

Drying to Heal: Principles, Applications, and Clinical Outcomes of Dental Desiccation Therapy

A concise companion guide to support lecture participation, note-taking, and clinical application.

Overview of Dental Desiccation Therapy

- Adjunctive therapy used to disrupt and dehydrate oral biofilms.
- Works by removing water from microbial structures and denaturing proteins.
- Commonly used alongside scaling and root planing (SRP) and periodontal instrumentation.
- May assist with improved visualization, hemostasis, easier calculus removal, and biofilm disruption.

Key Mechanisms of Action

Mechanism	Clinical Relevance
Biofilm Dehydration	Reduces structural integrity of the biofilm matrix.
Protein Denaturation	Disrupts microbial proteins and cell membranes.
Surfactant Activity	Helps soften calculus and ease of instrumentation.
Hemostatic Effect	Reduces blood flow and may improve visibility during instrumentation.

Clinical Considerations

- Review patient medical history prior to use.
- Use caution around implants and sensitive tissues.
- Follow manufacturer instructions (MSDS and IFUs) for application time and delivery method.
- Consider the case type and rationale behind the specific desiccant being used.
- Evaluate outcomes through periodontal markers, inflammation reduction, bleeding, and biofilm disruption.

Evidence-Based Highlights

- Research supports desiccation therapy as an adjunct—not a replacement—for mechanical debridement.

