



## Laryngeal (Voice Box) Cancer

Laryngeal cancer is not as well known by the general public as some other types of cancer, yet it is not a rare disease. The American Cancer Society estimates that in 2012 there will be about 12,360 new cases of laryngeal cancer (9,840 men and 2,520 women) and about 3,650 deaths (2,880 men and 770 women). Even for survivors, the consequences of laryngeal cancer can be severe with respect to voice, breathing, or swallowing. It is fundamentally a preventable disease though, since the primary risk factors for laryngeal cancer are associated with modifiable behaviors.

### *Risk Factors Associated With Laryngeal Cancer*

Development of laryngeal cancer is a process that involves many factors, but approximately 90 percent of head and neck cancers occur after exposure to known carcinogens (cancer causing substances). Chief among these factors is tobacco. Over 90 percent of laryngeal cancers are a type of cancer called squamous cell carcinoma (SCCA), and over 95 percent of patients with laryngeal SCCA are smokers. Smoking contributes to cancer development by causing mutations or changes in genes, impairing clearance of carcinogens from the respiratory tract, and decreasing the body's immune response.

Tobacco use is measured in pack-years, where one pack per day for one year is considered one pack-year. Two pack-years is defined as either one pack per day for two years, or two packs per day for one year (Longer terms of pack years are determined using a similar ratio.) Depending upon the number of pack-years smoked, studies have reported that smokers are about 5 to 35 times more likely to develop laryngeal cancer than non-smokers. It does seem that the duration of tobacco exposure is probably more important overall to cancer causing effect, than the intensity of the exposure.

Alcohol is another important risk factor for laryngeal cancer, and acts as a promoter of the cancer causing process. The major clinical significance of alcohol is that it potentiates the effects of tobacco. Magnitude of this effect is between an additive and a multiplicative one. That is, people who smoke and drink alcohol have a combined risk that is greater than the sum of the individual risks. The American Cancer Society recommends that those who drink alcoholic beverages should limit the amount of alcohol they consume, with one drink per day considered a limited alcohol exposure.

Other risk factors for laryngeal cancer include certain viruses, such as human papilloma virus (HPV), and likely acid reflux. Vitamin A and beta-carotene may play a protective role.

## ***Signs and Symptoms of Laryngeal Cancer***

Signs and symptoms of laryngeal cancer include: progressive or persistent hoarseness, difficulty swallowing, persistent sore throat or pain with swallowing, difficulty breathing, pain in the ear, or a lump in the neck. Anyone with these signs or symptoms should be evaluated by an Otolaryngologist (Ear, Nose and Throat Doctor). This is particularly important for people with risk factors for laryngeal cancer.

## ***Treatment of Laryngeal Cancer***

The primary treatment options for laryngeal cancer include surgery, radiation therapy, chemotherapy, or a combination of these treatments. Remember that this is a preventable disease in the vast majority of cases, because the main risk factors are associated with modifiable behaviors. Do not smoke and do not abuse alcohol!



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