



## Understanding Spasmodic Dysphonia

**Definition:** Spasmodic dysphonia (SD), a focal form of dystonia, is a neurological voice disorder that involves involuntary "spasms" of the muscles in the vocal cords causing interruptions of speech and affecting the voice quality. SD causes the voice to break up while the persons is speaking and sometimes the voice will also have a tight, strained, or strangled quality. It can also be termed as "laryngeal dystonia." There are two types of SD: adductor spasmodic dysphonia (more common) and abductor spasmodic dysphonia, which is less frequent

**Symptoms:** SD causes a persons' voice to break during vowel sounds. Some persons with adductor SD also have a harsh strangled voice while others with abductor SD sound breathy and have voice breaks on certain consonants. The voice breaks can make the person sound like they are upset or emotional. The control problems of the vocal cords result in different speech symptoms in the two types of disorder - *adductor SD* and *abductor SD*. Symptoms vary during the day, become aggravated by certain speaking situations, such as talking on the phone, or increase during stressful situations. It usually is not painful, but exerted efforts to vocalize can leave one feeling exhausted. Voice samples of SD appear on the NSDA Web site ([www.dysphonia.org](http://www.dysphonia.org)) and also on a new DVD called "Understanding Spasmodic Dysphonia."

**Causes:** The cause of spasmodic dysphonia is unknown. Dystonia are generally characterized by excessive contraction of muscles with associated abnormal movements and postures possibly due to abnormalities in the basal ganglia – the area of the brain that helps coordinate movements of the muscles throughout the body. While anecdotal evidence may suggest that symptom onset follows illnesses such as viral infection, bronchitis or surgery, or following a stressful event, such as job stress, death of a loved one, or divorce, it has not been scientifically proven and has not been wholly agreed upon by the medical community.

**Prevalence:** Spasmodic dysphonia (SD) is estimated to affect more than 50,000 people in North America, but this number may be higher due to ongoing misdiagnosis or undiagnosed cases of the disorder. SD is one of 30 movement disorders – chronic and debilitating neurological conditions that affect more than 40 million Americans – nearly one in seven people -- TWICE the number of people living with diabetes and FOUR times the number of those surviving cancer.

**Treatment:** Local injections of botulinum toxin,, into the vocal cord muscles have proven to be the most effective treatment for persons with adductor SD. The treatment relaxes the vocal muscles so that spasms are greatly diminished and speech is greatly improved. The treatment can also reduce the harsh strangled quality and help decrease the effort required to speak. Speech therapy and other treatments (e.g., breathing/relaxation exercises) may also help in some persons. No medications are helpful in everyone. Surgery is an option if other treatments are unsuccessful.

**Age of Onset:** Although it can start any time during a life, spasmodic dysphonia seems to begin frequently in the 40- to 50-year-old group and more often in women than men. Recent evidence is showing that symptoms may begin earlier in persons with a family history of dystonia.

**Diagnosis:** An interdisciplinary team of professionals evaluate and provide accurate differential diagnosis. This team usually includes a *speech-language pathologist* who evaluates voice production and voice quality; a *neurologist* who carefully searches for other signs of dystonia or other neurological conditions; and an *otolaryngologist* (or Ear, Nose and Throat) who examines the vocal cords and their movements.

**Misdiagnoses:** SD is often misdiagnosed as laryngitis, anxiety/psychological issues, acid reflux, or other disorders. The majority of patients go undiagnosed or misdiagnosed for years, some as many as ten years or more. However, some patients with other voice disorders can be misdiagnosed as spasmodic dysphonia. Patients with movement disorders in general have been estimated to go undiagnosed for five years or more and see more than 15 physicians before receiving an accurate diagnosis.

**Changes in symptoms:** It is not common for symptoms of Spasmodic Dysphonia to disappear but there are occasions when the symptoms will fluctuate. People with Spasmodic Dysphonia often try to improve their speech by changing the tenor or pitch of the voice or find effective way to modulate their voice to get around the spasms. Typically, Spasmodic Dysphonia affects only the speaking voice so laughing, crying, and shouting are normal. In some persons singing can be less affected than speaking.