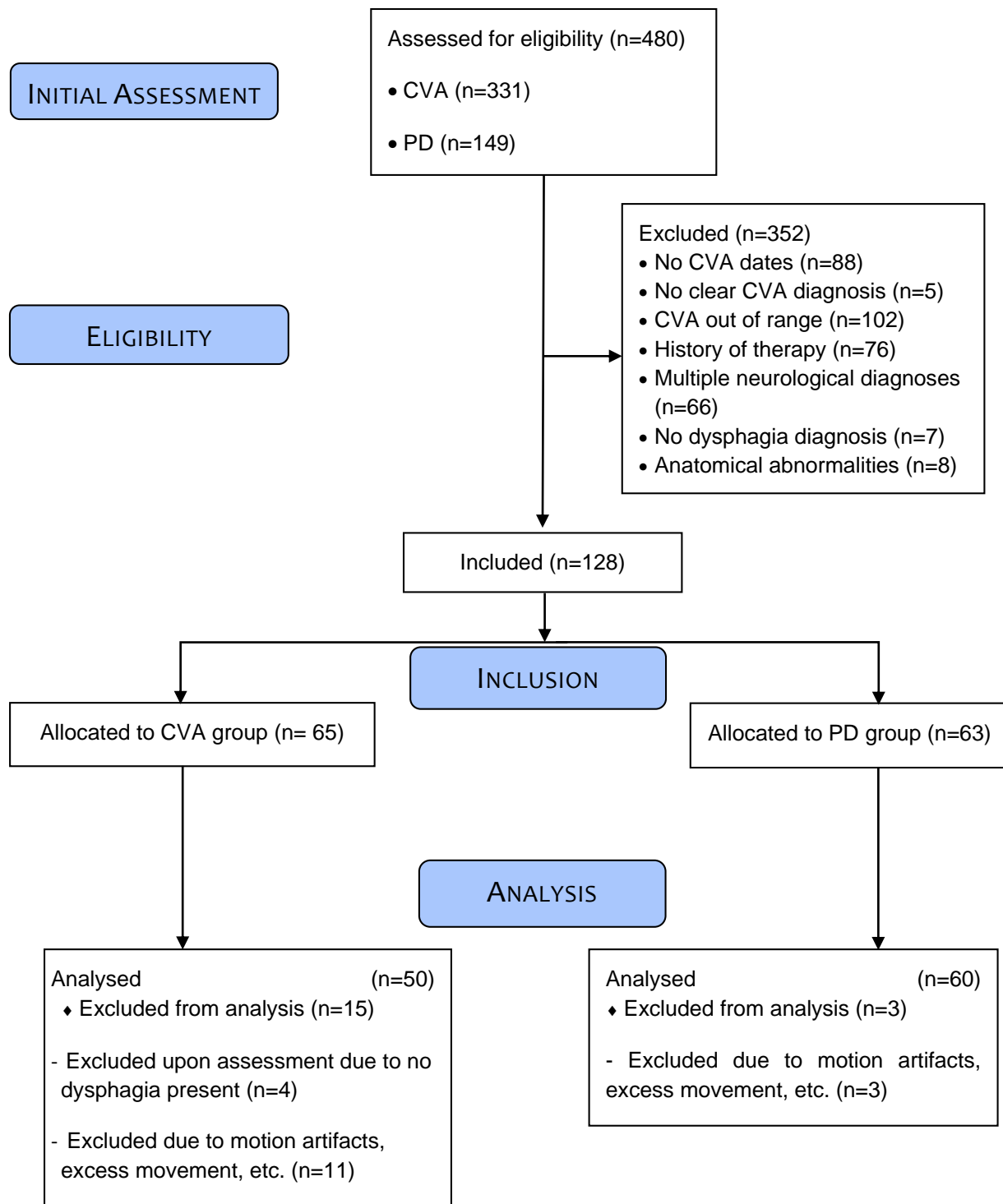


# Supplementary Material

## Swallow Safety and Laryngeal Kinematics: A Comparison of Dysphagia Between Parkinson's Disease and Cerebrovascular Accident

### Supplementary Material 1. Inclusion Summary Flowchart Inclusion Summary Flowchart



## **Supplementary Material 2. Penetration Aspiration Scale (PAS)**

Adapted from: Rosenbek et al., (1996) A Penetration-Aspiration Scale

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1. Material does not enter the airway
  2. Material enters the airway, remains above the vocal folds, and is ejected from the airway
  3. Material enters the airway, remains above the vocal folds, and is not ejected from the airway
  4. Material enters the airway, contacts the vocal folds, and is ejected from the airway
  5. Material enters the airway, contacts the vocal folds, and is not ejected from the airway
  6. Material enters the airway, passes below the vocal folds and is ejected into the larynx or out of the airway
  7. Material enters the airway, passes below the vocal folds, and is not ejected from the trachea despite effort
  8. Material enters the airway, passes below the vocal folds, and no effort is made to eject
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### Supplementary Material 3. Videofluoroscopic Dysphagia Scale (VDS)

Adapted from: Kim et al., (2014) Validation of the Videofluoroscopic Dysphagia Scale in Various Etiologies

Parameter	Coded value	Score	
Lip closure	Intact	0	4
	Inadequate	2	
	None	4	
Bolus formation	Intact	0	6
	Inadequate	3	
	None	6	
Mastication	Intact	0	8
	Inadequate	4	
	None	8	
Apraxia	None	0	4.5
	Mild	1.5	
	Moderate	3	
	Severe	4.5	
Tongue-to-palate contact	Intact	0	10
	Inadequate	5	
	None	10	
Premature bolus loss	None	0	4.5
	<10 %	1.5	
	10–50 %	3	
	>50 %	4.5	
Oral transit time	≤1.5 s	0	3
	>1.5 s	3	
Triggering of pharyngeal swallow	Normal	0	
	Delayed	4.5	
Vallecular residue	None	0	6
	<10 %	2	
	10–50 %	4	
	>50 %	6	
Laryngeal elevation	Normal	0	9
	Impaired	9	
Pyriform sinus residue	None	0	13.5
	<10 %	4.5	
	10–50 %	9	
	>50 %	13.5	
Coating of pharyngeal wall	No	0	9
	Yes	9	
Pharyngeal transit time	≤1.0 s	0	6
	>1.0 s	6	
Aspiration	None	0	12
	Supraglottic penetration	6	
	Subglottic aspiration	12	
Total			100