Teeth
What do I Need to Know?

Enamel
Enamel is a semitranslucent, highly mineralized crystalline solid which covers the crowns of teeth and acts as a barrier to protect the teeth.

Dentin
Dentin is less mineralized than enamel, but more mineralized than bone; it acts as a cushion for the enamel and a further barrier to the pulp.

Pulp
The pulp is the area in the middle of the tooth containing the blood vessels and nerves for that tooth.

Pulp Horns
The projections of the pulp underneath the taller parts of the tooth, or the “cusps.” These are the areas of the pulp which are closest to the functional (or “occlusal”) part of the tooth which is used to chew food.

Cementum
Protects the dentin and pulp of the roots the way enamel protects it in the crown.

Questions?
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What is Different in XLH Teeth?

*Although we are working to advance XLH dental knowledge, currently there is a lot of variation in the findings. This means that the differences noted below may be found in any combination (or not at all), in each XLH individual.*

**Differences in the Teeth**

**Enamel:** There is some indication that enamel in people with XLH may be thinner, easier to wear down, and have more microscopic cracks than in the rest of the population.

**Dentin:** This is where the major difference is in XLH teeth. The dentin is less mineralized, and may have defects leading to the pulp, making it a less effective barrier.

**Pulp:** The pulp is larger overall in XLH teeth; also the pulp horns are very high, bringing the pulp under the cusps very close to the enamel.

**Cementum:** May be thinner.

**Differences in Other Areas**

**Gums:** There is some suggestion that people with XLH may be susceptible to more aggressive periodontal (gum) disease.

**Bone:** There are abnormalities, but their significance is not clear.

What Does This Mean For Me?

**“Spontaneous” Abscesses:**
This is the most serious dental problem associated with XLH. Many people with XLH tend to get infections in the bone under their teeth without the normal evidence of cavities or trauma usually seen with those abscesses.

This is because the enamel and dentin are less of a barrier in many people who have XLH. This means that bacteria can make their way to the pulp much more easily.

Once the pulp is infected, unless the access point (which is often difficult to pinpoint in XLH patients because there is no cavity or trauma) is blocked, the infection will continue until the only treatment options are root canal therapy or extraction.

**Periodontal (Gum) Disease:**
May have a greater risk of periodontal disease, or more aggressive periodontal disease.

What Can I Do About It?

**Most of the preventative measures in dentistry are intended to prevent cavities. Unfortunately, these do not always help XLH patients because increase in cavities is not the problem. Research is ongoing to try and find better solutions, but in the meantime here are some general suggestions:**

1. **Diligent Oral Hygiene:** unfortunately, because of the challenges that can be present in XLH teeth and gums, you need to be extra diligent with brushing and flossing.

2. **Dietary Guidance:** as the bacteria responsible for abscesses feed on sugars, watch your sugar consumption and be sure to brush after sugary snacks.

3. **Regular Dental Checkups:** for the same reason as above, you need to make sure your teeth are monitored regularly to catch problems as they emerge.

4. **Extra Preventive Measures:** ask your dentist about sealants (for primary and permanent teeth) and nightguards.

5. **Cleanings:** in some patients, because the cementum is thinner, cleanings may be more uncomfortable. If cleanings are very painful for you, ask your dentist about options for pain management.

What is the Most Important Thing to Know?

It is not your fault. People with XLH have unique dental challenges. Sometimes even when you are doing everything right you may still have dental problems. While it is important to do everything you can to keep your mouth healthy, it is also important to remember that you some things about your oral health are out of your control.