

Connecting the Dots Resource Sheet

Remedial Instrumentation Maintenance | Selected research and clinical readings

The studies below inform treatment decisions and expected outcomes. The tooth-specific articles offer practical guidance for adapting instruments; they are not comparative trials of those exact techniques.

Treatment framework and clinical decisions

- Sanz, M., Herrera, D., Kebschull, M., Chapple, I., Jepsen, S., Berglundh, T., Sculean, A., & Tonetti, M. S. (2020). Treatment of stage I–III periodontitis—The EFP S3 level clinical practice guideline. *Journal of Clinical Periodontology*, 47(S22), 4–60. <https://doi.org/10.1111/jcpe.13290>
- Cobb, C. M., & Sottosanti, J. S. (2021). A re-evaluation of scaling and root planing. *Journal of Periodontology*, 92(10), 1370–1378. <https://doi.org/10.1002/JPER.20-0839>
- Harrel, S. K., Rethman, M. P., Cobb, C. M., Sheldon, L. N., & Sottosanti, J. S. (2022). Clinical decision points as guidelines for periodontal therapy. *Dimensions of Dental Hygiene*. <https://dimensionsofdentalhygiene.com/article/clinical-decision-points-guidelines-periodontal-therapy/>
- Matsuda, S. (2015). A new approach: Remedial maintenance instrumentation. *Dimensions of Dental Hygiene*. <https://dimensionsofdentalhygiene.com/article/a-new-approach/>

Instrumentation and residual pockets

- **Identify the priority site.** Use probing depth, bleeding, deposit detection, tissue changes, and root anatomy to locate the area that needs renewed attention.
- **Remove what sustains inflammation.** Disrupt biofilm and remove accessible residual calculus using a sequence and modality suited to the deposit and site.
- **Adapt the instrument.** Choose a working end that fits the root contour and tissue access. A small short-term trial found less recession with Mini-Five than conventional Gracey curettes.
- **Match retreatment to pocket depth.** Residual 4–5 mm pockets were more likely to close after re-instrumentation than pockets of 6 mm or more in one cohort. Deeper sites need an individualized plan.
- **Evaluate the response.** Reassess healing and decide whether further nonsurgical care, consultation, or another Step 3 approach is indicated. MINST results reflect a whole treatment approach.

Acunzo, R., Gorbunkova, A., Rezzolla, M., Bellucci, G., & Rasperini, G. (2021). Short-term effect of regular vs mini curettes on periodontal tissue according to phenotype: A randomized control clinical trial. *The International Journal of Esthetic Dentistry*, 16(3), 364–374. <https://pubmed.ncbi.nlm.nih.gov/34319670/>

Werner, N., Heck, K., Walter, E., Ern, C., Bumm, C. V., & Folwaczny, M. (2024). Probing pocket depth reduction after non-surgical periodontal therapy: Tooth-related factors. *Journal of Periodontology*, 95(1), 29–39. <https://doi.org/10.1002/JPER.23-0285>

Bumm, C. V., Schwendicke, F., Pitchika, V., Heck, K., Walter, E., Ern, C., Heym, R., Werner, N., & Folwaczny, M. (2025). Effectiveness of nonsurgical re-instrumentation: Tooth-related factors. *Journal of Periodontology*, 96(7), 748–759. <https://doi.org/10.1002/JPER.24-0178>

Ferrarotti, F., Baima, G., Rendinelli, M., Citterio, F., Mariani, G. M., Mussano, F., Romano, F., Romandini, M., & Aimetti, M. (2023). Pocket closure after repeated subgingival instrumentation: A stress test to the EFP guideline for stage III–IV periodontitis. *Clinical Oral Investigations*, 27, 6701–6708. <https://doi.org/10.1007/s00784-023-05279-6>

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- Liss, A., Abrahamsson, K. H., Welander, M., & Tomasi, C. (2025). Effectiveness of nonsurgical re-instrumentation of residual pockets as step 3 of periodontal therapy: A field study. *Journal of Periodontology*. Advance online publication. <https://doi.org/10.1002/JPER.24-0532>
- Barbato, L., Noce, D., Di Martino, M., Castelluzzo, W., Spoleti, F., Rupe, C., Nieri, M., & Cairo, F. (2024). Non-surgical retreatment versus papillary preservation flap surgery for residual pockets: A randomized controlled trial with clinical and patient-reported outcomes. *Journal of Clinical Periodontology*, 51(10), 1277–1288. <https://doi.org/10.1111/jcpe.14047>
- Isola, G., Polizzi, A., Pesce, P., Alibrandi, A., & Pizzo, G. (2026). Minimally invasive (MINST) versus conventional non-surgical therapy for residual pockets in patients with periodontitis: A randomized clinical trial. *Journal of Periodontal Research*. Advance online publication. <https://doi.org/10.1111/jre.70083>

Additional clinical reading

- Sharuga, C. (2010). Furcation anatomy. *Dimensions of Dental Hygiene*, 8(5), 36, 38–39. <https://dimensionsofdentalhygiene.com/article/Furcation-Anatomy/>
- Rethman, M. P., Cobb, C. M., Sottosanti, J. S., Sheldon, L. N., & Harrel, S. K. (2024). Mastering subgingival calculus removal. *Dimensions of Dental Hygiene*. <https://dimensionsofdentalhygiene.com/mastering-subgingival-calculus-removal/>

Visualization and treatment time

- **Plan the time around the work.** Allow time to assess priority sites, remove deposits, disrupt biofilm, and check the result. A fixed per-tooth allowance cannot describe every site.
- **Choose the modality for the site-specific care.** Use air polishing to address biofilm when appropriate. Hand-instrument priority sites while you are fresh. Then use an appropriate ultrasonic tip for further subgingival debridement and lavage as indicated.
- **Select instruments for access.** Match the tip or working end to pocket anatomy, tissue access, and the deposit. Magnification can improve the view of your working area and help you assess instrument adaptation.

Ho, K.-L. D., Fok, M. R., Li, K. Y., Pelekos, G., & Leung, W. K. (2025). Effectiveness of endoscope-assisted subgingival debridement versus repeated root surface debridement or access flap periodontal surgery in step 3 periodontal therapy: A systematic review and meta-analysis. *Clinical and Experimental Dental Research*, 11, e70196. <https://doi.org/10.1002/cre2.70196>

Fritz, P. (2010). Oral decontamination through definitive sanative therapy: Peace in the periodontal regions. *Oral Health*. <https://www.oralhealthgroup.com/features/oral-decontamination-through-definitive-sanative-therapy-peace-in-the-periodontal-regions/>

The end of the appointment marks the beginning of healing. Between visits, consider what will support a balanced oral environment: effective daily biofilm control, gentle tissue stimulation when appropriate, and care that protects exposed root surfaces, helping the person keep these teeth comfortable and functional for as long as possible.

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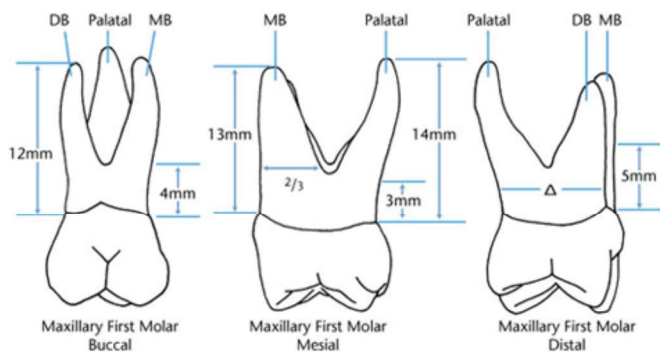
Tooth-specific instrumentation

Hodges, K. O. (2014). Anterior instrumentation. Dimensions of Dental Hygiene, 12(9), 48–49, 50, 52–53.

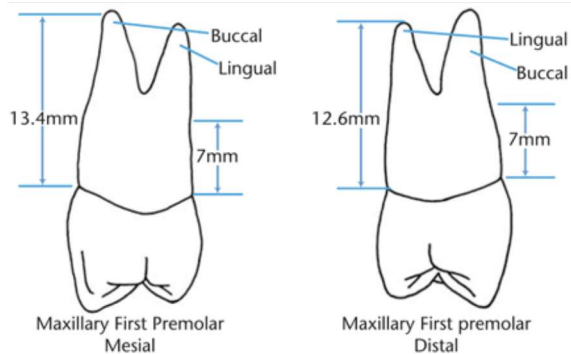
<https://dimensionsofdentalhygiene.com/article/anterior-instrumentation/>

Hodges, K. O. (2017). Instrument selection for premolar teeth and periodontal maintenance. Dimensions of Dental Hygiene, 15(11), 30, 32. <https://dimensionsofdentalhygiene.com/article/instrument-selection-for-premolar-teeth/>

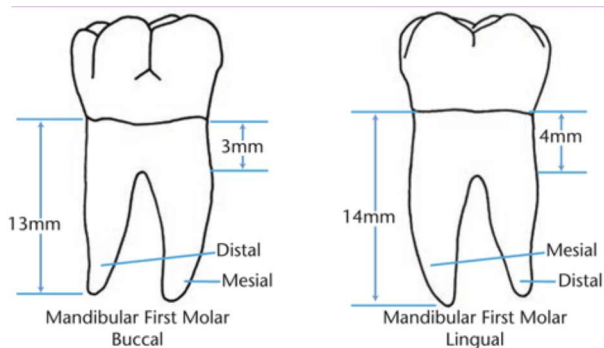
Hodges, K. O. (2019). Tips for instrumenting first molar teeth. Dimensions of Dental Hygiene, 17(2), 16, 18, 21. <https://dimensionsofdentalhygiene.com/article/instrumenting-first-molar-teeth/>



Dimensions of Dental Hygiene, May 2010



Dimensions of Dental Hygiene, May 2010



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