



Oral Leukoplakia

What is oral leukoplakia?

Oral leukoplakia (leuko=white, plakia=patch) is a white patch in the mouth that cannot be rubbed off and cannot be diagnosed as any other condition. Lichen planus, yeast infections ("thrush"), chronic cheek and tongue chewing injuries, and hairy/coated tongue are some of the specific conditions that appear white in the mouth and are therefore NOT oral leukoplakia. When all such known conditions have been ruled out, a patient is diagnosed with oral leukoplakia. While the long-term history of these lesions is impossible to predict, it is known that true leukoplakias are considered "potentially malignant," meaning that they have the potential, over time, to develop into oral cancer.

Oral leukoplakia occurs in 1-2% of the population and is most common in patients over age 40. It may affect any part of the mouth. Oral leukoplakias on the underside of the tongue, floor of mouth, and soft palate are more likely to become precancerous (dysplastic). Some oral leukoplakias are not just white but may appear red, rough and warty, or bumpy. These have a higher chance of being precancerous.

What are the different types of oral leukoplakia?

There are two main types: homogenous and non-homogenous leukoplakia. Homogenous leukoplakia consists of uniformly white plaques which have a lower likelihood for turning into cancer. Non-homogenous leukoplakias, which resemble mixed red and white non-uniform patches, have a greater likelihood of turning into cancer. Another much rarer variant, proliferative verrucous leukoplakia, is typically more extensive, involves different parts of the mouth, and is more common in older women; these have the highest chance of turning into cancer.

All oral leukoplakias must be biopsied because many cases are already precancerous/dysplastic or cancerous at the time they are biopsied. Even if the initial biopsy did not show changes of precancer/dysplasia, some oral leukoplakias when followed over time, become cancer, especially cases of proliferative verrucous leukoplakia.

What causes oral leukoplakia?

Alcohol and tobacco use, both known risk factors for oral cancer, are similarly well-established risk factors for development of oral leukoplakia. Other risk factors include a weakened immune system, long-term treatment with immune suppressing medications, a personal or family history of cancer, and, in some cultures, the chewing of areca nut and betel leaf. In many patients with oral leukoplakia, however, there are no risk factors and we don't know why it develops.

How do we know it is oral leukoplakia?

If your doctor suspects that a white lesion in your mouth is due to irritation, the source of the irritation will be removed and you will be asked to return in a few weeks for re-evaluation. If the white area is still present at the next visit, a biopsy will likely be performed. More than one biopsy may be obtained depending on the size and type of leukoplakia. The biopsy result will typically tell us whether you have a specific condition (such as lichen planus), response to chronic irritation, or precancerous changes/dysplasia. In some cases, the biopsy does not show obvious pre-cancerous changes but also does not offer a definitive diagnosis and these lesions will need to be monitored. Such cases are often diagnosed as "hyperkeratosis" which means an excess of keratin which is the white callous-like material that makes a leukoplakia look white

How do we treat oral leukoplakia?

If you smoke, we strongly encourage you to quit, and we can provide you with the appropriate guidance to help you stop. Depending on the results of the biopsy, your wishes, as well as the size, appearance and location of the oral leukoplakia, complete removal of the lesion may be suggested, either by surgery or laser removal. At a minimum, oral leukoplakias should be monitored and re-biopsied periodically for changes. Every patient is different and your doctor will discuss treatment options that are tailored to your particular needs and circumstances.



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What can I expect?

Even after complete removal, oral leukoplakia may recur, so it is important to follow-up for re-evaluation at least once or twice a year.

If your oral leukoplakia was not removed and is just being observed periodically you should ask your dentist to do this for you at routine dental visits or return to us for an examination once or twice a year. If you notice a change in the appearance of the leukoplakia in between visits, such as development of red, rough or warty areas, a lump or a sore, you should return for another evaluation and possible re-biopsy.

It is difficult to predict which oral leukoplakias will develop into cancer or when this may happen. Leukoplakias that contain precancerous cells/dysplasia are at higher risk for developing into cancer while those that only show “hyperkeratosis” are at lower risk. As such, it is very important that you see your dentist or a specialist for regular examinations to monitor changes in your mouth.

