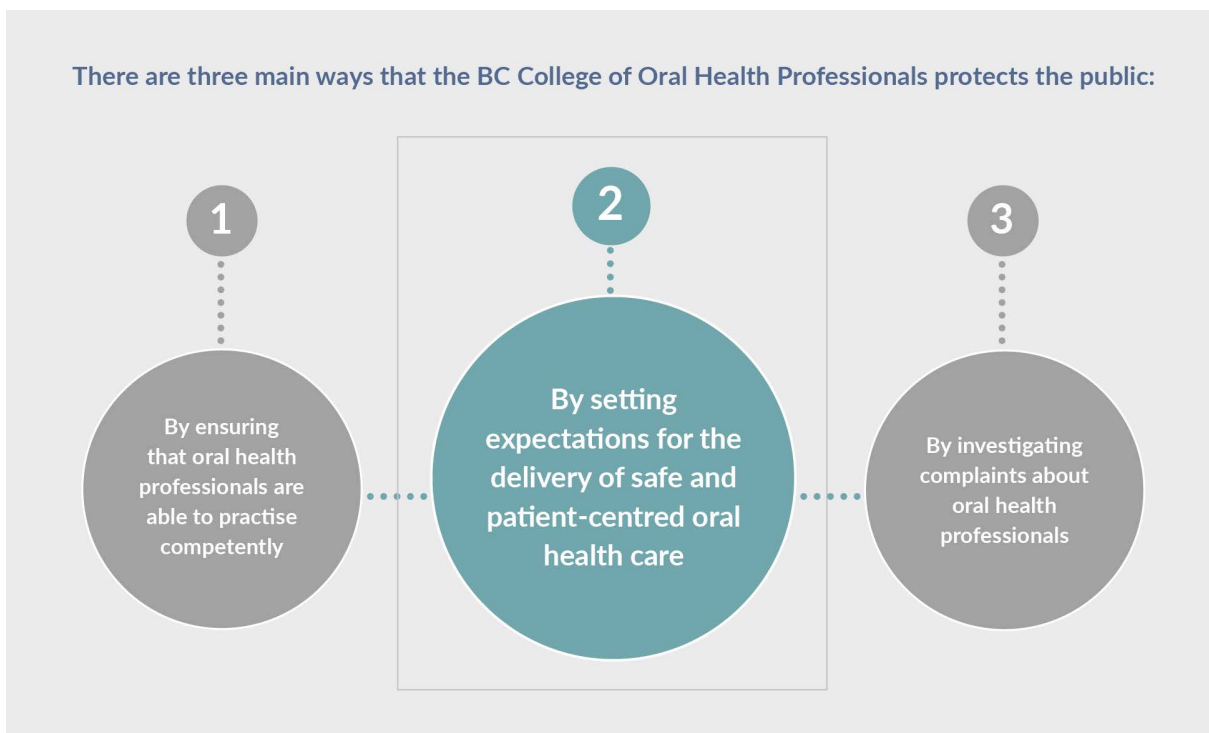


Expectations for clinical and ethical practice

Interpretation Guidelines: Laser Use in Periodontal Therapy

Applies to Dental Hygienists

There are three main ways that the BC College of Oral Health Professionals protects the public:



The British Columbia College of Oral Health Professionals (BCCOHP) was created on September 1, 2022 through the amalgamation of four health regulatory colleges: the College of Dental Hygienists of BC, the College of Dental Surgeons of BC, the College of Dental Technicians of BC, and the College of Denturists of BC. All current requirements for standards of clinical and ethical practice issued by the four colleges remain in place upon amalgamation. This document was created by the College of Dental Hygienists of British Columbia and will be updated to reflect the amalgamation.

Laser Use in Periodontal Therapy

May 5, 2020 Update: The CDHBC Interpretation Guidelines are under review. The content of these guidelines remains in place at this time; however, they need to be applied in the context of the new Dental Hygienists Regulation and CDHBC Bylaws. Readers are welcome to contact the CDHBC office if they have questions about the application of these guidelines in the interim time.

PURPOSE

To provide guidelines for laser use in periodontal therapy by dental hygienists.

BACKGROUND

Laser is an acronym for Light Amplification by Stimulated Emission of Radiation.

Some specific dental lasers, such as the diode laser and Nd:YAG are being used in North America, where legislation permits, by dental hygienists. These lasers are being used in non-surgical periodontal treatment regimens by removing diseased epithelial lining of the periodontal pocket and reducing the intrasulcular bacterial population. Removal of the diseased epithelial lining, otherwise known as gingival curettage, whether completed using a debridement instrument or a laser is not within the scope of practice for dental hygienists in BC.

Dental hygienists should be aware that the diode laser and Nd:YAG are also used as soft tissue surgical lasers. It is important to note that lasers have the potential to cause permanent thermal damage to bone and tooth structures if used inappropriately.

There is limited research supporting the use of lasers to decrease subgingival bacterial loads in comparison to traditional non-surgical periodontal therapy. Additional studies are required to compare the effectiveness of laser pocket disinfection as an adjunct to scaling and root planning (SRP) as compared to SRP alone.

Lasers are showing potential for the removal of calculus from a diseased root surface, however, there is potential for damage to the root surface. Further research is required to determine effectiveness of lasers for SRP.

The Canadian Academy of Periodontology (CAP) does not support the use of lasers in the treatment of periodontal disease due to the lack of long-term comparative studies. Further to this, the American Academy of Periodontology (AAP) re-affirms that there is insufficient or

conflicting evidence to support the use of lasers for pocket disinfection, curettage and SRP. Further research is required in these areas to determine effectiveness and safety.

POLICY

Dental hygienists who have undertaken appropriate education may use a diode laser as an adjunct for periodontal therapy. "Appropriate education" as defined in the CDHBC [Scope of Practice Statement](#) states that the preferred "appropriate education" for laser use in periodontal therapy is formal theoretical and clinical instruction.

Dental hygienists using a diode laser must ensure the tip is not initiated. An initiated tip leads to ablating or cutting of the soft tissues, otherwise known as gingival curettage, which is not within the dental hygiene scope of practice.

Additionally, the Nd:YAG laser would not be appropriate for use by a dental hygienist for SRP, as the thermal heat generated can lead to irreversible pulpal changes within the tooth. As well, the ND:YAG is not appropriate for dental hygienists to use for the purpose of pocket disinfection as it ablates the tissues in order to destroy pathogenic bacteria.

It is not within the CDHBC Scope of Practice for dental hygienists to use lasers for the purpose of SRP or gingival curettage.

The College advises dental hygienists that there is insufficient evidence to support the use of lasers in removing calculus from diseased root surfaces or in the reduction of subgingival bacterial loads. Registrants need to consider the risks and benefits of the use of lasers in adjunctive periodontal therapy, along with current indications for their use based on scientific evidence-based resources.

The College recommends that a laser safety program be implemented prior to the use of lasers within the dental hygiene practice setting. This is to ensure the safety of the client and the clinician.

REFERENCES

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Added to Handbook: Prior to June 2004

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