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Abstracts will be considered for both poster and platform presentations

Movement disorders

Since brain stem regions associated with early Parkinson's disease (PD) pathology encroach upon those involved in taste function, the ability to taste may be compromised in PD. However, studies on this point have been contradictory. We administered well-validated whole-mouth and regional taste tests that incorporated multiple concentrations of sucrose, citric acid, caffeine, and sodium chloride to 29 early stage PD patients and 29 age-, sex-, and race-matched controls. Electrogustometry was also performed on the anterior tongue. The PD cohort was tested both on and off dopamine-related medications in counterbalanced test sessions. While whole-mouth taste identification test scores for all stimuli were, on average, nominally lower for the PD patients than for the controls, a trend in the opposite direction was noted for the intensity ratings at the lower stimulus concentrations for all stimuli except caffeine. Moreover, regional testing found that PD subjects tended to rate the stimuli, relative to the controls, as more intense on the anterior tongue and less intense on the posterior tongue. No significant associations were evident between taste test scores and UPDRS scores, L-DOPA medication equivalency values, or [99mTc]TRODAT-1 SPECT imaging of dopamine transporter uptake within the striatum and associated regions. Our findings suggest that suprathreshold measures of taste function are influenced by PD and that this disease differentially influences taste function on anterior (CN VII) and posterior (CN IX) tongue regions. Conceivably PD-related damage to CN IX releases central inhibition on CN VII at the level of the brainstem, resulting in enhanced taste intensity on the anterior tongue.