# Critical Review: The impact of Expiratory Muscle Strength Training (EMST) on cough and swallow

## Heather Fraser

M.Cl.Sc (SLP) Candidate

University of Western Ontario: School of Communication Sciences and Disorders

This critical review examines the impact of Expiratory Muscle Strength Training (EMST) on cough and swallow outcomes in clients with (PD). Study designs include one pre-test/post-test with control design, one single group pre-test/post-test design, and one single-subject repeated measures design. Results of the studies examined reveal encouraging outcomes in the use of EMST as a treatment option for the PD population at risk for aspiration. However more research needs to be done on the translation of EMST to functional activities involving the muscles of respiration.

### Introduction

PD is a common, slowly progressive, idiopathic neurologic disease that affects 50 people per 100,000 older than the age of 50. The pathologic changes of PD most often involve nerve cell loss in the substantia nigra and locus ceruleus, as well as decreased dopamine content in the striatum. The depletion of dopamine in the striatum is thought to be responsible for the clinical signs of PD which include resting tremor, rigidity,

## Data Collection

Results of the literature search yielded the following three quantitative, prospective studies that met the aforementioned selection criteria: pre-test/post-test with control design (1), single group pre-test/post-test (1), and single-subject repeated measures design (1).

#### Results

Troche et al. (2010) based their stua0(e)15(d)-606(t)16(h)-23p64.99 Tm[(()] TJETBTm[()]06((20)23(10))] TJETBT1 0 0 1

Clinical Implications