

# Xylitol Nasal Spray for Chronic Rhinosinusitis (Nsouli)

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## **Xylitol Nasal Irrigation: A Possible Alternative Strategy for the Management of Chronic Rhinosinusitis**

Nsouli TM, Diliberto NZ, Nsouli ST, Davis CM, Bellanti JA **Introduction:** Chronic rhinosinusitis (CRS), a condition that has been estimated to affect nearly 14% of the population, is associated with significant quality-of-life impairment for the patient and a perplexing therapeutic challenge for the clinician. Although saline irrigation has been shown to be beneficial for patients with rhinosinusitis, xylitol (XLT), a five-carbon sugar alcohol that displays antibacterial properties by enhancing the body's own innate bactericidal mechanisms, has been suggested as a possible alternative.

### **Objective:**

The objective of the present pilot study was to evaluate the potential beneficial effect of XLT nasal spray (10% solution) in patients with CRS.

### **Methods:**

This 3-week prospective placebo open-control study evaluated 42 subjects ages 18-53 years with CRS, diagnosed based on published criteria, were randomized to XLT aqueous nasal spray two puffs in each nostril twice daily (n=32) or placebo (n=10). The efficacy of the treatment was assessed by means of evaluating changes from baseline using the sino-nasal outcome test 20 score (SNOT-20) and nasal resistance by using nasal function studies (rhinometry) over a 3-week period.

### **Results:**

All study subjects returned on a weekly basis for 3 weeks and were evaluated using SNOT-20 scores and peak nasal inspiratory flow rates, using rhinometry (Youlten rhinometer). Utilizing analysis of variance (ANOVA) of study results, after 3 weeks of therapy there was a significant amelioration of the XLT group as compared to the placebo group. The XLT group experienced a reduction of 25.3% in the SNOT-20 scores ( $p<0.001$ ) and an increase of 35.6% in the nasal inspiratory peak flow ( $p<0.001$ ) compared to the placebo group.

### **Conclusion:**

XLT aqueous nasal spray resulted in significant improvement of CRS symptoms as compared to placebo and the results of the present study suggest its use as an adjunct therapeutic agent in patients with chronic sinus disease.