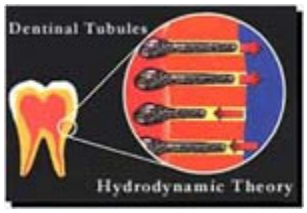
Hydrodynamic Theory

A commonly accepted theory to explain **Dentinal Hypersensivity**



Dentin can become sensitive when dentinal tubules are exposed in the oral cavity. Stimulus applied to dentin causes fluid in the dentinal tubules to flow at an increased or decreased rate, causing the odontoblasts to expand or contract to fill in the innermost tubule space. A small portion of the odontoblasts along the nerve fibers extend into the tubules. The reaction of the odontoblasts to the fluid movement caused by the stimulus affects the nerve fibers, which is thought to be the origin of Dentinal Hypersensivity.

Contributing Factors

Attachment Loss
Exposure of Root Surfaces

Mild

Moderate

Severe

Wear
Loss of Enamel/ Dentin/ Cementum

Abrasion
Mechanical wear of tooth structure, not caused by normal chewing.

Attrition
Gradual wearing away of tooth structure, resulting from chewing or grinding.

Erosion
Wear resulting from acids (e.g., dietary, stomach, or environmental).