Dental Unit Waterlines (DUWL)

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Overview

Biofilm is a thin, slimy film of bacteria that sticks to moist surfaces, such as those inside dental unit waterlines. Biofilm occurs in dental unit waterlines because of the long, small-diameter tubing and low flow rates used in dentistry, the frequent periods of stagnation, and the potential for retraction of oral fluids. As a result, high numbers of common water bacteria can be found in untreated dental unit water systems. A few disease-causing microorganisms found in untreated dental unit water include *Legionella, Pseudomonas aeruginosa,* and nontuberculous *Mycobacterium* .
Dental health care personnel and patients could be placed at risk of adverse health effects if water is not appropriately treated.
Source: CDC

Resources

Centers for Disease Control and Prevention (CDC)

- Guidelines for Infection Control in Dental Health-Care Settings — 2003
- Appendix A - Regulatory Framework for Disinfectants and Sterilants; includes Figure: Decreasing Order of Resistance of Micro-organisms to Germicidal Chemicals

- Appendix B - Immunizations Strongly Recommended for Health-Care Personnel (HCP)
- Appendix C - Methods for Sterilizing and Disinfecting Patient-Care Items and Environmental Surfaces

- Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care
- Infection Prevention Checklist for Dental Settings Basic Expectations for Safe Care
- HAN - October 31, 2022 - Outbreaks of Nontuberculous *Mycobacteria* Infections

Highlight Importance of Maintaining and Monitoring Dental Waterlines

- *Mycobacterium absecessus* in Healthcare Settings
- Dental Unit Water Quality
- Infection Prevention & Control in Dental Settings

Organization for Safety, Asepsis and Prevention (OSAP)

- Dental Unit Water Quality: Organization for Safety, Asepsis and Prevention White Paper and Recommendations– 2018
- OSAP Recommendations to Clinicians
- Message to My Patients
- Questions to Help Guide Selection of Dental Waterline Devices and Chemical Treatment Options
- Checklist for Dental Unit Water Quality Improvement
- Troubleshooting Dental Water Quality Problems
- Glossary of Terminology

Food and Drug Administration (FDA)

- Dental Unit Waterlines

American Dental Association (ADA)

- Dental Unit Waterlines

Fact Sheets & Information

Organization for Safety, Asepsis and Prevention

- Dental Unit Waterline Fact Sheet

Related Articles

- Woman Dies After Contracting Legionnaires' Disease From Dentist's Office
- Notes from the Field: *Mycobacterium abscessus* Infections Among Patients of a Pediatric Dentistry Practice — Georgia, 2015

- Invasive Mycobacterium abscessus Outbreak at a Pediatric Dental Clinic