

Articulatory adaptations in individuals with Moebius Syndrome

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Moebius syndrome is a rare congenital neuromuscular disorder (affecting 0.00002 to 0.002% of the world's population) characterized by bilateral facial paralysis, resulting in lip immobility and incomplete lip closure. This study examines articulatory strategies in three individuals with Moebius syndrome (with intact speech intelligibility) and three control speakers. Using Electromagnetic Articulography (EMA), articulatory movements were analyzed during diadochokinetic tasks and sentence production. Results indicate that individuals with Moebius syndrome compensate for lip paralysis by employing exaggerated tongue movements, but with significant individual variability in compensatory patterns. These findings will be discussed in the context of motor equivalence and its implications for understanding the flexibility and coordination mechanisms underlying speech motor control under severe articulatory constraints.