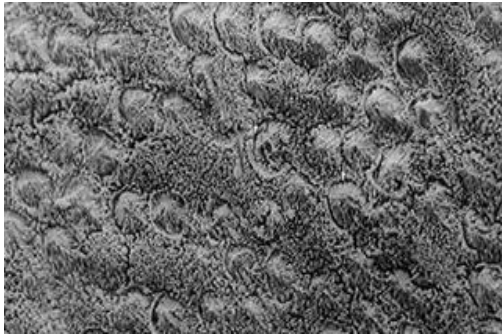


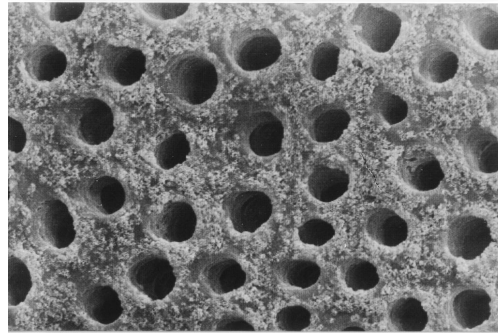
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### Root and dentin sensitivity

Exposed dentin, particularly on exposed roots, can become extremely sensitive to cold, air, touch and sometimes heat. This is caused by acidic foods coming into contact with the surface. The acid dissolves some of the surface, opening tiny tubules that run from the surface to the nerve of the tooth. See pictures below (about 500x magnification, scanning electron microscope):



Normal dentin surface



Acid treated dentin surface

These open tubules transmit sensation to the nerve. The process can be reversed by completely avoiding acids for one to two weeks. Additionally a source of bioavailable calcium in paste form can be applied 3-4 times a day by wiping it on with a finger. We currently use a product called MI Paste.

Desensitizing toothpastes will also help, but they do not treat the cause, only make the nerve less sensitive.

The most common acidic foods are: citrus fruits and juices, other fruit and juices, soft drinks, wine and vinegar (especially in salad dressings). The most important thing is duration of exposure: frequent ingestion is worse than a larger quantity eaten quickly.

Another thing to avoid is brushing right after acid exposure, this can remove the acid-softened layer and in some cases cause deep notching of exposed roots. You should wait 2-3 hours before brushing.

Here is a good article for more detail:  
<http://jada.ada.org/content/137/7/990.long>