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Dentinal Hypersensitivity



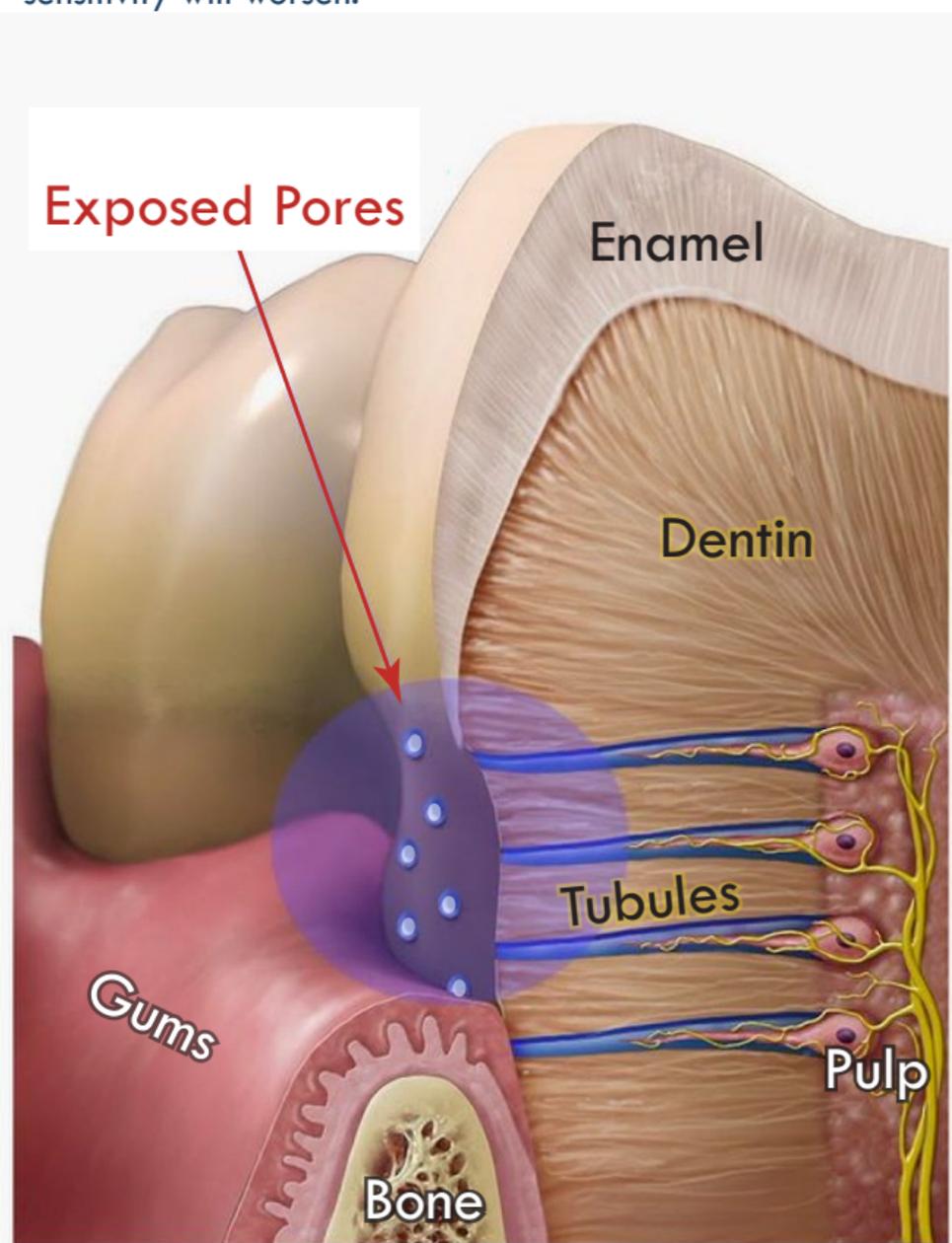
Are your teeth especially sensitive to temperature, sweets, or brushing? This common issue often develops slowly from a combination of factors, and thus requires a combination of treatments to be effective. This brochure discusses those factors to help you manage your symptoms.

Why do teeth become sensitive?

Because your dentin is porous.

Enamel is the hard outer layer that insulates and protects the underlying dentin. With intact enamel, people rarely experience sensitivity. But during your lifetime you will continue to lose enamel to wear and tear, exposing the underlying dentin layer more and more.

Dentin has around 20,000 pores per square millimeter! Those pores penetrate all the way to the pulp of the tooth as “dentinal tubules”. Cells within the pulp monitor those tubules for changes in fluid pressure, and when the fluid moves (because of cold, sweets, clenching pressure, etc.), the tooth feels that as pain. As more dentin gets exposed, your sensitivity will worsen.



Dentinal tubules shown here are greatly exaggerated in size for illustration purposes.

What caused this for me?

For most people, there is no one single cause, as it usually is a combination of these common issues:

- Brushing too hard over the years.
- Clenching and/or grinding your teeth.
- A diet high in acidic food/drinks.
- Active cavities that need to be filled.
- Medications that cause dry mouth.
- Acid reflux and other medical conditions.
- Low levels of fluoride as a child.

Sensitivity develops slowly from a combination of factors, and thus requires a combination of treatments to be effective.

What areas are most affected?

Dentinal hypersensitivity can occur anywhere the dentin is exposed, including the chewing surface or around the edge of fillings. But the most common area is right along the gum line, where the root of the tooth starts.

The root surface of the tooth has no enamel to insulate it from the world. In our teens and twenties, most people have very little gum recession, and so none of the root surfaces are exposed, and sensitivity is rare.

But as your teeth experience wear and tear from those factors mentioned above, more of the gums may recede, and more dentin surface gets exposed.

How can it be treated?

Treatment depends upon the severity of your symptoms and include simple things like mouthwash, to diet and behavior changes, and sometimes fillings or other surgical treatment is needed.

Toothpaste - Sensitivity toothpaste has medication that penetrates the pores of the tooth and dulls the nerve response. This does not “fix” the issue however, as the pores are still exposed, but it is the first line of defense because it is non-invasive, starts to work within days, and can be used long term.

Fluoride - Fluoride seals the pores in your teeth and eliminates sensitivity permanently. Unfortunately it takes months of daily use to become effective. Using a simple over-the-counter fluoride mouthwash (e.g. ACT®) is the best non-invasive, long-term approach to managing sensitivity. For more severe cases, custom-fit trays are made that can be filled with a prescription fluoride gel for daily use.

Fillings - When the tooth erosion is significant enough, replacing the lost structure with white filling can protect and insulate the tooth from sensitivity, while also making it look better. These fillings along the gum line typically last about a decade, and can be easily replaced when necessary. See *the back panel of this brochure for an example.*

Behavior Changes - Changing how hard you brush or being more aware of your clenching and grinding habits can make a huge difference in your overall tooth sensitivity. Other behaviors, like bulimia, can be devastating to your teeth and must be changed over the long term to have any hope of improved symptoms.

Diet - Sugary, acidic drinks can wreak havoc on your teeth. Like most things in life, moderation is key. Chewing sugar-free gum after meals or sugary drinks can be helpful.

Medications - Medications may be drying out your mouth, or make you clench more, or perhaps adding medication can help you control conditions like acid reflux. Either way, your dentist and physician may need to consult with one another to find a solution that works for you.



Inman Park Dentistry's prescription to manage your tooth sensitivity:

STEP ONE

Brush gently with a sensitivity toothpaste (e.g. Sensodyne®) every time you brush for at least 1-2 weeks. Be aware that most "whitening" toothpastes are extra-abrasive, and can literally wear away your gums and teeth over the years.

STEP TWO

Use a fluoride containing mouthwash (e.g. ACT®) every day, for the rest of your life. Next to brushing and flossing, it is the best preventative measure you can take to strengthen your teeth and reduce sensitivity.

STEP THREE

Be aware of your diet. Acidic drinks (especially all the good stuff... wine, juice, soda, etc.) can etch and slowly erode your tooth. Minimizing the time those drinks are on your teeth can help (drinking a soda in 10 minutes is better than sipping on it repeatedly over an hour).

STEP FOUR

Relax. Clenching and/or grinding will always make sensitivity worse, and it is often stress-related. Since you can not remove all stress from your life, it helps to be aware of any clenching. See our brochure on TMD/TMJ issues for advice. For chronic TMD-related sensitivity, an occlusal splint (night guard) is recommended.

STEP FIVE

If you are still experiencing uncomfortable sensitivity, talk to your dentist. You may have other issues contributing to your sensitivity that we need to identify and fix.

Are your teeth sensitive near the gum line, with notched enamel?

The term for such wear and tear on a tooth is “abfraction”, and it is **one of the most common oral health issues for adults over the age of forty.**



Abfraction lesions repaired with composite (filling).

Actual case done by Alex Rodriguez, DMD.

Abfractions affect the health of your mouth in several ways:

- The gums have receded exposing the softer dentin layer. Moderate or severe recession of the gums must be corrected surgically, typically by a periodontist (gum specialist).
- The worn dentin surface exposes the inner pores, which can make the tooth extremely sensitive for some people.
- Structurally, the tooth is weaker and prone to further erosion. In severe cases, the tooth can fracture at the gum line if the abfraction is advanced.
- Esthetically, the tooth may look unhealthy because of the yellower dentin showing when you smile.

Minor abfractions can be monitored for any worsening over time. But moderate to severe abfractions should be corrected with tooth-colored fillings (as shown above), placed about once every decade.