

Table 9.1

## Summary of Dysarthria Types

Dysarthria type	Lesion site	Neuromotor basis	Common etiologies	Speech characteristics
Ataxic	Cerebellum	Incoordination	Any bilateral or generalized damage to the cerebellum, including: <ul style="list-style-type: none"> <li>• Degenerative ataxia</li> <li>• Cerebellar strokes</li> <li>• Tumors</li> <li>• Traumatic brain injury (TBI)</li> <li>• Toxic conditions</li> <li>• Inflammatory conditions</li> <li>• Demyelinating disease</li> </ul>	<p><b>Articulation</b></p> <ul style="list-style-type: none"> <li>• Imprecise consonants</li> <li>• Irregular articulatory breakdowns</li> <li>• Distortion of vowels</li> </ul> <p><b>Prosody</b></p> <ul style="list-style-type: none"> <li>• Excessive and even stress</li> <li>• Prolonged phonemes and intervals between words or syllables</li> <li>• Slow rate of speech</li> </ul> <p><b>Phonation</b></p> <ul style="list-style-type: none"> <li>• Monopitch</li> <li>• Monoloud</li> <li>• Harshness</li> </ul> <p><b>Resonance</b></p> <ul style="list-style-type: none"> <li>• Intermittent hyponasality (not prominent characteristic)</li> </ul> <p><b>Respiration</b></p> <ul style="list-style-type: none"> <li>• Exaggerated and paradoxical movement during speech production</li> </ul>
Flaccid	Lower motor neuron	Weakness and hypotonia	Any damage to LMN connections to muscles and/or the cranial nerves involved in speech production (V, VII, IX, X, XI, XII), including: <ul style="list-style-type: none"> <li>• Degenerative disease</li> <li>• Motor neuron disease</li> <li>• Progressive bulbar disease</li> <li>• Multiple systems atrophy</li> <li>• Myasthenia gravis</li> <li>• Botulism</li> <li>• Vascular diseases and brainstem strokes</li> <li>• Infections (polio, AIDS)</li> <li>• Guillain Barre syndrome</li> <li>• Surgical trauma</li> </ul>	<p><b>Articulation</b></p> <ul style="list-style-type: none"> <li>• Imprecise consonants</li> <li>• Weak pressure consonants (more so for lesions of cranial nerve V, VII, XII)</li> </ul> <p><b>Phonation/Phonatory–Prosodic</b></p> <ul style="list-style-type: none"> <li>• Breathiness</li> <li>• Audible inspiration</li> <li>• Harshness</li> <li>• Monopitch</li> <li>• Monoloud or reduced loudness</li> <li>• Short phrases</li> </ul> <p><b>Resonance</b></p> <ul style="list-style-type: none"> <li>• Hyponasality</li> <li>• Nasal emission</li> <li>• Short phrases</li> </ul> <p><b>Respiration</b></p> <ul style="list-style-type: none"> <li>• Reduced subglottal air pressure</li> <li>• Weak inhalation</li> </ul>

(continues)

Table 9.1 (continued)

Dysarthria type	Lesion site	Neuromotor basis	Common etiologies	Speech characteristics
Hyperkinetic	Basal ganglia and/or basal ganglia connections within central nervous system (CNS)	Abnormal, extra movements	<ul style="list-style-type: none"> <li>Huntington's disease</li> <li>Sydenham's chorea</li> <li>Brainstem stroke</li> <li>TBI</li> <li>Toxic conditions</li> <li>Metabolic conditions (i.e., tardive dyskinesia)</li> <li>Tourette's syndrome</li> <li>Seizure disorders</li> <li>Spasmodic dysphonia</li> </ul>	<p><b>Articulation</b></p> <ul style="list-style-type: none"> <li>Imprecise consonants</li> <li>Distorted vowels</li> </ul> <p><b>Prosody</b></p> <ul style="list-style-type: none"> <li>Slower rate of speech</li> <li>Prolonged interword intervals</li> <li>Inappropriate silent periods</li> <li>Phoneme prolongations</li> <li>Excess and equal stress</li> <li>Reduced stress</li> <li>Short phrases</li> </ul> <p><b>Phonation</b></p> <ul style="list-style-type: none"> <li>Monopitch</li> <li>Monoloud</li> </ul> <p><b>Resonance</b></p> <ul style="list-style-type: none"> <li>Hypernasality (mild, in some cases)</li> </ul> <p><b>Respiration</b></p> <ul style="list-style-type: none"> <li>Audible inspiration and forced/sudden inspiration or expiration</li> </ul>
Hypokinetic	Basal ganglia and/or basal ganglia connections within CNS	Reduced range of motion, rigidity, and reduced movement	<ul style="list-style-type: none"> <li>Parkinson's disease (most common cause)</li> <li>Stroke/vascular disease</li> <li>Toxic and metabolic conditions (antipsychotic/neuroleptic drug toxicity)</li> <li>Repeated TBI</li> <li>Infections (HIV, Creutzfeldt-Jakob disease)</li> </ul>	<p><b>Articulation</b></p> <ul style="list-style-type: none"> <li>Imprecise/distorted consonants</li> <li>Stops sounding more like fricatives</li> <li>Mushy fricatives</li> </ul> <p><b>Prosody</b></p> <ul style="list-style-type: none"> <li>Reduced stress</li> <li>Inappropriate silent intervals</li> <li>Short rushes of speech</li> <li>Variable and increased rate in segments</li> <li>Short phrases</li> </ul> <p><b>Phonation</b></p> <ul style="list-style-type: none"> <li>Monopitch</li> <li>Monoloud</li> <li>Low pitch</li> <li>Harsh and continuously breathy</li> </ul> <p><b>Resonance</b></p> <ul style="list-style-type: none"> <li>Mild hypernasality (~25% of cases)</li> </ul>

Table 9.1 (continued)

Dysarthria type	Lesion site	Neuromotor basis	Common etiologies	Speech characteristics
Hypokinetic (continued)				<p><b>Respiration</b></p> <ul style="list-style-type: none"> <li>• Reduced vital capacity</li> <li>• Irregular breathing</li> <li>• Faster rate of respiration</li> </ul> <p><b>Fluency</b></p> <ul style="list-style-type: none"> <li>• Repeated phonemes; palilalia less likely</li> </ul>
Spastic	Upper motor neuron (Bilateral)	Weakness and spasticity	<ul style="list-style-type: none"> <li>• Multiple strokes that damage pyramidal and extrapyramidal tracts</li> <li>• Brainstem stroke</li> <li>• Primary lateral sclerosis (PLS)</li> <li>• Multiple sclerosis (MS)</li> <li>• TBI</li> <li>• Brainstem tumor</li> <li>• Viral or bacterial infection of cerebral tissue</li> <li>• Cerebral palsy (children)</li> </ul>	<p><b>Articulation</b></p> <ul style="list-style-type: none"> <li>• Imprecise consonants</li> <li>• Distorted vowels</li> </ul> <p><b>Prosody</b></p> <ul style="list-style-type: none"> <li>• Excess and equal stress</li> <li>• Reduced stress</li> <li>• Slow rate</li> <li>• Short phrases</li> </ul> <p><b>Phonation</b></p> <ul style="list-style-type: none"> <li>• Hyperadduction of vocal folds</li> <li>• Continuous breathy voice</li> <li>• Harshness</li> <li>• Low pitch</li> <li>• Pitch breaks</li> <li>• Strained/strangled voice quality</li> <li>• Monopitch</li> <li>• Monoloud</li> </ul> <p><b>Resonance</b></p> <ul style="list-style-type: none"> <li>• Hypernasality</li> </ul>
Mixed	Damage to various parts of the nervous system	flaccid—spastic ataxic—spastic	<ul style="list-style-type: none"> <li>• Multiple Sclerosis (MS)</li> <li>• Amyotrophic lateral sclerosis (ALS)</li> <li>• Friedreich's ataxia</li> <li>• Wilson's disease</li> </ul>	<p><b>Articulation</b></p> <ul style="list-style-type: none"> <li>• Imprecise consonants</li> <li>• Distorted vowels</li> </ul> <p><b>Prosody</b></p> <ul style="list-style-type: none"> <li>• Excess and equal stress</li> <li>• Reduced stress</li> <li>• Slow rate</li> <li>• Short phrases</li> </ul>

(continues)

Table 9.1 (continued)

Dysarthria type	Lesion site	Neuromotor basis	Common etiologies	Speech characteristics
Mixed (continued)				<p><b>Phonation</b></p> <ul style="list-style-type: none"> <li>• Hyperadduction of vocal folds</li> <li>• Continuous breathy voice</li> <li>• Harshness</li> <li>• Low pitch</li> <li>• Pitch breaks</li> <li>• Strained/strangled voice quality</li> <li>• Monopitch</li> <li>• Monoloud</li> </ul> <p><b>Resonance</b></p> <ul style="list-style-type: none"> <li>• Hypernasality</li> <li>• Nasal emission</li> </ul>
Unilateral Upper Motor Neuron	Upper motor neuron (Unilateral)	Weakness and spasticity	<ul style="list-style-type: none"> <li>• Stroke</li> <li>• Neurosurgical trauma</li> <li>• Multiple sclerosis</li> </ul>	<p><b>Articulation</b></p> <ul style="list-style-type: none"> <li>• Imprecise consonants</li> <li>• Irregular articulatory breakdowns</li> <li>• Some vowel distortions</li> <li>• Sound/syllable repetitions</li> </ul> <p><b>Prosody</b></p> <ul style="list-style-type: none"> <li>• Slow rate</li> <li>• Increased rate in segments</li> <li>• Excess and equal stress</li> <li>• Short phrases</li> </ul> <p><b>Phonation</b></p> <ul style="list-style-type: none"> <li>• Harshness/strained harshness</li> <li>• Reduced loudness</li> <li>• Wet hoarseness</li> <li>• Breathiness</li> <li>• Monopitch</li> <li>• Monoloud</li> <li>• Low pitch</li> </ul> <p><b>Resonance</b></p> <ul style="list-style-type: none"> <li>• Hypernasality</li> <li>• Nasal emission</li> <li>• Combination of hypernasality and nasal emission</li> </ul>

Note. Adapted from Manasco (2014).