

Dental Hygiene Focus:

New Perio Classifications

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A New Classification of Periodontal Diseases: A Paradigm Shift for All!

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Editor's notes: This article was first published as an editorial in the October 2018 issue of the *Canadian Journal of Dental Hygiene*. Salme E Lavigne is scientific editor of the journal; Jane L Forrest is an editorial board member and director of the the National Center for Dental Hygiene Research and Practice based in the United States.

In addition, please note that the new AAP classification system has replaced the term "plaque-induced gingivitis" with "dental biofilm-induced gingivitis," reflecting our new knowledge of the oral microbiome arising from the Human Microbiome Project.

We were both privileged to attend the recent EuroPerio conference, the largest periodontal conference in the world, held in Amsterdam in June 2018. With over 10,000 attendees from around the globe, the conference high point was the presentation of the work undertaken by the 110 experts who participated in the World Workshop on the Classification of Periodontal and Peri-Implant Diseases and Conditions, resulting in a new classification of these diseases that is important for all dental hygiene professionals. Given that the former classification was almost two decades old (1999), it was truly time for a change and to recognize new knowledge along with its implications.

The modifications to the classification system required an extensive review and interpretation of the scientific literature by experts in 4 separate working groups: periodontal health and gingival diseases and conditions; periodontitis; manifestations of systemic diseases and conditions; and peri-implant diseases and conditions. Once work began, it was recognized that "severity" was not simply the presence of plaque, as every client is not the same. Classifying disease based on plaque microbes was also found not to be viable given the recent Human Microbiome Project that has revealed the presence of over 1,000 oral microbes and has introduced the concept that symbiosis is destroyed when biofilm accumulates, creating a dysbiosis. Secondary descriptors such as extent, rate of

progression, diagnostic biomarkers, and patient outcomes were also considered. However, once the working groups looked at the evidence, they agreed that the new system must first be designed to prevent overtreatment and thus they created "case definitions" for each of the periodontal and peri-implant diseases and conditions.

One notable change to the classification system was prompted by the recognition that there is no evidence to justify the distinction between chronic and aggressive periodontitis as separate diseases. Both are now found under the single category of "periodontitis." Additionally, the working groups added the category of "periodontal health," which was not previously included. However, necrotizing diseases and periodontitis as a manifestation of systemic disease remain the same. Overall, the new classification is very different from the previous version as the periodontitis category is based on the oncology system of "staging" and "grading" of disease. **Staging** classifies both severity and extent of current tissue loss, including tooth loss due to periodontitis, while also incorporating the level of complexity in the long-term management of both function and esthetics. In contrast, **grading** incorporates 4 other biological dimensions: history-based periodontitis progression; risk for further periodontitis progression; anticipated inferior treatment outcomes; and risk that the

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A New Classification of Periodontal Diseases...cont'd

disease or its treatment may have a negative impact on the general health of the client. This system is aligned with the principles of “personalized medicine” based on the multifactorial etiology, and is believed to optimize care and improve prognosis while being adaptable over time.

The presentation concluded with a 4-step practical approach to implementing the new classification for periodontitis¹:

Step 1: Prepare an initial overview of the case—based on full mouth radiographs, full mouth probing depths, and missing teeth to first categorize either mild to moderate periodontitis or severe/very severe periodontitis.

Step 2: Determine Stage I, II, III, IV to establish case complexity—based on a consideration of maximum clinical attachment loss (CAL) or bone loss; confirmation of bone loss patterns (horizontal or vertical); and tooth loss due to periodontitis.

Step 3: Determine and refine the Grade (A, B or C)—based on history/risk of progression/age; risk factors; medical status and systemic inflammatory considerations; response to scaling and root planing and plaque control; and detailed assessments.

Step 4: Establish treatment plan—based on stage and grade, to fall under either standard treatment (mild to moderate periodontitis, stages I & II; grade A or B) or complex and/or multidisciplinary treatment (severe/very severe periodontitis, stages III & IV; grade B or C).



This editorial has hopefully provided some background on this new classification system. However, coverage of all the specific details is beyond the scope of this piece. We urge all of you to read the recently published article by Caton et al.² in its entirety as it offers a more detailed introduction to this new system. The updated classification incorporates 2 decades of contemporary research findings and will guide how inclusion criteria are defined for future periodontal and peri-implant research. As professionals in a dynamic and evidence-based discipline, dental hygienists should start using this new classification system as it will allow them to remain current in clinical practice and in how future practitioners are prepared in our education programs.

References

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2. Caton G, Armitage G, Berglundh T, Chapple ILC, Jepsen S, Kornman K, et al. A new classification scheme for periodontal and peri-implant diseases and conditions—introduction and key changes from the 1999 classification. *J Periodontol*. 2018 Jun;Suppl 1:S1-S8.

