



WHAT YOU CAN'T SEE MAY
HARM YOUR PATIENTS, YOUR STAFF
AND YOUR PRACTICE'S REPUTATION

 **DentaPure®**
Clean Water. Clear Choice.™



WHAT'S LURKING IN YOUR WATERLINE?

How is Your Dental Office Treating DUWLs to Minimize the Potential for Microbial Growth?



Actual
biofilm

LEGIONELLA
At least 1 confirmed fatality has been traced back to contaminated dental unit waterlines¹



PNEUMONIA

RESPIRATORY INFECTION

BACTERIA BY THE NUMBERS

EPA Guideline: $\leq 500 \text{ CFU/mL}$ ²
Untreated waterlines can reach up to 1,000,000 CFU/mL³



Biofilm
Parasites

MYCOBACTERIAL INFECTION

the PROBLEM:

Narrow Tubing = Microbial Colonization = Biofilm Growth

Research shows that the extremely narrow design of waterline tubing promotes water stagnation and bacterial accumulation⁴.

Using an in-line water heater? If your water exceeds 68° F, you're promoting even further microorganism growth⁵.



The Biofilm Problem

Biofilm is a complex matrix of bacteria, fungi and algae bound together in a sticky gel of polysaccharides that forms a microcolony. The microcolony attaches to a surface, such as the interior of dental unit waterline tubing.

Once colonies of microorganisms start surviving inside your waterlines, they begin to build a sticky matrix that creates visible biofilm, or "slime." This sticky slime makes it easy for new pathogens passing through to anchor themselves to the waterline walls. When untreated, or improperly maintained, the water flowing through these contaminated DUWLs can potentially harm your patients, your staff and your practice's reputation.

the REALITY:

The Implications from Improperly Treated Dental Unit Waterlines Are Far Too Great To Ignore!

Multiple children were hospitalized and hundreds more may be at risk of serious bacterial infection after receiving treatment at a southern California pediatric dental clinic. All of the children identified to date received pulpotomies.

Over 20 children required medical treatment as a result of infection acquired at an Atlanta, GA area pediatric dental clinic following a similar bacterial outbreak attributed to contaminated dental unit water in September 2015.

The source of these illnesses was reportedly dental unit waterlines contaminated with *Mycobacterium*, a bacteria universally found in water.



Unilateral, non-tender, cervical lymphadenopathy with violaceous discoloration⁶.

Providing clean, safe dental water is critical to implementing and maintaining an effective and ethical infection control protocol. Is your office at risk?

Implications of Nontuberculous Mycobacterial Infections in Children

- Most children require surgical treatment⁶
 - Comes with risk of damage to the facial nerve and will always result in a scar⁶
- Swelling, redness and pain around the infected tooth can occur, with the bacteria often spreading to the gum and jawbone. In those cases, stopping the infection often means removing part of the jaw itself, making it a long-term issue for these children⁷
- Antibiotic treatment frequently prescribed post-operatively⁶
 - Antibiotic treatment can last up to 24 months in some cases⁸
- Even if infections are diagnosed early, adequate treatment may be complicated by inability to reduce immune suppression, antibiotic adverse reactions and patient allergy⁸



Child with a cervicofacial *Mycobacterium haemophilum* lymphadenitis presenting as a fluctuant swelling with red skin discoloration⁸.

CLEAN, SAFE AND COMPLIANT DENTAL UNIT WATER IS POSSIBLE!

the SOLUTION: DentaPure®

Clean Water. Clear Choice.™

simple

- Installs in minutes
- Cost-effective
- Compatible with bottle and municipal systems
- Can use either tap or distilled water
- Once the DentaPure® cartridge is installed, no monitoring or shocking protocol is required for 365 days, or 240L of water if usage records are kept (life of the cartridge)

effective

- In independent ADA testing, the DentaPure cartridge performed at ≤ 10 CFU/mL⁹
- EPA registered to provide ≤ 200 CFU/mL¹⁰

safe

- Elemental iodine (I_2) is non-allergenic; safe for patients to ingest¹¹
- Contains no silver
- Compliant with the proposed EPA rule for Best Management Practices for dental amalgam waste¹²
 - The pH of the DentaPure cartridge falls between 6 and 8 - within the EPA BMP acceptable range¹³
- No harsh chemicals
- Dispose of used cartridges in your regular trash

reliable

- Reduces the possibility of human error
- 1 DentaPure cartridge delivers safe, compliant water for 365 days, or 240L of water if usage records are kept
- Will not interfere with dental materials and bonding¹⁴
- No concerns with dental unit corrosion or etching¹⁵
- Crosstex reminds you when it's time to change cartridges

get 1 CEU

Crosstex offers a free Waterline Treatment course:

**Children Hospitalized from
Contaminated Dental Unit Water:
Could This Happen in Your Office?**

Register Today at
CrosstexLearning.com



Watch
the



*Discover the problem you may
not realize you have.*

Scan or visit DentaPure.com



*Learn the microbiological water purification
secret NASA has known for years and
revolutionize the way your practice treats
DUWLs to minimize the potential for
microbial growth!*

With the DentaPure® Cartridge, Ensuring Dental Unit Waterline Safety Has Never Been Easier

1 DentaPure®
Cartridge



365 Days of Safe,
Compliant
Dental Unit Water*

NO tablets / **NO** tablet downsides:

- Cost \$\$\$: Average tablet treatment cost = \$821/year for one operatory[†]
- Tablets only work with strict compliance to IFUs and daily protocols
- Staff time and expense to manage daily, monthly, bi-monthly and quarterly procedures (daily tablets, shocking, monitoring)
- Tablets must be added at every water change and given the proper time to dissolve
- Undissolved tablet solids may adversely affect expensive handpieces over time
- Service technician calls may increase due to clogged lines
- Potential risk of staff exposure to daily chemicals

NO routine shocking

NO harsh chemicals

NO silver

NO distilled water required

NO special disposal requirements

NO allergenic iodine proteins

* Or, 240L of water if usage records are kept

[†] Includes cost for initial shock, daily tablets, shocking per IFU and quarterly waterline testing

All claims made based on use with potable water

DentaPure®
Municipal Cartridge
(DP365M)



DentaPure®
Independent Water
Bottle Cartridge
(DP365B)

CONTACT
YOUR
DISTRIBUTOR
TODAY!



Did You Know?

The DentaPure® cartridge uses the same technology developed for NASA to ensure that water consumed in space is safe from harmful levels of bacteria and many other harmful organisms.

The DentaPure cartridge installs onto your dental unit's existing water bottle pickup tube. A municipal waterline cartridge is also available.

Many university systems and dental schools rely on the DentaPure cartridge for compliance in their clinics!

**Visit DentaPure.com for more information
on how the multi-award-winning DentaPure® cartridge
can help simplify your DUWL maintenance protocols**

To learn about more Crosstex options to treat your DUWLs, visit Crosstex.com/PureH2O

¹ <http://www.rdhmag.com/articles/print/volume-32/issue-3/features/legionnaires-disease-and-dental-unit-water.html>

² <https://www.epa.gov/ground-water-and-drinking-water/table-regulated-drinking-water-contaminants>

³ <https://www.cdc.gov/oralhealth/infectioncontrol/guidelines/slides/077.htm>

⁴ http://www.osap.org/?page=Issues_DUWL_1

⁵ http://www.osap.org/?page=Issues_DUWL_3

⁶ Haahr Iversen R, Illum P. Cervicofacial nontuberculous mycobacterial lymphadenitis in children. *Dan Med J* 59/1; 1-4

⁷ Dr. Matthew Zahn, Orange County Healthcare Agency

⁸ Jerome A. Lindeboom et al. *Clin. Microbiol. Rev.* 2011;24:701-717

⁹ A Laboratory Evaluation of Dental Unit Water Treatment Systems. *ADA Professional Product Review - 2014*: Vol 9, Iss 2: 9-17

¹⁰ Data on file

¹¹ Schabelman E, Witting M. The relationship of radiocontrast, iodine, and seafood allergies: a medical myth exposed, *J Emerg Med.* 2010 Nov;39(5):701-7. doi: 10.1016/j.jemermed.2009.10.014. Epub 2010 Jan 4.

¹² <https://www.epa.gov/eg/dental-effluent-guidelines-documents>

¹³ Batchu H., Chou H, Rakowski D., Fan PL. The effect of disinfectants and line cleaners on the release of mercury from amalgam.: *JADA* 2006 Oct;1419-1425

¹⁴ Puttaiah R. Effects of Low Grade Iodine in Dental Unit Waterlines On Shear Bond Strength of a Dentin Bonding Agent, Baylor College of Dentistry

¹⁵ Data on file

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