

The use of precise and careful technique is essential for dental professionals to avoid scraping, cutting, or causing abrasions during dental cleanings. Proper ergonomics, specialized equipment, and a light but firm touch help ensure an effective and gentle cleaning process. [\[1, 2, 3\]](#)

Technique for scaling and polishing

Dental hygienists follow specific techniques for both manual and ultrasonic scaling to protect both the tooth enamel and the soft gum tissue. [\[1, 3\]](#)

Hand scaling

- **Use sharp instruments:** Sharp scalers are more efficient and require less force to remove calculus and plaque, which minimizes pressure and strain on the tooth and gums. Dull instruments require increased force and scraping motions that can cause abrasions and damage the tooth's surface.
- **Maintain proper angulation:** The instrument's blade should be angled at less than 90 degrees and greater than 45 degrees to the tooth's surface to effectively remove buildup without causing trauma to the soft tissue.
- **Work with a modified pen grasp:** This grip provides maximum control over the instrument and enhances tactile sensitivity, allowing the hygienist to feel the texture of the tooth's surface. This lets them apply the right amount of pressure for effective and precise cleaning.
- **Apply controlled strokes:** Use light, short, and overlapping strokes rather than long, heavy, or aggressive motions. This technique prevents gouging the tooth and traumatizing the gums.
- **Establish a secure fulcrum:** A fulcrum, or finger rest, is essential for stabilizing the hand and providing leverage. This prevents uncontrolled movements that could accidentally slip and injure the patient. [\[2, 3, 4, 5, 6\]](#)

Ultrasonic scaling

- **Keep the tip moving:** The ultrasonic scaler tip must constantly move to prevent heat buildup and damage to the tooth's surface. The side of the tip should be used against the tooth, not the point.
- **Use light pressure:** Only a light, feather-like pressure is needed, as the vibration of the tip is what shatters the deposits. Excessive pressure can dull the tip, reduce its effectiveness, and potentially damage the tooth.
- **Select the right tip:** Different tips are used for different procedures and areas of the mouth. Slimmer tips are designed for navigating deep periodontal pockets, while broader tips are better for plaque and calculus above the gumline.
- **Use proper water flow:** A constant water flow prevents the tip and tooth from overheating and also flushes away debris. [\[3, 7, 8, 9, 10\]](#)

Polishing

- **Apply light, intermittent pressure:** Polishing should be done with a rubber cup using light, continuous, and oblique strokes. Excessive pressure and speed can generate heat and remove the fluoride-rich outer enamel layer.
- **Avoid exposed dentin:** Polishing over exposed dentin is not recommended because it can cause sensitivity and physical damage.
- **Use a proper polishing agent:** For most cleanings, a fine-grit prophylaxis paste is

sufficient to remove stains without causing significant abrasion. [11, 12, 13, 14, 15]

Advanced technologies

Newer technologies offer alternatives to traditional scaling and polishing, providing an even gentler cleaning experience.

- **Laser cleaning:** Lasers can be used to target and remove affected areas without touching the surrounding healthy tissues. This method can result in less pain and no scraping.
- **Air polishing:** This technique uses a stream of fine particles to gently remove biofilm and plaque. It is highly effective for cleaning hard-to-reach areas with less discomfort. [20, 21, 22, 23, 24]

Ergonomics and patient management

The overall approach to the dental cleaning plays a critical role in preventing accidents and patient discomfort.

- **Maintain proper ergonomics:** By maintaining a neutral and balanced working posture, the dental professional avoids muscle fatigue and strain that can negatively affect their control over instruments.
- **Position the patient correctly:** The patient's chair is positioned to allow the hygienist to work comfortably, reducing the need for awkward postures and minimizing the risk of a slip.
- **Use magnification:** Dental loupes (magnifying glasses) and headlights improve visibility and illumination, allowing the hygienist to see details more clearly and work with greater precision.
- **Communicate with the patient:** Clear communication helps manage patient expectations and keeps them informed. The hygienist can provide verbal cues to guide the patient to tilt or turn their head for better access. [3, 25, 26]

AI responses may include mistakes.

- [1] <https://foothillsfamilydentistryllc.com/can-dental-cleaning-damage-gums/>
- [2] <https://dimensionsofdentalhygiene.com/article/improve-the-ergonomics-of-your-instrumentation/>
- [3] <https://dimensionsofdentalhygiene.com/article/promote-ergonomic-health/>
- [4] <https://www.dentalproductsreport.com/view/6-tips-to-injury-proof-your-hygiene-hands>
- [5] <https://dimensionsofdentalhygiene.com/article/getting-a-grasp/>
- [6] https://link.springer.com/chapter/10.1007/978-3-031-90355-7_26
- [7] <https://hayeshandpiece.com/dental-resources/post/scaling-instruments-in-dentistry>
- [8] <https://www.youtube.com/watch?v=98PP2nf-71w>
- [9] <https://www.dvm360.com/view/complete-dental-cleaning-procedure-proceedings>
- [10] <https://www.petvetbiomed.com/html5/web/10200/13099ImageFile3.pdf>
- [11] <https://dimensionsofdentalhygiene.com/article/polishing-protocol/>
- [12] <https://dimensionsofdentalhygiene.com/article/the-right-stuff/>
- [13] <https://dmq-connect.com/articles/rubber-cup-polishing-for-biofilm-control/>
- [14] <https://dimensionsofdentalhygiene.com/article/polishing-protocol/>

- [15] <https://kearnsfamilydentistry.com/tooth-polishing-necessary-your-oral-health/>
- [16] <https://www.royaltydentalassociates.com/all-you-need-to-know-about-ultrasonic-teeth-cleaning/>
- [17] <https://dentiquenyc.com/dental-cleanings-hygiene>
- [18] <https://dentistbrighton.co.uk/is-air-polishing-suitable-for-everyone/>
- [19] <https://ru.ohi-s.com/articles-videos/3317/>
- [20] <https://www.mcmillanfamilydental.com/about/technology/precision-biofilm-removal/>
- [21] <https://www.magnoliadentistry.com/blog/laser-tooth-cleaning/>
- [22] <https://houstonbiologicaldentist.com/how-laser-dentistry-used-in-deep-cleaning/>
- [23] <https://www.pomdental.com/why-laser-treatment-is-best-for-teeth-cleaning/>
- [24] <https://optident.co.uk/air-abrasion/>
- [25] <https://www.rdhmag.com/ergonomics/seating/article/14210339/common-ergonomic-errors-and-solutions-for-dental-hygienists>
- [26] <https://www.hufriedygroup.com/en/blog/prevent-common-aches-and-pain>