

**Critical Review: Effectiveness of Sphincter Pharyngoplasty Compared to Pharyngeal Flap Surgery in Reducing Hypernasality in Individuals with Velopharyngeal Insufficiency**

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This critical review examines several studies to determine the effectiveness of sphincter pharyngoplasty (SP) compared to pharyngeal flap surgery (PF) in reducing hypernasality in individuals with velopharyngeal insufficiency (VPI). Overall, research indicates preliminary evidence that both surgeries produce similar results in reducing hypernasality. However, some questions arose as to the strength of the research designs. Additionally, further research is recommended in a variety of areas.

***Introduction***

Velopharyngeal insufficiency (VPI) occurs when there is a deficit in the closure of the velopharyngeal port (i.e. the junction of the velum and the lateral and posterior pharyngeal walls). This may occur from inadequate movement or reduced length of the velum, resulting in a gap between the velum and the





The sample sizes were small, which affected the ability of each study to detect a significant difference between the two surgical treatments and limited the researcher's capacity to make definite conclusions. The VPI Surgical Trial Group (2005) calculated a sample size required to achieve 80% power; however, they were limited by the number of available patients and were unable to achieve a sufficient sample. None of the other studies reported the level of power.

The VPI Surgical Trial Group (2005) selected patients who had undergone primary palatal repair from each of the five participating clinics. Ysunza et

All of the studies included an operational



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