

**Gal Levy M.S., CCC-SLP**  
**Speech Pathologist**  
**(214) 995-6444**  
[galslp@gmail.com](mailto:galslp@gmail.com)

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Dear Doctor / Colleague,

This letter will shed some light on:

*Spasmodic Dysphonia (SD) or "stuttering of the vocal cords".*

### **What is SD?**

Laryngeal Dystonia or as it called Spasmodic Dysphonia is an organic voice disorder caused by dysfunction of center neurological integration that produces spasm of the vocal cords. Spasmodic dysphonia causes the voice to break or to have a tight, strained or strangled quality. There are three different types of spasmodic dysphonia: adductor spasmodic dysphonia (closed glottis), abductor spasmodic dysphonia (open glottis) and mixed spasmodic dysphonia.

In adductor spasmodic dysphonia, sudden involuntary muscle movements or spasms cause the vocal cords to slam together and stiffen. By that make it difficult for the them to vibrate and produce voice. Words are often cut off or difficult to start, speech may be choppy and sound similar to stuttering. The voice is commonly described as strained or strangled and full of effort.

In abductor spasmodic dysphonia, the sudden involuntary muscle movements or spasms cause the vocal folds to open and stay opened. Thus, vocal cords can not be closed for phonation (to produce the speech sounds). As a result, the voice of these individuals often sounds weak, quiet and breathy or whispery.

Mixed spasmodic dysphonia involves muscles that open the vocal folds as well as muscles that close the vocal folds and therefore has mixed features of both above – mentioned syndromes.

Surprisingly, all 3 conditions are usually absent while doing vegetative phonation, whispering, crying, laughing, singing, speaking at a high pitch ,speaking when just woke up from a sound sleep or after drinking alcoholic beverages ( SD is the **only** voice disorder for which I am allowing my patients to drink some alcohol!) As in many other voice disorders, Stress and nervousness, will make the muscle spasms even more severe.

SD is another mysterious voice disorder, the cause is yet unknown. Because the voice can sound normal at times, spasmodic dysphonia was once thought to be psychogenic, but as reported by NIDCD ( The National Institute of Deafness and other Communication Disorders), research has revealed increasing evidence that most cases of spasmodic dysphonia are in fact neurogenic and may co-occur with other movement disorders such as blepharospasm (excessive eye blinking and involuntary forced eye closure), tardive dyskinesia (involuntary and repetitious movement of muscles of the face, body, arms and legs), oromandibular dystonia (involuntary movements of the jaw muscles, lips and tongue), torticollis (involuntary movements of the neck muscles), or tremor (rhythmic, quivering muscle movements).

NIDCD also reports that spasmodic dysphonia may run in families and is thought to be inherited. Research has identified a possible gene on chromosome 9 that may contribute to the spasmodic dysphonia that is common to certain families. Spasmodic dysphonia can affect anyone between 30 and 50 years of age. More women appear to be affected by spasmodic dysphonia than are men.

### **Treatment for SD?**

The “triangle” ENT –Neurologist – SLP is usually on the front line in diagnosing and treating the symptoms of SD. There is presently no known cure for spasmodic dysphonia. Current treatments only help reduce the symptoms.

SLP- Voice therapy may reduce some symptoms, especially in mild cases. Voice Therapy and Vocal Cords special physiotherapy may also support a better voice while undergoing the post effects of treatment of choice – see below.

ENT- has 2 common options, One: an operation that cuts one of the nerves of the vocal folds (the recurrent laryngeal nerve) thus improving the voice for several months to several years.

Two: injections of very small amounts of botulinum toxin (botox) directly into the affected muscles of the larynx. Botulinum toxin is produced by the *Clostridium botulinum* bacteria. This is the bacterium that occurs in improperly canned foods and honey. The toxin weakens muscles by blocking the nerve impulse to the muscle. The botox injections generally improve the voice for a period of three to four months after which the voice symptoms gradually return. Reinjections are necessary to maintain a good speaking voice. Initial side effects that usually subside after a few days to a few weeks may include a temporary weak, breathy voice or occasional swallowing difficulties – this will be the best time to refer the patient to speech therapy , as was mentioned above. Botox may relieve the symptoms of both adductor and abductor spasmodic dysphonia, and is considered to be the main line of defense against SD.

**I trust you have gained some insight from this educational note. I appreciate the opportunity of being of service to you and your patients. Please e-mail me at [galslp@gmail.com](mailto:galslp@gmail.com) if you would like this or previous information to be sent to you via e-mail in a digital format.**

Thank you,

Gal Levy, M.S., CCC-SLP