

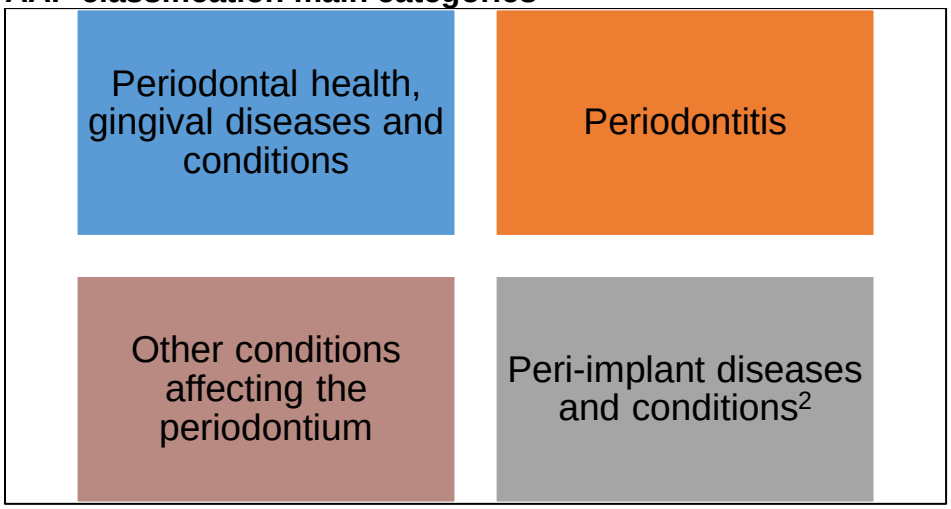
Episode #50 – Treatment Guideline for Periodontitis: Part 2

December 10, 2021

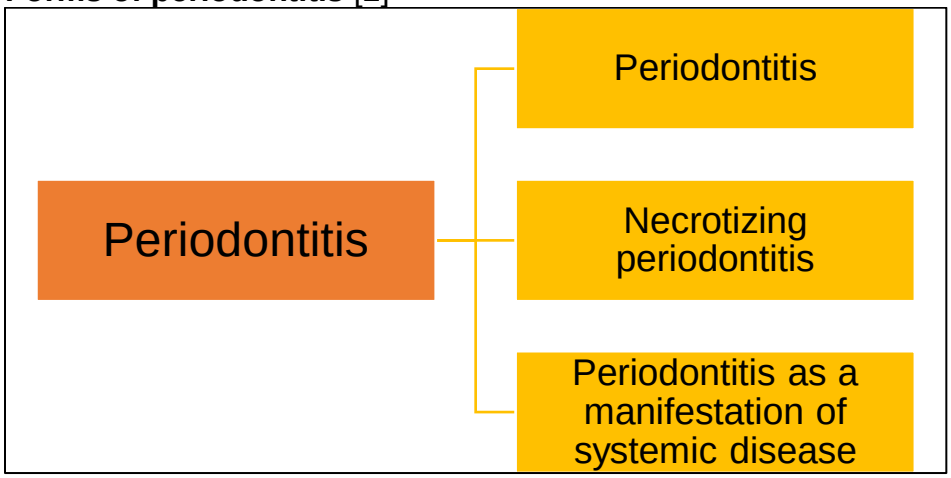
Overview of AAP classification system

The American Academy of Periodontology (AAP) classification of periodontal diseases and conditions[1] consists of 4 main categories. [1]

AAP classification main categories



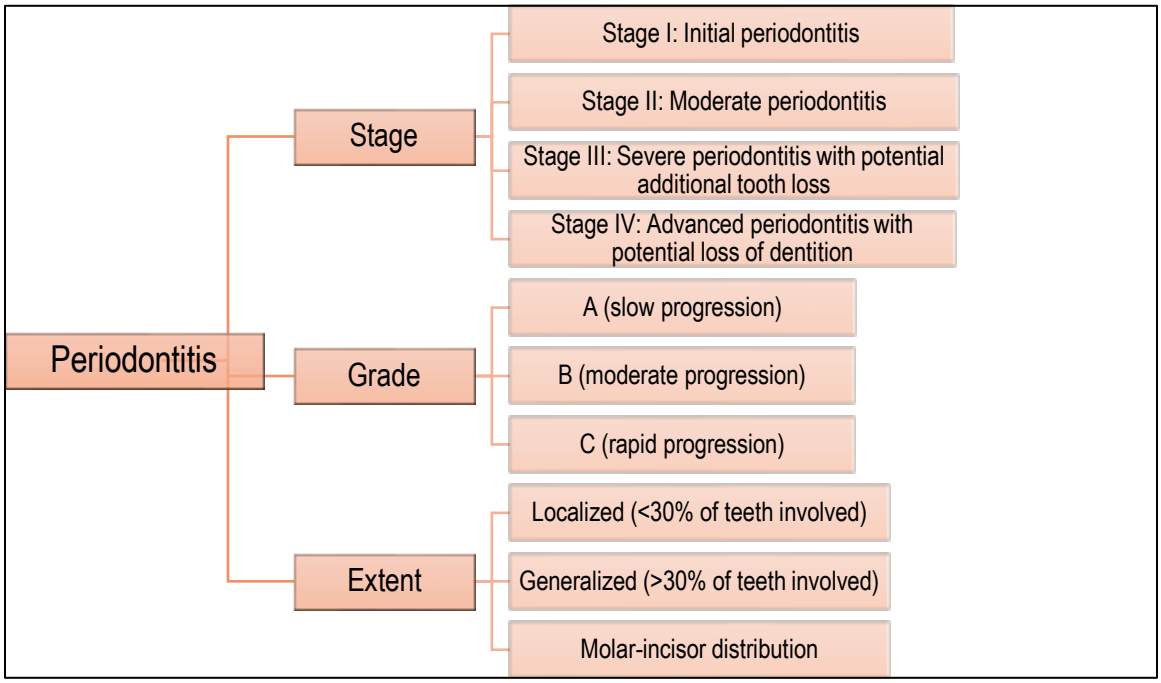
Forms of periodontitis [2]



[1] Refer to Episode #49 for additional information on AAP classification system.
[2] Refer to Episode #46 for in depth information on classifying peri-implant diseases and conditions.

Disclaimer: This document is educational and not intended to provide clinical advice nor should it be used as a replacement for professional dental or medical advice. Dental hygienists are encouraged to consult with CDHO practice advisors and refer to CDHO guidelines. Dental hygienists are responsible for the decisions they make and for the consequences associated with those decisions.
© ODHA

Periodontitis according to stage, grade, and extent[2]



Staging of periodontitis

Staging of periodontitis is based on:

- Interdental clinical attachment loss (CAL)[3];
- Radiographic bone loss (RBL);
- Periodontal probing depths;
- Loss of teeth due to periodontitis;
- Vertical versus horizontal bone loss; and
- Furcation involvement. [3]

Staging criteria [3]

Stage	CAL	Probing depth	Tooth loss from periodontitis	Bone loss trend	Furcation	RBL
I (Initial periodontitis)	1-2 mm	≤4 mm	None	Horizontal	Class I	<15%
II (Moderate periodontitis)	3-4 mm	≤5 mm	None	Horizonal	Class I	15-33%
III (Severe periodontitis)	≥5 mm	≥6 mm	≤4 teeth	Vertical	Class II to III	Extending to middle 3rd of root or beyond
IV (Advanced periodontitis)	≥5 mm	≥6 mm	≥5 teeth	Vertical	Class II to III	Extending to middle 3rd of root or beyond

[2] Refer to Episode #8 for additional information on staging and grading.
[3] Refer to Episode #20 for additional information on CAL.

Disclaimer: This document is educational and not intended to provide clinical advice nor should it be used as a replacement for professional dental or medical advice. Dental hygienists are encouraged to consult with CDHO practice advisors and refer to CDHO guidelines. Dental hygienists are responsible for the decisions they make and for the consequences associated with those decisions. © ODHA

Grading of periodontitis

Determining factors for grading periodontitis include:

- Changes in RBL or CAL over five years;
- Amount of biofilm deposit present related to level of destruction;
- Smoking status;
- HbA1c levels[4]; and
- Ratio of percentage bone loss to age of the client (% bone loss/age). [3]

Grading criteria [3]

	Direct evidence	Indirect evidence		Grade modifiers	
	RBL or CAL over 5 years	**% Bone loss/age**	**Biofilm**	**Smoking**	**HbA1c**
Grade A	None	<0.25	Heavy biofilm Low destruction	Non-smoker	No diabetes diagnosis
Grade B	<2 mm	0.25-1.0	Destruction reflects biofilm deposits	<10 cigarettes/day	HbA1c <7%
Grade C	≥2 mm	>1.0	Destruction exceeds biofilm deposits Rapid progression Early onset	≥10 cigarettes/day	HbA1c ≥7%

EFP S3 level clinical practice guideline[5]

In 2020, the European Federation of Periodontology (EFP) published the first evidence-based guideline for treating periodontitis. The guideline is based on diagnosis of stage I-III periodontitis according to the American Academy of Periodontology (AAP) classification of periodontal diseases. [4]

Treatment of stage I-III periodontitis – The EFP S3 level clinical practice guideline utilizes the highest level of methodology. The methodology included synthesizing relevant research from 15 commissioned systematic reviews, evaluating the quality and strength of evidence, formulating specific recommendations, and determining recommendation consensus. The guideline has 62 clinical treatment recommendations, each graded by strength of evidence and degree of consensus.[6] [4] [5]

Strength of recommendation:

- Grade A: strong recommendation: i.e., recommended (↑↑) or not recommended (↓↓)
- Grade B: recommendation: i.e., suggested (↑) or not suggested (↓)
- Grade 0: open recommendation: i.e., may be considered (←→)

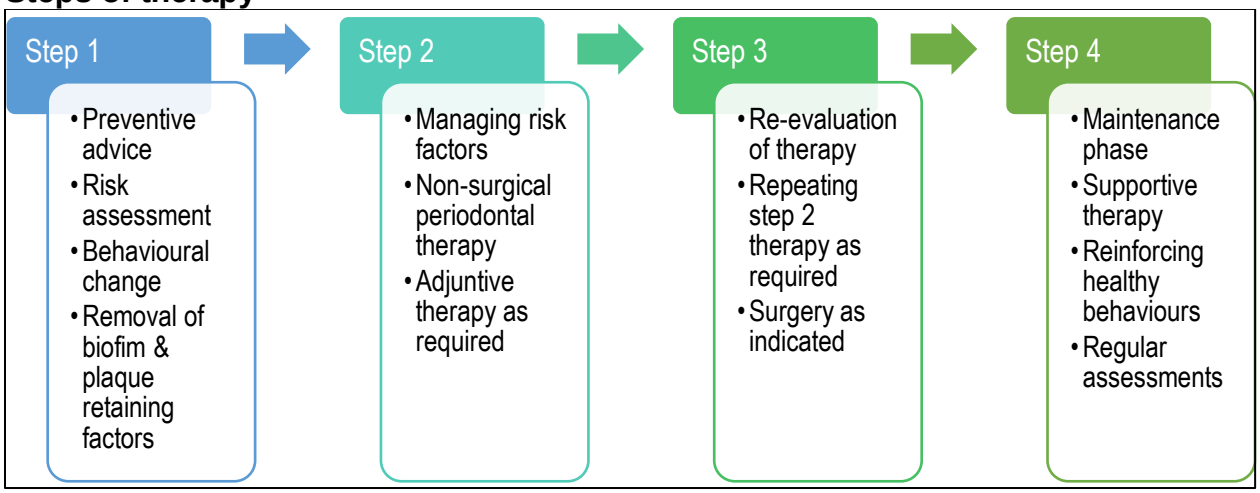
[4] HbA1c or glycated hemoglobin A1c is measured via a blood test. It indicates the average level of blood glucose levels over the past 2 to 3 months.
[5] Refer to Episode #49 for additional informatin on the *EFP S3 level clinical practice guideline.*
[6] Not all recommendations are included in this document. Refer to the *EFP S3 level clinical practice guideline* for the full list of recommendations and supporting evidence.

Disclaimer: This document is educational and not intended to provide clinical advice nor should it be used as a replacement for professional dental or medical advice. Dental hygienists are encouraged to consult with CDHO practice advisors and refer to CDHO guidelines. Dental hygienists are responsible for the decisions they make and for the consequences associated with those decisions. © ODHA

Strength of consensus:
- Unanimous consensus (agreement of 100% of participants)
- Strong consensus (agreement of >95%)
- Consensus (agreement of 75-95%)
- Simple majority (agreement of 50-74%) [5]

The guideline provides oral health professionals with clinical recommendations for the treatment of stage I-III periodontitis utilizing 4 sequential steps:
1. Reducing inflammation by motivating clients to adopt good oral hygiene practices and a healthy lifestyle, and through professional removal of supragingival deposits.
2. Providing professional subgingival debridement with adjunctive therapies as required.
3. Administering additional complex treatments (e.g., resective, assess flap, and regenerative surgery) when indicated.
4. Preventing relapse through long-term supportive care, healthy lifestyle, good oral hygiene, and regular assessments. [4] [5]

Steps of therapy



First step of therapy

Step 1 of therapy is to guide behaviour change by motivating the client to achieve successful dental biofilm removal and to control local and systemic modifiable risk factors that significantly influence the disease. The first step is insufficient to treat periodontitis; however, it provides the foundation to achieve ideal treatment response and long-term stable results.

Step 1 includes:
- Educational and preventive interventions designed to control gingival inflammation,
- Professional mechanical removal of supragingival deposits, and
- Elimination of local biofilm retentive factors.

Recommendation 1.1 – Reinforcing oral hygiene practices to control gingival inflammation throughout all 4 periodontal therapy steps is recommended. This includes:

Disclaimer: This document is educational and not intended to provide clinical advice nor should it be used as a replacement for professional dental or medical advice. Dental hygienists are encouraged to consult with CDHO practice advisors and refer to CDHO guidelines. Dental hygienists are responsible for the decisions they make and for the consequences associated with those decisions. © ODHA

- Providing oral hygiene instructions (OHI) to reduce plaque and gingivitis.
- Recommending manual or power toothbrushing as the main method to reduce plaque and gingivitis.
- Teaching interdental cleaning, preferably with interdental brushes, when gingival inflammation is present. Other interdental cleaning devices and methods may be instructed when interdental brushes are not suitable. [5]

Grade of recommendation: Grade A—↑↑
Strength of consensus: Strong consensus

Recommendation 1.2 – Emphasizing the importance of oral hygiene and engaging the client in behavioural change to improve oral hygiene is recommended. [6]

Grade of recommendation: Grade A—↑↑
Strength of consensus: Strong consensus

Recommendation 1.4 – Performing supragingival professional mechanical plaque and calculus removal and controlling biofilm retentive factors is recommended.
- Supragingival debridement is a critical component to prevent periodontitis and treat plaque-induced periodontal diseases.
- Biofilm retentive factors, due to tooth anatomy or inadequate restorative margins, should be prevented and/or eliminated since they are associated with gingival inflammation and/or periodontal attachment loss [5]

Grade of recommendation: Grade A—↑↑
Strength of consensus: Unanimous consensus

Recommendation 1.5 – Implementing risk factor control interventions for smoking and diabetes is recommended. Both smoking and diabetes are risk factors in the etiopathogenesis of periodontitis. Interventions to control these risk factors include:
- Client education and advice (e.g., smoking cessation), and
- Medical referral as required (e.g., diabetes educator, dietician, physician, nurse practitioner). [5] [7]

Grade of recommendation: Grade A—↑↑
Strength of consensus: Strong consensus

Recommendation 1.6 – Providing tobacco smoking cessation interventions is recommended. Interventions include:
- Brief counselling, and
- Client referral for advanced smoking cessation counselling and pharmacotherapy as required. [5] [7]

Grade of recommendation: Grade A—↑↑
Strength of consensus: Unanimous consensus

Disclaimer: This document is educational and not intended to provide clinical advice nor should it be used as a replacement for professional dental or medical advice. Dental hygienists are encouraged to consult with CDHO practice advisors and refer to CDHO guidelines. Dental hygienists are responsible for the decisions they make and for the consequences associated with those decisions. © ODHA

Recommendation 1.7 – Providing diabetes control interventions is recommended. Interventions include:

- Education,
- Brief dietary counselling, and
- Referral of clients with hyperglycemia for glycemic control. [5] [7]

Grade of recommendation: Grade A—↑↑
Strength of consensus: Consensus

Second step of therapy

Step 2 of therapy (i.e., cause-related therapy) is aimed at reducing and/or eliminating subgingival biofilm and calculus via subgingival instrumentation (i.e., hand and ultrasonic/sonic instrumentation). Subgingival instrumentation may be supplemented with adjunctive use of physical or chemical agents; local or systemic host-modulating agents; locally delivered subgingival antimicrobials; and/or systemic antimicrobials. This step also requires successful implementation of first step measures.

The first and second steps of therapy can be delivered simultaneously, especially if deep probing depths are present to prevent periodontal abscess formation. [5]

Recommendation 2.1 – Treating periodontitis by providing subgingival instrumentation to reduce periodontal probing depths, gingival inflammation, and the number of diseased sites is recommended. [5] [8]

Grade of recommendation: Grade A—↑↑
Strength of consensus: Unanimous consensus

Recommendation 2.2 – Performing subgingival periodontal instrumentation with:

- Hand instruments,
- Ultrasonic/sonic instruments, or
- Combination of hand and ultrasonic/sonic instruments is recommended.

Research demonstrated treatment outcomes were not dependent on the type of instrument utilized. Instrument choice should be based upon the clinician's experience, skills, and preference, along with client preference. [5] [8]

Grade of recommendation: Grade A—↑↑
Strength of consensus: Unanimous consensus

Recommendation 2.3 – It is suggested subgingival periodontal instrumentation can be performed via:

- Multiple session delivery (i.e., traditional quadrant scaling), or
- Full-mouth delivery within 24 hr (i.e., single or two-stage therapy within 24 hr).

Research suggested treatment outcomes were not dependent on the type of delivery protocol utilized. The type of treatment delivery may be based on client preference and other considerations, such as the client's medical status, tolerance for chair time, or

Disclaimer: This document is educational and not intended to provide clinical advice nor should it be used as a replacement for professional dental or medical advice. Dental hygienists are encouraged to consult with CDHO practice advisors and refer to CDHO guidelines. Dental hygienists are responsible for the decisions they make and for the consequences associated with those decisions. © ODHA

need for repeated oral hygiene instruction. However, clinicians should be aware there is evidence of systemic implications (e.g., acute systemic inflammatory response in the immediate post-operative period) with full-mouth delivery protocols. The full-mouth approach should include careful consideration of the client's general health. [5] [8]

Grade of recommendation: Grade B—↑
Strength of consensus: Strong consensus

Recommendation 2.4 – The use of lasers[7] as adjuncts to subgingival instrumentation is not suggested. There is insufficient evidence to recommend adjunctive therapy with lasers due to the low number of controlled studies and the heterogeneity of study designs. Client-reported benefits remain to be demonstrated. [5] [9]

Grade of recommendation: Grade B—↓
Strength of consensus: Simple majority

Recommendation 2.5 – The use of adjunctive antimicrobial photodynamic therapy (aPDT) at wavelength ranges of either 660-670 nm or 800-900 nm in clients with periodontitis is not suggested. No benefits were observed with the adjunctive application of aPDT. There is insufficient evidence to recommend adjunctive therapy with aPDT due to the low number of controlled studies and the heterogeneity of study designs. Client-reported benefits remain to be demonstrated. [5] [9]

Grade of recommendation: Grade B—↓
Strength of consensus: Consensus

Recommendation 2.6 – The use of local administration of statin gels (atorvastatin, simvastatin, rosuvastatin) as adjuncts to subgingival instrumentation is not recommended. [5] [10]

Grade of recommendation: Grade A—↓↓
Strength of consensus: Strong consensus

Recommendation 2.7 – The use of probiotics as an adjunct to subgingival instrumentation is not suggested. Administration of probiotics conferred limited clinical benefits. [5] [10]

Grade of recommendation: Grade B—↓
Strength of consensus: Consensus

Recommendation 2.8 – The use of systemic sub-antimicrobial dose doxycycline (SDD) as an adjunct to subgingival instrumentation is not suggested.

Systemic SDD (up to 40 mg a day) is used specifically for its anti-inflammatory as opposed to its antimicrobial properties. SDD offers anti-collagenolytic activity, which

[7] Refer to Episode #24 for information on lasers.

Disclaimer: This document is educational and not intended to provide clinical advice nor should it be used as a replacement for professional dental or medical advice. Dental hygienists are encouraged to consult with CDHO practice advisors and refer to CDHO guidelines. Dental hygienists are responsible for the decisions they make and for the consequences associated with those decisions. © ODHA

may reduce connective tissue breakdown and enhance healing after subgingival instrumentation in clients with periodontitis.

Although there is evidence systemic SDD (for 6-9 months) enhances nonsurgical periodontal therapy response, particularly in ≥7 mm pockets, potential risk of adverse reactions and client compliance taking a systemic medication for several months pose some caution in recommending SDD for periodontal treatment. [5] [10]

Grade of recommendation: Grade B—↓
Strength of consensus: Consensus

Recommendation 2.13 – The use of adjunctive antiseptics, specifically chlorhexidine mouthrinse for a limited time period, as an adjunct to subgingival instrumentation may be considered in specific cases.

Several factors should be considered:

- It may be necessary to improve mechanical plaque control before considering chlorhexidine as an adjunct to subgingival instrumentation.
- Specific considerations can be made when used with full-mouth disinfection approaches and/or with systemic antimicrobials.
- Medical status of the client.
- Adverse effects (e.g., staining) and economic costs. [5]

Grade of recommendation: Grade 0—↔
Strength of consensus: Consensus

Recommendation 2.14 – The use of locally administered sustained-release chlorhexidine (e.g., Periochip) as an adjunct to subgingival instrumentation in clients with periodontitis may be considered. [5] [11]

No increase in adverse effects or differences in client-reported outcome measures were observed. The product's cost needs to be considered.

Grade of recommendation: Grade 0—↔
Strength of consensus: Consensus

Recommendation 2.15 – The use of specific locally administered sustained-release antibiotics (e.g., Atridox, Arestin) as an adjunct to subgingival instrumentation in clients with periodontitis may be considered. [5] [11]

A systematic review revealed statistically improved periodontal probing depth reduction with locally applied antibiotics (i.e., Atridox, Arestin) as an adjunct to subgingival debridement on short-term follow-up (6–9 months). Long-term data did not show significant improvement of CAL for either product. [11]

Disclaimer: This document is educational and not intended to provide clinical advice nor should it be used as a replacement for professional dental or medical advice. Dental hygienists are encouraged to consult with CDHO practice advisors and refer to CDHO guidelines. Dental hygienists are responsible for the decisions they make and for the consequences associated with those decisions. © ODHA

No increase in adverse effects or differences in client-reported outcome measures were observed. Harm versus benefit considerations on the use of antibiotics need to be considered. High cost of product needs to be considered. [5]

Grade of recommendation: Grade 0—↔
Strength of consensus: Consensus

Recommendation 2.16 – A. The routine use of systemic antibiotics as adjunct to subgingival debridement in clients with periodontitis is not recommended because of antibiotic stewardship concerns.

Grade of recommendation: Grade A—↓↓
Strength of consensus: Consensus

B. The adjunctive use of specific systemic antibiotics may be considered for specific client categories (e.g., generalized periodontitis stage III in young adults). [5] [12] ·

Grade of recommendation: Grade 0—←→
Strength of consensus: Consensus

Third step of therapy
Step 3 involves treating areas unresponsive to the second step of therapy (i.e., pockets ≥4 mm with bleeding on probing [BOP] or deep periodontal pockets ≥6 mm). The purpose of step 3 interventions is to gain access to deep pocket sites for subgingival instrumentation or to regenerate or resect lesions that make management of periodontitis complex (e.g., intra-bony and furcation lesions).

Step 3 interventions may include:
- Repeated subgingival instrumentation with or without adjunctive therapies
- Access flap periodontal surgery
- Resective periodontal surgery
- Regenerative periodontal surgery

Recommendation 3.1 – Perform access flap surgery on deep residual pockets (≥6 mm) in clients with stage III periodontitis after completion of first and second steps of periodontal therapy is suggested. Repeating subgingival instrumentation on moderately deep residual pockets (4-5 mm) is suggested. [5] [13]

Grade of recommendation: Grade B—↑
Strength of consensus: Consensus

Recommendation 3.3 – Resective periodontal surgery for residual pockets ≥6 mm in clients with stage III periodontitis after step 2 is suggested. However, the potential for increase gingival recession must be considered. [5] [14]

Grade of recommendation: Grade B—↑
Strength of consensus: Simple majority

Disclaimer: This document is educational and not intended to provide clinical advice nor should it be used as a replacement for professional dental or medical advice. Dental hygienists are encouraged to consult with CDHO practice advisors and refer to CDHO guidelines. Dental hygienists are responsible for the decisions they make and for the consequences associated with those decisions. © ODHA

Recommendation 3.4 – Based on expert opinion, surgical treatment of deep periodontal pockets (with or without intra-bony defects or furcation involvement) by specialists or dentists with additional specific training is recommended. [5]

General dentistry education is not designed to provide competence to complete advanced periodontal surgery. Additional specific training is required. Post-graduate periodontal education is specifically designed to provide competence and proficiency to deliver complex periodontal surgery.

Grade of recommendation: Grade A—↑↑
Strength of consensus: Consensus

Recommendation 3.6 – Based on expert opinion, periodontal (including implant) surgery in clients not achieving and maintaining adequate levels of self-performed oral hygiene is not recommended. [5]

Research has demonstrated:

- Negative effects (e.g., CAL) when periodontal surgery was performed without adequate biofilm control.
- Dose-dependent effect of plaque control on periodontal surgery healing outcomes, (similar data was reported after implant surgery).
- Plaque scores less than 20%-25% were consistently associated with better surgical outcomes. [5]

Grade of recommendation: Grade A—↑↑
Strength of consensus: Strong consensus

Recommendation 3.7 – Treating teeth with residual deep pockets with intra-bony defects 3 mm or deeper with periodontal regenerative surgery is recommended. [15]

Grade of recommendation: Grade A—↑↑
Strength of consensus: Consensus

Recommendation and statement 3.10 – A. Periodontal therapy on molars with class II and III furcation involvement and residual pockets is recommended.

Grade of recommendation A. Grade A—↑↑
Strength of consensus: Strong consensus

B. Furcation involvement is no reason for extraction. [5] [16] [17]

Statement
Strength of consensus: Consensus

Fourth step of therapy

Step 4 provides long-term supportive periodontal care to maintain periodontal stability and prevent relapse since risk for periodontitis recurrence and progression is high. Step

Disclaimer: This document is educational and not intended to provide clinical advice nor should it be used as a replacement for professional dental or medical advice. Dental hygienists are encouraged to consult with CDHO practice advisors and refer to CDHO guidelines. Dental hygienists are responsible for the decisions they make and for the consequences associated with those decisions. © ODHA

4 combines preventive and therapeutic interventions outlined in step 1 and 2, based on the client's periodontal status. Interventions include advice on healthy lifestyles and good oral hygiene, regular assessments, and professional debridement.

Recommendation 4.1 – After active therapy, supportive periodontal care scheduled at 3 to a maximum of 12 months and customized to the client's risk profile and periodontal condition is recommended. [5] [14] [18] [19] [20]

Research supports performing supportive periodontal care every 3-4 months. [19]

- Supportive periodontal care every 3 months may be sufficient to control periodontitis progression after periodontal surgery. [14]
- In addition, the 2014 European Workshop on Prevention recommended intervals of 2-4 times per year based on the client's risk. [18] [20]

Grade of recommendation: Grade A—↑↑
Strength of consensus: Strong consensus

Recommendation 4.3 – Repeated individualized instructions in oral self-care, including interdental cleaning to control inflammation and avoid potential damage is recommended. [5] [21]

Toothbrushing and interproximal cleaning is essential to maintain gingival health. Devices for interproximal cleaning include interdental brushes, rubber/elastomeric cleaning sticks, wood sticks, oral irrigators, and floss. All device use should be monitored for efficacy and signs of trauma (e.g., non-carious cervical lesions). [5] [21]

Grade of recommendation: Grade A—↑↑
Strength of consensus: Unanimous consensus

Recommendation 4.4 – Taking into account clients needs and preferences when choosing a toothbrush or interdental brush is recommended.

Grade of recommendation: Grade A—↑↑
Strength of consensus: Strong consensus

Recommendation 4.6 – Using interdental brushes (if suitable) to supplement toothbrushing is recommended. [5] [21]

A systematic review found interdental brushes provided significantly better cleaning than floss. [21] Clinical evidence shows clients with open interdental spaces prefer the use of interdental brushes over dental floss. [5]

Grade of recommendation: Grade A—↑↑
Strength of consensus: Unanimous consensus

Recommendation 4.7 – Flossing as the first choice for interdental cleaning for clients in periodontal maintenance is not suggested. [5] [21]

Disclaimer: This document is educational and not intended to provide clinical advice nor should it be used as a replacement for professional dental or medical advice. Dental hygienists are encouraged to consult with CDHO practice advisors and refer to CDHO guidelines. Dental hygienists are responsible for the decisions they make and for the consequences associated with those decisions. © ODHA

A systematic review found interdental brushes provided significantly better cleaning than flossing. [21] There is moderate risk of trauma with improper use of interdental brushes or floss. Therefore, individual instruction is essential. [5]

Grade of recommendation: Grade B—↓
Strength of consensus: Consensus

Recommendation and statement 4.11 – A. In specific cases, the use of adjunctive antiseptics to help control gingival inflammation may be considered.

Grade of recommendation: Grade 0—←→
Strength of consensus: Consensus

Adjunctive use of antiseptic agents has been proposed to control gingival inflammation during periodontal maintenance. Antiseptic agents can be delivered in dentifrices and mouthrinses. A decision has to be made whether to recommend a toothpaste and/or mouthrinse that contains antiseptic ingredients (in addition to fluoride) for clients who are unable to effectively control supragingival biofilm and/or gingival inflammation by mechanical self-care.

The decision individualized and based on considerations such as:

- Local factors (e.g., gingival inflammation related to plaque accumulation, accessibility for cleaning, anatomical factors).
- General factors (e.g., general health status, frailty, dexterity).
- Client preferences (e.g., cost, taste).
- Unwanted effects (e.g., staining, burning sensation during use).
- Potential negative impacts on beneficial aspects of the oral microbiome highlighted in recent evidence (e.g., impact on nitric oxide pathway)[8] [23].
- Frequency and duration of use. [5]

B. It is unknown whether other adjunctive agents (e.g., probiotics, prebiotics, anti-inflammatory agents, antioxidant micronutrients) are effective to control gingival inflammation in clients in supportive periodontal care. [5] [22]

Grade of recommendation: Grade 0—Statement: unclear, additional research needed.
Strength of consensus: Consensus

Recommendation 4.12 – If an antiseptic dentifrice is going to be used to control gingival inflammation, a product containing chlorhexidine or stannous fluoride-sodium hexametaphosphate, is suggested for clients in supportive periodontal care. [5] [22] [24] [25]

Grade of recommendation: Grade B—↑

[8] Bescos et al. (2020) found a 7-day use of chlorhexidine mouthrinse had significant impact on the oral microbiome, leading to a more acidic environment favourable for increased dental caries, and reduction in oral nitrate-reducing bacteria in healthy individuals. [23]

Disclaimer: This document is educational and not intended to provide clinical advice nor should it be used as a replacement for professional dental or medical advice. Dental hygienists are encouraged to consult with CDHO practice advisors and refer to CDHO guidelines. Dental hygienists are responsible for the decisions they make and for the consequences associated with those decisions. © ODHA

Strength of consensus: Consensus

Recommendation 4.13 – If an antiseptic mouthrinse is going to be used for the control of gingival inflammation, a product containing chlorhexidine, essential oils, or cetylpyridinium chloride, is suggested for clients in supportive periodontal care. [5] [24] [22] [25]

Grade of recommendation: Grade B—↑
Strength of consensus: Consensus

Recommendation 4.20 – It is unknown whether physical activity, dietary counselling, or lifestyle modifications aimed at weight loss are relevant in supportive periodontal care. [5] [7]

Grade of recommendation: Grade 0—Statement: unclear, additional research needed
Strength of consensus: Strong consensus

Take home messages

The *EFP S3-level Clinical Practice Guideline* offers clear recommendations to clinicians on therapies for treating the first 3 stages of periodontitis and provides the supporting evidence. The guideline is a step-by-step approach to treatment. After each step it is important to re-evaluate, since each step must be successfully completed before progressing to the next step.

The guideline also offers flexibility because there are a variety of treatment options so clinicians can take into account client preferences, economic considerations (e.g., cost of the medicament or procedure vs. potential benefit), skill and training of the operator, and need to refer to a specialist.

Finally, periodontitis is a long-term chronic condition with risk of recurrence. Therefore, it is vital to provide evidence-based treatment and supportive periodontal care to prevent disease progression and tooth loss to maintain a healthy functional and esthetic dentition that will support general health and wellbeing.

References

[1] J. Caton, G. Armitage, T. Berglundh, I. Chapple, S. Jepsen, K. Kornman, B. Mealey, P. Papapanou, M. Sanz and M. Tonetti, "A new classification scheme for periodontal and peri-implant diseases and conditions – Introduction and key changes from the 1999 classification," *Journal of Periodontology,* vol. 89, no. 1, pp. S1-S8, 21 June 2018.

[2] P. Papapanou, M. Sanz, N. Buduneli, T. Dietrich, M. Feres, D. Fine, T. Flemming, R. Garcia, et al., "Periodontitis: Consensus report of workgroup 2 of the 2017 World Workshop on the Classification of Periodontal and Peri-Implant Diseases and Conditions," *Journal of Periodontology,* vol. 89, no. S1, pp. S173-S182, 2018.

Disclaimer: This document is educational and not intended to provide clinical advice nor should it be used as a replacement for professional dental or medical advice. Dental hygienists are encouraged to consult with CDHO practice advisors and refer to CDHO guidelines. Dental hygienists are responsible for the decisions they make and for the consequences associated with those decisions. © ODHA

[3] Tonetti, M; Greenwell, H; Kornman, K, "Staging and grading of periodontitis: Framework and proposal of a new classification and case definition," *Journal of Periodontology,* vol. 89, no. S1, p. S159– S172, 11 February 2018.

[4] European Federation of Periodontology, "EFP publishes first evidence-based treatment guidelines for periodontitis to help clinicians and benefit patients," 27 July 2020. [Online]. Available: https://www.efp.org/news-events/news/efp-publishes-first-evidence-based-treatment-guidelines-for-periodontitis-to-help-clinicians-and-benefit-patients-30451/. [Accessed 15 November 2021].

[5] M. Sanz, D. Herrera, M. Kebschull, I. Chapple, S. Jepsen, et al., "Treatment of stage I–III periodontitis - The EFP S3 level clinical practice guideline," *Journal of Clinical Periodontology,* vol. 47, no. S22, pp. 4-60, July 2020.

[6] M. Carra, L. Detzen, J. Kitzmann, J. Woelber, C. Ramseier and P. Bouchard, "Promoting behavioural changes to improve oral hygiene in patients with periodontal diseases: A systematic review," *Journal of Clinical Periodontology,* vol. 47, no. S22, pp. 72-89, 7 January 2020.

[7] C. Ramseier, J. Woelber, J. Kitzmann, L. Detzen, M. Carra and P. Bouchard, "Impact of risk factor control interventions for smoking cessation and promotion of healthy lifestyles in patients with periodontitis: A systematic review," *Journal of Clinical Periodontology,* vol. 47, no. S22, pp. 90-106, 7 January 2020.

[8] J. Suvan, Y. Leira, F. Sancho, F. Graziani, J. Derks and C. Tomasi, "Subgingival instrumentation for treatment of periodontitis. A systematic review," *Journal of Clinical Periodontology,* vol. 47, no. S22, pp. 155-175, 30 December 2019.

[9] G. Salvi, A. Stähli, J. Schmidt, C. Ramseier, A. Sculean and C. Walter, "Adjunctive laser or antimicrobial photodynamic therapy to non-surgical mechanical instrumentation in patients with untreated periodontitis: A systematic review and meta-analysis," *Journal of Clinical Periodontology,* vol. 47, no. S22, pp. 176-198, 20 December 2019.

[10] N. Donos, E. Calciolari, N. Brusselaers, M. Goldoni, N. Bostanci and G. Belibasakis, "The adjunctive use of host modulators in non-surgical periodontal therapy. A systematic review of randomized, placebo-controlled clinical studies," *Journal of Clinical Periodontology,* vol. 47, no. S22, pp. 199-238, 13 December 2019.

[11] D. Herrera, P. Matesanz, C. Martin, V. Oud, M. Feres and W. Teughels, "Adjunctive effect of locally delivered antimicrobials in periodontitis therapy: A systematic review and meta-analysis," *Journal of Clinical Periodontology,* vol. 47, no. S22, pp. 239-256, 8 January 2020.

[12] W. Teughels, M. Feres, V. Oud, C. Martin, P. Matesanz and D. Herrera, "Adjunctive effect of systemic antimicrobials in periodontitis therapy: A systematic review and meta-analysis," *Journal of Clinical Periodontology,* vol. 47, no. S22, pp. 257-281, 29 January 2020.

[13] I. Sanz-Sánchez, E. Montero, F. Citterio, F. Romano, A. Molina and M. Aimetti, "Efficacy of access flap procedures compared to subgingival debridement in the treatment of periodontitis. A systematic review and meta-analysis," *Journal of Clinical Periodontology,* pp. 282-302, 22 January 2020.

Disclaimer: This document is educational and not intended to provide clinical advice nor should it be used as a replacement for professional dental or medical advice. Dental hygienists are encouraged to consult with CDHO practice advisors and refer to CDHO guidelines. Dental hygienists are responsible for the decisions they make and for the consequences associated with those decisions. © ODHA

[14] D. Polak, A. Wilensky, G. Antonoglou, L. Shapria, M. Goldstein and C. Martin, "The efficacy of pocket elimination/reduction compared to access flap surgery: A systematic review and meta-analysis," *Journal of Clinical Periodontology,* vol. 47, no. S22, pp. 303-319, 8 January 2020.

[15] L. Nibali, V. Koidou, M. Nieri, L. Barbato, U. Pagliaro and F. Cairo, "Regenerative surgery versus access flap for the treatment of intra-bony periodontal defects: A systematic review and meta-analysis," *Journal of Clinical Periodontology,* vol. 47, no. S22, pp. 320-351, 20 December 2019.

[16] H. Dommisch, C. Walter, B. Dannewitz and P. Eickholz, "Resective surgery for the treatment of furcation involvement: A systematic review," *Journal of Clinical Periodontology,* vol. 47, no. S22, pp. 375-391, 8 January 2020.

[17] S. Jepsen, S. Gennai, J. Hirschfeld, Z. Kalemaj, J. Buti and F. Graziani, "Regenerative surgical treatment of furcation defects: A systematic review and Bayesian network meta-analysis of randomized clinical trials," *Journal of Clinical Periodontology,* vol. 47, no. S22, pp. 352-374, 20 December 2019.

[18] M. Sanz, A. Bäumer, N. Buduneli, H. Dommisch, R. Farina, et al., "Effect of professional mechanical plaque removal on secondary prevention of periodontitis and the complications of gingival and periodontal preventive measures," *Journal of Clinical Periodontology,* vol. 42, no. S16, pp. S214-S220, 2015 January 2015.

[19] L. Trombelli, R. Farina, A. Pollard, N. Claydon, G. Franceschetti, I. Khan and N. West, "Efficacy of alternative or additional methods to professional mechanical plaque removal during supportive periodontal therapy: A systematic review and meta-analysis," *Journal of Clinical Periodontology,* vol. 47, no. S22, pp. 144-154, 14 February 2020.

[20] L. Trombelli, G. Franceschetti and R. Farina, "Effect of professional mechanical plaque removal performed on a long-term, routine basis in the secondary prevention of periodontitis: A systematic review," *Journal of Clinical Periodontology,* vol. 42, no. S16, pp. S221-S236, 12 December 2014.

[21] D. Slot, C. Valkenburg and G. Van der Weijden, "Mechanical plaque removal of periodontal maintenance patients: A systematic review and network meta-analysis," *Journal of Clinical Periodontology,* vol. 47, no. S22, pp. 107-124, 27 July 2020.

[22] E. Figuero, S. Roldán, J. Serrano, M. Escribano, C. Martín and P. Preshaw, "Efficacy of adjunctive therapies in patients with gingival inflammation: A systematic review and meta-analysis," *Journal of Clinical Periodontology,* vol. 47, no. S22, pp. 125-143, 23 December 2019.

[23] R. Bescos, A. Ashworth, C. Cutler, Z. Brookes, L. Belfield, et al., "Effects of chlorhexidine mouthwash on the oral microbiome," *Scientific Reports,* vol. 10, no. Article no. 5254, pp. 1-8, 24 March 2020.

[24] E. Figuero, D. Herrera, A. Tobías, J. Serrano, S. Roldán, M. Escribano and C. Martín, "Efficacy of adjunctive anti-plaque chemical agents in managing gingivitis: A systematic review and network meta-analyses," *Journal of Clinical Periodontology,* vol. 46, no. 7, pp. 723-739, 6 May 2019.

Disclaimer: This document is educational and not intended to provide clinical advice nor should it be used as a replacement for professional dental or medical advice. Dental hygienists are encouraged to consult with CDHO practice advisors and refer to CDHO guidelines. Dental hygienists are responsible for the decisions they make and for the consequences associated with those decisions. © ODHA

[25] J. Serrano, M. Escribano, S. Roldán, C. Martín and D. Herrera, "Efficacy of adjunctive anti-plaque chemical agents in managing gingivitis: A systematic review and meta-analysis," *Journal of Clinical Periodontology,* vol. 42, no. S16, pp. S106-S138, 11 December 2014.

Client Resources

Periodontal (Gum) Disease, ODHA Factsheet
https://odha.on.ca/wp-content/uploads/2016/08/Gum-Disease.14.1-copyright.pdf

Oral Health and Overall Health, ODHA Factsheet
https://odha.on.ca/wp-content/uploads/2016/08/Overall-Health.14.1-copyright.pdf

Brushing, Flossing, Rinsing, ODHA Factsheet
https://odha.on.ca/wp-content/uploads/2016/08/Brushing-Flossing.14.1-copyright.pdf

Oral Care for Seniors
https://odha.on.ca/wp-content/uploads/2016/08/ODHA-Facts-seniors.VFS21.11.pdf

From Head to Toe: Preventing and Treating Gum Disease for Overall Health, CDHO Factsheet
https://www.cdho.org/docs/default-source/pdfs/oral-health-rpt/oralhealthmatters_gumdisease.pdf

5 Medical Conditions That Hurt Your Mouth, CDHO Factsheet
https://www.cdho.org/docs/default-source/pdfs/oral-health-rpt/article-5-medical-conditions.pdf

Diabetes and Oral Health, ODHA Factsheet
https://odha.on.ca/wp-content/uploads/2016/08/Diabetes-15.1-copyright.pdf

Smoking and Smokeless Tobacco, ODHA Factsheet
https://odha.on.ca/wp-content/uploads/2016/08/ODHA-Facts-Smoking.VFS19.1-copyright.pdf

From Head to Toe: Smoking and Your Oral Health, CDHO Factsheet
https://www.cdho.org/docs/default-source/pdfs/oral-health-rpt/oralhealthmatters_smoking.pdf

Smokers' Helpline
Connect with Smokers' Helpline by:

- Phone 1-866-366-3667
- Online at https://www.smokershelpline.ca/
- By texting the word iQuit to the number 123456

Support to quit smoking, Ontario Ministry of Health
https://www.ontario.ca/page/support-quit-smoking

Disclaimer: This document is educational and not intended to provide clinical advice nor should it be used as a replacement for professional dental or medical advice. Dental hygienists are encouraged to consult with CDHO practice advisors and refer to CDHO guidelines. Dental hygienists are responsible for the decisions they make and for the consequences associated with those decisions. © ODHA

One Step at a Time: You Can Quit, Canadian Cancer Society
Downloadable booklet for people who smoke and may or may not be ready to quit.
https://cancer.ca/en/cancer-information/resources/publications/osaat-you-can-quit

STOP on the Net, CAMH
A free online smoking cessation program for Ontario adults over 18 years of age.
https://www.nicotinedependenceclinic.com/en/stop/stop-on-the-net

Nutrition and Oral Health, ODHA Factsheet
https://odha.on.ca/wp-content/uploads/2016/08/Nutrition.19.1-copyright.pdf

Canada's Food Guide
https://food-guide.canada.ca/en/

Canada's Food Guide Resources
https://www.canada.ca/en/health-canada/services/canada-food-guide/resources/resources-download.html

Additional Resources
Treatment of stage I–III periodontitis—The EFP S3 level clinical practice guideline, Sanz, M; Herrera, D; Kebschull, M; Chapple, I; Jepsen, S; Beglundh, T; et al. *Journal of Clinical Periodontology*, Volume 47, Issue S22, May 7, 2020, p 4-60
https://onlinelibrary.wiley.com/doi/10.1111/jcpe.13290

Endpoints of active periodontal therapy, Loos, B; Needleman, I. *Journal of Clinical Periodontology*, Volume 47, Issue S22, January 10, 2020, p 61-71
https://onlinelibrary.wiley.com/doi/10.1111/jcpe.13253

Systematic reviews for first step of therapy and supportive periodontal care:
Promoting behavioural changes to improve oral hygiene in patients with periodontal diseases: A systematic review, Carra, M; Detzen, L; Kitzmann, J; Woelber, J; Ramseier, C; Bouchard, P. *Journal of Clinical Periodontology*, Volume 47, Issue S22, January 7,2020, p 72-89
https://onlinelibrary.wiley.com/doi/10.1111/jcpe.13234

Impact of risk factor control interventions for smoking cessation and promotion of healthy lifestyles in patients with periodontitis: A systematic review, Ramseier, C; Woelber, J; Kitzmann, J; Detzen, L; Carra, M; Bouchard, P. *Journal of Clinical Periodontology*, Volume 47, Issue S22, January 7, 2020, p 90-106
https://onlinelibrary.wiley.com/doi/10.1111/jcpe.13240

Mechanical plaque removal of periodontal maintenance patients: A systematic review and network meta-analysis, Slot, D; Valkenburg, C; Van der Weijden, F. *Journal of Clinical Periodontology*, Volume 47, Issue S22, July 27, 2020, p 107-124
https://onlinelibrary.wiley.com/doi/10.1111/jcpe.13275

Disclaimer: This document is educational and not intended to provide clinical advice nor should it be used as a replacement for professional dental or medical advice. Dental hygienists are encouraged to consult with CDHO practice advisors and refer to CDHO guidelines. Dental hygienists are responsible for the decisions they make and for the consequences associated with those decisions. © ODHA

Efficacy of adjunctive therapies in patients with gingival inflammation: A systematic review and meta-analysis, Figuero, E; Roldán, S; Serrano, J; Escribano, M; Martín, C; Preshaw, P. *Journal of Clinical Periodontology*, Volume 47, Issue S22, Dec 23, 2019, p 125-143
https://onlinelibrary.wiley.com/doi/10.1111/jcpe.13244

Efficacy of alternative or additional methods to professional mechanical plaque removal during supportive periodontal therapy: A systematic review and meta-analysis, Trombelli, L; Farina, R; Pollard, A; Claydon, N; Franceschetti, G; Khan, I; West, N. *Journal of Clinical Periodontology*, Volume 47, Issue S22, February 14, 2020, p 144-154
https://onlinelibrary.wiley.com/doi/10.1111/jcpe.13269

Systematic reviews for second step of therapy:
Subgingival instrumentation for treatment of periodontitis. A systematic review, Suvan, J; Leira, Y; Sancho, F; Graziani, F; Derks, J; Tomasi, C. *Journal of Clinical Periodontology*, Volume 47, Issue S22, December 30, 2019, p 155-175
https://onlinelibrary.wiley.com/doi/10.1111/jcpe.13245

Adjunctive laser or antimicrobial photodynamic therapy to non-surgical mechanical instrumentation in patients with untreated periodontitis: A systematic review and meta-analysis, Salvi, G; Stähli, A; Schmidt, J; Ramseier, C; Sculean, A; Walter, C. *Journal of Clinical Periodontology*, Volume 47, Issue S22, December 20, 2019, p 176-198
https://onlinelibrary.wiley.com/doi/10.1111/jcpe.13236

The adjunctive use of host modulators in non-surgical periodontal therapy. A systematic review of randomized, placebo-controlled clinical studies, Donos, N; Calciolari, E; Brusselaers, N; Goldoni, M; Bostanci, N; Belibasakis, G. *Journal of Clinical Periodontology*, Volume 47, Issue S22, December 13, 2019, p 199-238
https://onlinelibrary.wiley.com/doi/10.1111/jcpe.13232

Adjunctive effect of locally delivered antimicrobials in periodontitis therapy: A systematic review and meta-analysis, Herrera, D; Matesanz, P; Martín, C; Oud, V; Feres, M; Teughels, W. *Journal of Clinical Periodontology*, Volume 47, Issue S22, January 8, 2020, p 239-256
https://onlinelibrary.wiley.com/doi/10.1111/jcpe.13230

Adjunctive effect of systemic antimicrobials in periodontitis therapy: A systematic review and meta-analysis**,** Teughels, W; Feres, M; Oud, V; Martín, C; Matesanz, P; Herrera, D. *Journal of Clinical Periodontology*, Volume 47, Issue S22, January 29, 2020, p 257-281
https://onlinelibrary.wiley.com/doi/10.1111/jcpe.13264

Systematic reviews for third step of therapy:
Efficacy of access flap procedures compared to subgingival debridement in the treatment of periodontitis. A systematic review and meta-analysis, Sanz-Sánchez, I; Montero, E; Citterio, F; Romano, F; Molina, A; Aimetti, M. *Journal of Clinical Periodontology*, Volume 47, Issue S22, January 22, 2020, p 282-302
https://onlinelibrary.wiley.com/doi/10.1111/jcpe.13259

Disclaimer: This document is educational and not intended to provide clinical advice nor should it be used as a replacement for professional dental or medical advice. Dental hygienists are encouraged to consult with CDHO practice advisors and refer to CDHO guidelines. Dental hygienists are responsible for the decisions they make and for the consequences associated with those decisions. © ODHA

The efficacy of pocket elimination/reduction compared to access flap surgery: A systematic review and meta-analysis, Polak, D; Wilensky, A; Antonoglou, G; Shapira, L; Goldstein, M; Martin, C. *Journal of Clinical Periodontology*, Volume 47, Issue S22, January 8, 2020, p 303-319
https://onlinelibrary.wiley.com/doi/10.1111/jcpe.13246

Regenerative surgery versus access flap for the treatment of intra-bony periodontal defects: A systematic review and meta-analysis, Nibali, L; Koidou, V; Nieri, M; Barbato, L; Pagliaro, U; Cairo, F. *Journal of Clinical Periodontology*, Volume 47, Issue S22, December 20, 2019, p 320-351
https://onlinelibrary.wiley.com/doi/10.1111/jcpe.13237

Regenerative surgical treatment of furcation defects: A systematic review and Bayesian network meta-analysis of randomized clinical trials, Jepsen, S; Gennai, S; Hirschfeld, J; Kalemaj, Z; Buti, J; Graziani, F. *Journal of Clinical Periodontology*, Volume 47, Issue S22, December 20, 2019, p 352-374
https://onlinelibrary.wiley.com/doi/10.1111/jcpe.13238

Resective surgery for the treatment of furcation involvement: A systematic review, Dommisch, H; Walter, C; Dannewitz, B; Eickholz, P. *Journal of Clinical Periodontology*, Volume 47, Issue S22, January 8, 2020, p 375-391
https://onlinelibrary.wiley.com/doi/10.1111/jcpe.13241

Disclaimer: This document is educational and not intended to provide clinical advice nor should it be used as a replacement for professional dental or medical advice. Dental hygienists are encouraged to consult with CDHO practice advisors and refer to CDHO guidelines. Dental hygienists are responsible for the decisions they make and for the consequences associated with those decisions. © ODHA