



# Using Icon to Halt Pediatric Caries Lesion Progression in Interproximal Posterior Cases

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It is a long-standing philosophy of mine to treat caries lesions, whenever possible, with non-surgical intervention. Filling without drilling is now a possibility using Icon. Icon is an easy-to-use non-surgical technique to treat incipient smooth surface caries on permanent teeth by placing an infiltrating resin that strengthens, stabilizes, and limits lesion progression.

## Case Presentation Example

Patient presents with a small interproximal lesion (Class II) located on mesial tooth #19, a permanent first molar. It is radiographically identified 2/3 through the enamel but not touching the DEJ yet.

## Treatment Plan

These small Class II lesions are the most common lesions found in our day-to-day pediatric practice. They are too small to cut in one's view so we typically take a "watch" approach, but we also want to do something to halt the progression of the lesion. The plan is to treat the lesion non-surgically by using the Icon resin infiltration procedure.

## Preparation

An orthodontic separator is placed around the area for one week prior to the Icon procedure. This allows a clear view of the lesion to ensure that it's not cavitated, and to also more readily place the Icon apparatus that will be used in between the teeth.

After one week, the patient returns and is ready for the Icon procedure.

## Step-by-Step Technique

1. Remove the separator, check the tooth surface, and place a rubber dam around the area. We use flat, very gentle pediatric clamps so 90% of the time we don't even have to use local or even topical anesthesia.
2. Deposit the Icon etchant into the tooth from the packet. Allow it to sit for a couple of minutes and then rinse.
3. Place the alcohol on the tooth and allow it to dry for about 30 seconds. By design, Icon is extremely hydrophobic and very sensitive to moisture. Because of this, I then use an air syringe to further ensure dryness of the area for optimal resin infiltration.



4. Using the mylar-style packet, place the resin infiltrant into the tooth. Let it set for three minutes to allow Icon to completely diffuse into the tooth.
5. Remove, and then floss the surface to make sure there is no extra material.
6. Light cure the area, then place the resin again for one additional minute.
7. Remove, floss again, light cure, and the simple process is complete.

### Conclusion

As opposed to sealants commonly used on the outside of the tooth, Icon resin is placed inside of the tooth and works by capillary action. Many clinical studies have shown that by using the Icon resin infiltration procedure, it almost reaches the DEJ depending on how deep the lesion\*. It non-surgically fills the caries lesion without the need to surgically compromise the tooth. The result is a resin-filled lesion that halts progression. I've personally performed hundreds of these cases with an astounding 98% success rate spanning over approximately four years. We continuously do follow up x-rays, and the lesions simply do not change.

### The Icon Patient Pack Includes

- 15% hydrochloric acid (Icon Etch)
- One syringe of ethanol alcohol (Icon Dry)
- One syringe of resin (Icon Infiltrant, low viscosity liquid resin)
- Applicator tips

\*Clinical Studies available upon request