

## Cancer Association of South Africa (CANSA)



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### Fact Sheet on Lichen Planus

#### Introduction

Lichen planus (LP) is a disease of the skin and/or mucous membranes that resembles lichen.

A lichen is a composite organism that emerges from algae or cyanobacteria (or both) living among filaments of a fungus in a mutually beneficial (symbiotic) relationship. The whole combined life form has properties that are very different from properties of its component organisms.



[Picture Credit: Lichen Planus]

The cause of lichen planus (LP) is unknown, but it is thought to be the result of an autoimmune process with an unknown initial trigger. There is currently no specific cure, but many different medications and procedures have been used to control the symptoms.

#### **Arnold, D.L. & Krishnamurthy, K. 2020.**

“Lichen planus (LP) is an inflammatory disorder of the skin and mucous membranes with no known cause. It appears as pruritic, violaceous papules and plaques most commonly found on the wrists, lower back, and ankles. A lattice-like network of white lines called Wickham striae overlies the lesions but is most easily observed on the buccal mucosa where erosions can also be present. Drug-induced lichen planus, or lichenoid drug eruption, is frequently photo distributed but may be indistinguishable from idiopathic LP. The natural history of LP varies significantly. The majority of patients with cutaneous lesions spontaneously clear within 1 to 2 years after initial presentation. However, recurrences are common, and residual hyperpigmentation of the skin frequently results. By contrast, oral LP is a chronic disease that may or may not remit. Drug-induced LP gradually resolves after removal of the causative medication.”

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## **Lichen Planus (LP)**

Lichen planus is a chronic recurrent rash that is due to inflammation. The rash is characterised by small, flat-topped, many-sided (polygonal) bumps that can grow together into rough, scaly plaques on the skin. There may also be a rash in the lining (mucous membranes) of the mouth or vagina.

Lichen planus is a very curious and poorly understood skin condition. Its name is descriptive in that to some it resembles a simple plant, a lichen, that grows on rocks and tree bark, while '*planus*' is Latin for flat.

**Gall, R., Navarro-Fernandez, I.N.** 2020.

"Erosive lichen planus (ELP) is a variant of lichen planus which involves chronic and painful ulceration of the skin and mucosal surfaces. ELP is thought to be the result of autoimmune damage of the basal cell layer, which is mediated by activated CD8 T lymphocytes. Occasionally, ELP may present in conjunction with other clinical forms of lichen planus or may be induced by drug exposure. Clinical findings include painful, persistent ulcers, primarily of the mouth and genitals. Complications of ELP include secondary infection, development of squamous cell carcinoma, and scarring."

**Haenen, C.C.P., Buurma, A.A.J., Genders, R.E. & Quint, K.D.** 2018.

"Hypertrophic lichen planus (HLP) is a chronic T-cell-mediated inflammatory disease characterised by pruritic hypertrophic or verrucous plaques on the lower limbs. We report a case of an 87-year-old woman with a 12-year history of HLP on both lower legs presenting with malignant transformation of one lesion into a squamous cell carcinoma (SCC). Malignancy developing in cutaneous lichen planus is rare, with less than 50 cases reported in the literature. This case highlights the need to be aware of suspicious changes in long-standing HLP to allow early detection of a developing SCC."

## **Incidence of Lichen Planus (LP) in South Africa**

Because Lichen Planus is not a type of cancer, there is, therefore, no information regarding this condition in the National Cancer Registry of 2017.

## **Causes of Lichen Planus (LP)**

The cause of lichen planus is unknown, though strong evidence suggests that inflammation, controlled by the immune system, gives rise to the lesions. However, certain diseases, medical conditions or other factors may act as triggers of lichen planus in some people.

The possible triggers of lichen planus include:

- Hepatitis C infection
- Hepatitis B vaccine
- Influenza vaccine
- Certain pigments, chemicals and metals
- Nonsteroidal anti-inflammatory drugs, such as ibuprofen (Advil, Motrin IB, others) and naproxen (Aleve, others)
- Certain medications for heart disease, high blood pressure or arthritis

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### **Complications of Lichen Planus (LP)**

Erosive lichen planus is a long-lasting (chronic) form of lichen planus that causes painful ulcers to develop, as well as burning and discomfort in the genital areas of both male and females.

Occasionally, in around 2% of cases, long-term cases of erosive lichen planus can develop into certain types of cancer, such as:

- Cancer of the mouth
- Cancer of the vulva
- Cancer of the penis

### **Persons at Risk of Lichen Planus (LP)**

Lichen planus can occur in anyone at any age, but there are certain factors that make some people more likely to develop the condition. The skin form of lichen planus occurs in men and women equally, but women are twice as likely to get the oral form. It is very rare in young and elderly people, and most common in middle-aged people.

Other risk factors include having other family members with lichen planus, having a viral disease like hepatitis C, or being exposed to certain chemicals that may act as allergens. These could be antibiotics, arsenic, gold, iodide compounds, diuretics, and certain kinds of dyes.

### **Signs and Symptoms of Lichen Planus (LP)**

The signs and symptoms of lichen planus depend on where it appears on the body.

Skin - On the skin, lichen planus often causes bumps that are shiny, firm, and reddish purple. Sometimes the bumps have tiny white lines running through them. These lines are called Wickham's striae.

Most people get a few bumps. Some people get many bumps, which can appear on different parts of the body. The most common places for these bumps to appear are the wrists, lower back, and ankles, but they can appear anywhere on the skin, including the genitals. On the legs, the bumps tend to be darker.

New bumps may appear as older bumps clear.

When lichen planus develops on the skin, a person can have the following:

- Thick patches of rough, scaly skin. If bumps continue to appear in the same place, thick patches of rough, scaly skin can form. These patches develop with time and are most common on the shins and around the ankles.
- Itch. Sometimes the bumps and patches itch. The thick patches are most likely to itch.
- Blisters. These are rare.
- Pain, especially on the genitals. The skin can be bright red and raw. Open sores can appear. These can make sex painful or impossible.

Mouth (oral lichen planus) - When lichen planus appears inside the mouth, it most commonly occurs on the insides of the cheeks. It also can appear on the tongue, lips, and gums. Inside your mouth, you may have:

[Picture Credit: Oral Lichen Planus]

- Patches of tiny white dots and lines that can look like lace.
- Redness and swelling.
- Peeling on the gums.
- Painful sores (can hurt or burn).



Nails - When lichen planus appears on the nails, it often appears on just a few nails. Sometimes it appears on all of the nails on a hand or foot. One may see:

- Ridges or grooves on the nails.
- Splitting or thinning.
- Loss of nails (can be temporary or permanent).



[Picture Credit: Lichen Planus of the Nails]

Scalp (lichen planopilaris) - It is rare, but this disease can develop on the scalp. If it does, the person may have the following on his/her scalp:

[Picture Credit: Lichen Planus of the Scalp]

- Redness and irritation.
- Tiny bumps.
- Thinning hair or patches of hair loss.
- Scars which appear slowly (American Academy of Dermatology).



Genital Lichen Planus - is an inflammatory disease that can cause an itchy or burning rash, or painful purple lesions, on the skin of the arms or legs, or inside the mouth. It can also affect both male and female genitals.



[Picture Credit: Lichen Planus of the Vulva]



[Picture Credit: Lichen Planus of the Penis]

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### **Treatment of Lichen Planus (LP)**

Most of the time, the bumps go away without any treatment after about a year. However, treatment can make the skin look better.

The goal of treatment is to reduce your symptoms and speed healing of the skin lesions. If symptoms are mild, no treatment may be needed.

There is no known cure for skin lichen planus, but treatment is often effective in relieving itching and improving the appearance of the rash until it goes away. Lichen planus of the scalp must be treated right away, or the hair of the affected area may never grow back.

Since every case of lichen planus is different, no one treatment does the job. Topical corticosteroids are very useful. You can use a corticosteroid ointment or cream that you apply directly to the bumps. Corticosteroids may be injected directly into a lesion. In the mouth, steroid pastes or inhalant powders may be easier to apply to affected sites. Hydrocortisone foam can be used inside the vagina. Antihistamines may be prescribed to relieve itching. Extensive cases may require the use of oral corticosteroid for a few weeks or longer. This usually shortens the duration of the outbreak, but may have serious side effects. Ultraviolet light therapy (also called PUVA) may be beneficial in some cases. The so-called immune modulating drugs, tacrolimus ointment and pimecrolimus cream, may be useful for oral and genital lichen planus. Other treatment options include topical or oral retinoid (a form of vitamin A), long term antibiotics, oral antifungal agents, phototherapy, methotrexate, and hydroxychloroquine.

**Arora, K.S., Bansal, R., Mohapatra, S., Verma, A., Sharma, S. & Pareek, S. 2018.**

**OBJECTIVES:** The present observational study was conducted with an aim to evaluate the efficacy of diode laser in management of homogenous oral leukoplakia (OL) and reticular oral lichen planus (OLP), so that these potentially malignant disorders can be limited and further malignant transformation can be prevented. Further the assessment of associated postoperative complications after laser therapy was also carried out.

**STUDY DESIGN:** Present study was carried out using diode laser 810nm on 60 subjects, of whom 30 subjects were of homogenous OL and 30 subjects were of reticular OLP aged between 20 – 60 years, the diagnosis of which was histopathologically confirmed.

**RESULTS:**

Of the 60 subjects none complained of pain during and immediately after surgery with no bleeding at any stage of the procedure. By the end of 3rd day post operative most subjects reported no pain and swelling and very few subjects had negligible pain and swelling when evaluated. On subsequent follow-up of 1,2 and 4 week(s) none of the subject reported of pain, swelling or bleeding and it was noted that all the areas treated with laser had healed without scarring with no signs of recurrence. Fibrosis was seen in two male patients and one female patient treated for OL and OLP respectively.

**CONCLUSION:** Patient compliance and contentment without any postoperative complications were observed to be of high degree in the present study. Thus diode laser can be considered as a best alternative to conventional surgical treatment modality in managing OL and OLP and preventing its further transformation.

### **Medical Disclaimer**

This Fact Sheet is intended to provide general information only and, as such, should not be considered as a substitute for advice, medically or otherwise, covering any specific situation. Users

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#### **Sources and References Consulted or Utilised**

##### **American Academy of Dermatology**

<https://www.aad.org/dermatology-a-to-z/diseases-and-treatments/i---l/lichen-planus/signs-symptoms>

##### **American Skin Association**

<http://www.americanskin.org/resource/lichen.php>

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##### **Healthline**

<http://www.healthline.com/health/lichen-planus#Overview1>

##### **Lichen Planus**

<http://www.dermaamin.com/site/atlas-of-dermatology/2-b/211-bullous-lichen-planus-.html>

##### **Lichen Planus of the Nails**

<http://www.nailsmag.com/article/81889/what-is-lichen-planus>

##### **Lichen Planus of the Penis**

<http://www.enzyklopaedie-dermatologie.de/artikel?id=2341>

##### **Lichen Planus of the Scalp**

<http://www.huidziekten.nl/zakboek/dermatosen/ltxt/lichen-planopilaris.htm>

##### **Lichen Planus of the Vulva**

<https://cme.dannemiller.com/articles/activity?id=570&f=1>

##### **Mayo Clinic**

<http://www.mayoclinic.org/diseases-conditions/lichen-planus/basics/causes/con-20026040>

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<http://www.mayoclinic.org/diseases-conditions/lichen-planus/basics/complications/con-20026040>

**MedicineNet**

[http://www.medicinenet.com/lichen\\_planus/article.htm](http://www.medicinenet.com/lichen_planus/article.htm)

**Olson, M.A., Rogers, R.S.3<sup>rd</sup>, & Bruce, A.J.** 2016. Oral lichen planus. *Clin Dermatol.* 2016 Jul-Aug;34(4):495-504. doi: 10.1016/j.clindermatol.2016.02.023. Epub 2016 Mar 2.

**Oral Lichen Planus**

[http://www.medicinenet.com/lichen\\_planus/article.htm](http://www.medicinenet.com/lichen_planus/article.htm)

**Wikipedia**

[http://en.wikipedia.org/wiki/Lichen\\_planus](http://en.wikipedia.org/wiki/Lichen_planus)

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