



# Dentin Hypersensitivity

## Closing the Knowledge Gaps

Canadian Advisory Board on Dentin Hypersensitivity

The high prevalence of dentin hypersensitivity, combined with continued underreporting and underdiagnosis, has intensified the need to focus on the management of this condition. Responding to that need, the Canadian Advisory Board on Dentin Hypersensitivity, a committee representing a broad range of dental care specialties, convened to determine best-practice recommendations.<sup>1</sup> Collectively, they evaluated the scientific evidence as well as condition-related knowledge gaps that were identified by an extensive national survey of 8,000 dental professionals (7% response rate). By contributing their own diverse expertise, the committee produced the first ever “Consensus-Based Recommendations for the Diagnosis and Management of Dentin Hypersensitivity,” to provide direction to the dental care profession.



Gordon Schwartz,  
DDS, PhD, Dip Perio



Véronique Benhamou,  
DDS, Cert Perio

### Gathering evidence: the foundation for a consensus.

The Canadian Advisory Board on Dentin Hypersensitivity began its task by gathering information from two key sources. A thorough search of literature, articles and reviews from 1966 to 2002 was conducted to provide the available scientific evidence; while a large, national, multi-disciplinary survey revealed current clinical knowledge and practices. This Educational Needs Assessment Survey, sent to 5,000 dentists and 3,000 dental hygienists, was implemented to determine practitioners' understanding of the

mechanisms and management of dentin hypersensitivity.

The results of the 66-item questionnaire highlighted 14 key knowledge gaps spanning diagnosis, management and treatment, reflecting the limited emphasis on dentin hypersensitivity in the curricula of dental and hygiene schools. The following present some of the identified misconceptions:

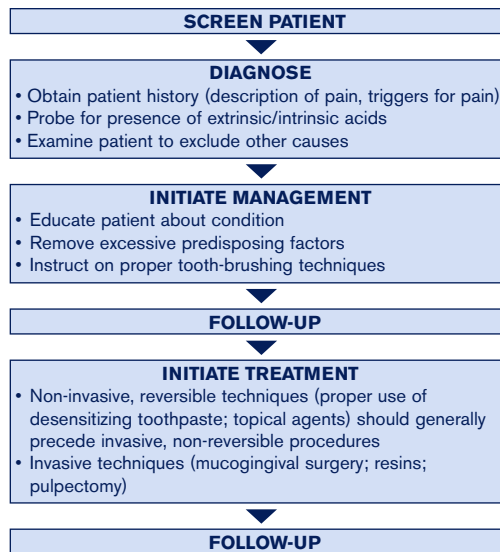
- Practitioners underestimated the prevalence of this condition, particularly among young adults.
- Screening was not a primary consideration, putting the onus on patients to initiate conversation about their sensitivity concerns.
- Although dentin hypersensitivity is by definition a diagnosis of exclusion, less than half of the practitioners attempted to exclude other diseases.
- When identifying causes, few professionals knew that enamel erosion is the primary factor leading to dentin hypersensitivity, with 60% incorrectly identifying gingival recession as the primary cause.
- Over 85% incorrectly cited toothbrush abrasion as the reason for continued tubule exposure, even though toothbrushing, with or without toothpaste, has no significant effect on tubule exposure.
- Treatment strategies varied greatly, with only 50% responding that they attempted to modify predisposing factors.
- Over half of the surveyed dental care professionals incorrectly identified fluoride instead of potassium nitrate or strontium chloride as the active agent in desensitizing toothpastes.

- Many were unaware that most desensitizing toothpastes, when used regularly, are effective in preventing caries, just like non-desensitizing toothpastes that contain fluoride.

It is not surprising therefore, that 50% of respondents reported they were only somewhat or very confident about managing their patients' pain.

### Clinical and academic experience: a framework for management.

The limited professional knowledge base emphasized the pressing need for clear instruction in managing and treating dentin hypersensitivity. Where science was lacking, board members incorporated learnings from their own diverse clinical and academic experience, developing a framework of fundamental steps to direct clinicians. To provide a systematic approach to the problem, a treatment algorithm was developed, reflecting many of the board's final recommendations. This included diligent screening, correct diagnosis, management and treatment, along with regular follow-up.



See *Consensus-Based Recommendations for detailed algorithm on diagnosis and management*

### Education: a prerequisite for best practice.

While most patients hesitate to report their sensitivity, methodical screening and diagnosis by dental professionals are also lacking. As a result, dentin hypersensitivity is highly prevalent, but underreported and underdiagnosed.\* Professionals are often unaware that affected patients may be deterred from keeping regular dental and

hygiene appointments, due to the discomfort elicited by various standard procedures.<sup>2</sup> This highlights the importance of ongoing screening and the need for improved management skills.

Dental professionals must initiate conversation about sensitive teeth, provide patient education and long-term counselling to address the high prevalence of this painful condition. Increasing emphasis on dentin hypersensitivity in the curriculum of dental and hygiene schools, as well as the availability of continuing dental education programs, will elevate professional knowledge and confidence. This will provide dentists and hygienists with the tools to assume greater responsibility in addressing this condition, so that patients are not left to suffer in silence.

The Canadian Advisory Board on Dentin Hypersensitivity was supported by an unrestricted educational grant from GlaxoSmithKline Consumer Healthcare.



10367  
MM5063CA

\*Reported prevalence range 8-57%.

1. Consensus-Based Recommendations for the Diagnosis and Management of Dentin Hypersensitivity. Canadian Advisory Board on Dentin Hypersensitivity. *J Can Dent Assoc* 2003;69(4):221-226.

2. Haywood, VB. Dentin hypersensitivity: bleaching and restorative considerations for successful management. Proceedings of a symposium held at the FDI World Dental Congress, Vienna 2002. *International Dental Journal* 2002;52(5):376-384.