

# WHAT CAN I DO?

Visit your dentist or doctor for advice to improve calcification of both the teeth and periodontium

## Useful Tips

### Oral and dental hygiene

- Due to the sensitivity of your teeth, you should take extra care of your dental hygiene.
- Choose a soft-bristled toothbrush and an age-appropriate fluoride toothpaste.
- If brushing is painful, ask your dentist for possible solutions.

### A balanced diet – monitor your sugar consumption

- The bacteria that cause abscesses feed on sugar. You should monitor and reduce your sugar consumption and brush your teeth after sugary snacks.

### Regular appointments with your dentist

- Have regular dental check-ups (2-4 times a year) for prevention and early treatment of any problems.
- 6-monthly periodontal follow-up is essential for all adults.

### Additional preventative measures

- Ask your dentist about night-time retainers and sealants for the grooves in your teeth.
- Your dentist, in agreement with your doctor, may provide you with orthodontic treatment and implants.

# WHO TO CONTACT ABOUT XLH?

More information and resources



International XLH Alliance

<https://xlhalliance.org>

## Reference:

**Clinical practice recommendations for the diagnosis and management of X-linked hypophosphataemia.**

Haffner D, et al. *Nat Rev Nephrol* 2019;15:435-455.

\* The knowledge of XLH has improved, but some points remain unclear and unexplained. The above differences may not be found in all individuals and different combinations are possible.

# THE DENTAL ASPECTS OF X-LINKED HYPOPHOSPHATAEMIA (XLH)

Information for Patients



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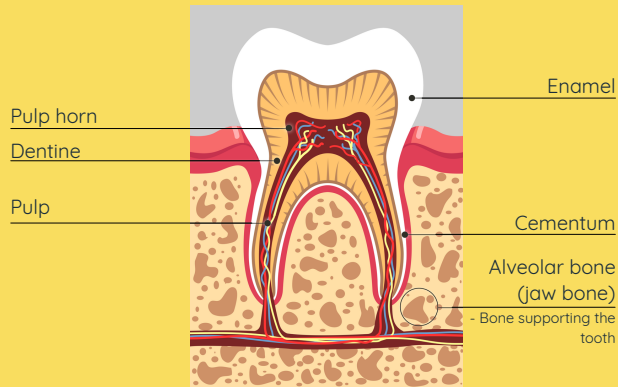
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# TEETH: WHAT SHOULD I KNOW?

## Anatomy of a normal tooth



### Enamel

Covers the crown of the tooth and acts as a protective barrier; it is a highly mineralised semi-transparent layer.

### Dentine

A less dense layer of hard (calcified) tissue beneath the enamel; the composition is similar to bone. The cohesion with enamel helps to cushion pressure on the tooth, especially when chewing, and it serves as a protective barrier for the pulp.

### Pulp

Tissue that is located in the tooth core, it is not calcified and contains the vessels and nerves of the tooth.

### Cementum

A calcified layer of tissue that covers the root of the tooth and anchors it in the jaw bone.

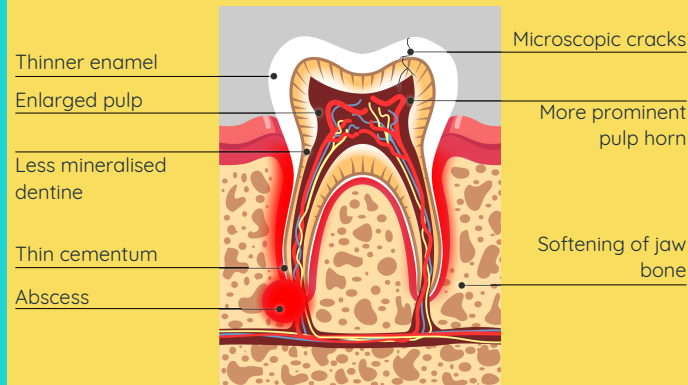
### Periodontium

The specialised tissues that surround and support the teeth, maintaining them in the jaw bones.

# HOW ARE TEETH OF XLH PATIENTS DIFFERENT?\*

Dental issues are very common in XLH

## Anatomy of an XLH affected tooth with dental abscess



### Enamel

The enamel is thinner and more prone to being worn down. Microscopic cracks are often present and allow bacteria to enter the pulp without the presence of cavities.

### Dentine

Dentine is less mineralised and may have structural defects allowing bacteria to enter the pulp; the barrier function is not very effective.

### Pulp

The pulp is generally enlarged and closer to the external surface of the tooth. Therefore, it is more vulnerable and susceptible to infections.

### Pulp horn

The pulp horns are more prominent.

### Cementum

It is thinner.

### Periodontium

There may be abnormalities in the jaw bone, i.e. the support bones of the teeth.

# WHAT DOES THIS MEAN FOR ME?\*

“Spontaneous” abscesses are a common dental consequence associated with XLH

Patients with XLH have an increased risk of developing periodontal disease with more severe consequences, such as premature tooth loss, even in young adults.

You may develop infections in the bone around the teeth, **without any clinical or X-ray changes** (no cavities or injury), contrary to what is conventionally observed. The barrier function of the enamel and dentine is compromised **and bacteria can easily reach the pulp**.

Once the pulp is infected, an **ABSCESS** (collection of pus) or a **FISTULA** (hollow tunnel that allows pus to escape) may develop.

Infection can sometimes spread rapidly to the facial tissue causing **CELLULITIS**, a swelling of the face with an alteration in the overall condition, but without any obvious clinical dental signs.



In case of an **ABSCESS** or **FISTULA**, you should **URGENTLY** see a dentist.

In case of **CELLULITIS**, you should see your dentist **IMMEDIATELY**, or go to the nearest emergency unit, to start antibiotics

Once the infection has resolved, the only two treatment solutions available are either a root canal or tooth extraction.

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