

# Dentin Hypersensitivity

**ADOPTED** by the FDI General Assembly **September, 2009** in **Singapore, Singapore**

## Introduction

Dentin hypersensitivity is characterized by short sharp pain arising from exposed dentin most commonly at the tooth cervical area in response to stimuli (typically thermal, evaporative, tactile, osmotic or chemical), but which cannot be ascribed to any other dental defects, diseases or restorative treatments. It is a commonly encountered but frequently misunderstood clinical problem. It occurs in many adults at various levels of prevalence ranging from 3% to 57%, owing to differences in the populations studied and the methods of investigation used. In general, patients with periodontitis have a relatively higher prevalence of dentin hypersensitivity, presumably because of the greater risk and extent of root exposure as a result of periodontal destruction. In recent years, there are increasing numbers of younger adults with this noxious problem, likely due to the exposure to some predisposing factors such as acidic diets, traumatic brushing, personal habits, and the inappropriate use of tooth whitening products. Growing numbers of patients are seeking professional care for this problem.

Exposure of open dentinal tubules due to loss of enamel and/or gingival recession or both with subsequent loss of cementum and/or dentin is considered to be a primary cause of dentin hypersensitivity consistent with the hydrodynamic theory. Over time there can be a natural process for obliteration of open tubules by calcification crystals. In addition, dentin hypersensitivity could often be combined with other conditions, such as erosion, abrasion, attrition, abfraction, bruxing, genetic conditions, and periodontal conditions.

FDI recognizes that:

- Understanding of the etiological/predisposing factors and appropriate diagnosis are crucial to effectively manage dentin hypersensitivity.
- Currently, there is inadequate evidence to establish a specific guideline for management of dentin hypersensitivity.
- There is a wide range of treatment options that can modify, block, or alter fluid flow through dentinal tubules and thereby prevent pulp nerve response.
- Following identification of predisposing factors and appropriate diagnosis, dentin hypersensitivity could be co-managed by oral healthcare professionals and by patients at home as appropriate. Usually, the relevant predisposing factors should be addressed and appropriate prevention measures be reinforced. Least invasive treatments (e.g. use of desensitizing toothpastes and agents) are undertaken first, and if necessary, invasive treatments may be provided later by dentists.
- Further multidisciplinary research into dentin hypersensitivity is encouraged.

## References

- Canadian Advisory Board on Dentin Hypersensitivity. Consensus-based recommendations for the diagnosis and management of dentin hypersensitivity. *J Can Dent Assoc* 2003; 69:221-226.
- Orchardson R, Gillam DG. Managing dentin hypersensitivity. *JADA* 2006; 137:990-998.

- Drisko C. Oral hygiene and periodontal considerations in preventing and managing dentine hypersensitivity. *Int Dent J* 2007; 57:399-410.
- West NX. The dentin hypersensitivity patient – a total management package. *Int Dent J* 2007; 57:411-419.