

THE BEARING PRESS

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Extreme Handpiece Makeover: Does Yours Needs One? —Part 1 of 5

The history, rationale, and effects of handpiece sterilization will be covered over a five-part series in upcoming issues of *The Bearing Press*.

By Glenn Williams

The Night Clinicians Will Never Forget

On May 20, 1992, millions of Americans curled up in front of their televisions, not knowing that dentistry was about to change virtually overnight. That evening, CBS "Street Stories," and NBC "Dateline" both aired controversial stories about dentistry and handpiece sterilization. It was a turning point for dental professionals and changed forever the way handpieces are purchased, used, and maintained.

As the media sharks circled, another tragic event made headlines: a young woman in Florida, Kimberly Bergalis, became infected

with the AIDS virus under highly questionable circumstances. News media sources were quick to associate this tragedy with the young woman's dentist. Televised Congressional hearings in 1993 focused national attention on the dental industry, and the Food and Drug Administration was compelled to take action. It issued the first guidelines mandating routine handpiece sterilization for private practice. The handpiece was soon to become one of the most troublesome workhorse systems in the dental office, increasing both demands on staff time, and what used to be considered a minimal overhead expense.

Routine Sterilization: Good for Patients, Bad for Handpieces

Prior to the 1990s, dental handpiece sterilization was not an issue. Handpiece manufacturers maintained that handpieces were autoclavable, but there was little practical call for testing those claims. As long as normal maintenance procedures were performed, the average handpiece would last one or two years before needing any sort of repair. Handpiece repairs were not viewed as a major contributor to practice overhead or staff time.

Once clinicians began to sterilize handpieces after each patient, they started experiencing a variety of performance



problems. Handpiece life expectancy dropped dramatically due to the stresses of repeated sterilization and handpieces required substantially more service and repair. Rather than lasting for several years and requiring little if any maintenance, handpieces now show signs of extreme wear within a year or less. The answer is the equivalent of an extreme makeover for handpieces: refurbishment by a trained handpiece repair expert.

One Life to Live

How long will a handpiece turbine last? This is perhaps the most frequently asked question related to handpiece purchase and repair. It is difficult to quantify life expectancy under sterilization conditions because of the tremendous number of variables associated with turbine life: lubrication, type of sterilizer, conditions of use, number of use/sterilization cycles per day, etc.

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WHAT'S INSIDE...

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National Dental Handpiece Repair Association

Our Mission

To improve our client's ability to deliver patient care by maintaining their powered instruments with exceptional service and integrity.

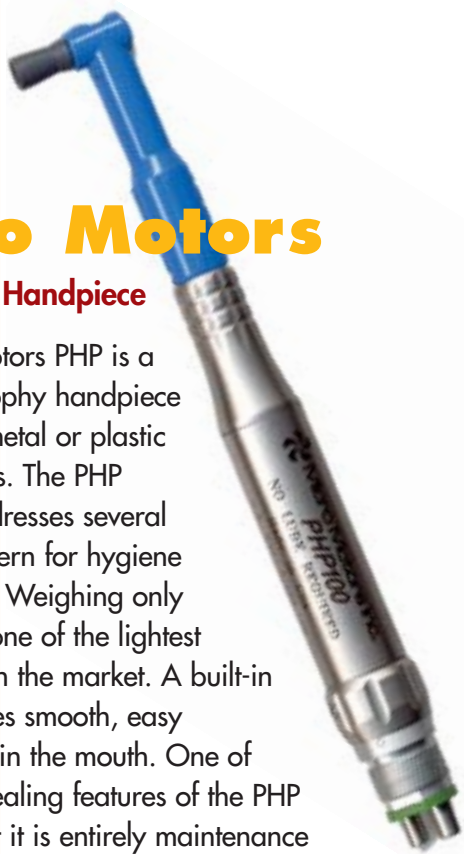
SPOTLIGHT

Micro Motors

PHP Prophy Handpiece

The Micro Motors PHP is a dedicated prophy handpiece for use with metal or plastic prophy angles. The PHP favorably addresses several areas of concern for hygiene professionals. Weighing only 3.1 oz., it is one of the lightest handpieces on the market. A built-in swivel provides smooth, easy manipulation in the mouth. One of the most appealing features of the PHP is the fact that it is entirely maintenance free. No lubrication is required which saves time and eliminates mess. The PHP is all stainless steel construction, a durable finish that will not degrade over time like aluminum. The PHP was rated "Good" in CRA clinical evaluations and comes with a two year warranty. It is reasonably priced at only \$525. For more information, or if you would like to evaluate the PHP handpiece in your office, contact your local NDHRA member.

Rating ★★★★★



DENTAL FACTS

- People in the US spent around \$320 million on take-home tooth whitening products in 2003...per Information Resources in Chicago.
- Around 18 million people in the US suffer from sleep apnea, according to the NIH. In addition, Medicare is considering paying for at home apnea testing. www.sleepapneainfo.com
- Around 30,000 individuals a year are diagnosed with oral cancer in the US
- Retail sales in the US of electric toothbrushes rose 23% between 2002 & 2003 while manual toothbrush sales dropped 6%... per Information Resources Inc.
- The UK's National Health Service needs to hire 5,200 dentists. Currently the UK has 4 dentists per 10,000 population while the US has 6.
- Asthmatic children have a higher incidence of caries than non-asthmatics. Research indicates this may be caused by dry mouth associated with the use of inhalers and sugar contained in medication. Data from studies were presented at the 82nd Annual Meeting of the International Association of Dental Research.

—Courtesy of The Anaheim Group

TIPS FROM YOUR TECH

Surface Disinfection is a necessary protocol with all items that cannot be removed from the treatment room and heat sterilized. Unfortunately, one of the side effects of spraying down the handpiece tubing and connectors can be a build up of corrosion on or inside your equipment. To minimize these harmful effects, we recommend spraying the disinfectant solution onto a wipe material first, then apply the wipe to the items being disinfected.

Using this method instead of spraying disinfectant directly onto the item will minimize any excess fluid building up on threads, couplers, or fiber optic bulbs as pictured below.



—Photo courtesy of Dorothy Slattery, DDS, Mill Valley, CA

CLINICIAN'S CORNER

This newsletter is provided as a service to our customers by Handpiece Express. We appreciate any feedback for improvement. We welcome your handpiece-related questions, suggestions, concerns, or humorous stories. Please email input to: glenn@handpieceexpress.com.

Extreme Makeover...

Continued from front page

Two noteworthy independent studies devoted to quantifying handpiece longevity under continued sterilization have been published. The United States Air Force Dental Investigative Service (DIS) at Brooks Air Force Base is responsible for dental product evaluation for all branches of the military. In 1993 DIS conducted an extensive study to determine the life expectancy of a handpiece subjected to ongoing use and sterilization. DIS measured ten performance parameters over nine different handpiece models subjected to 1,000 use/sterilization cycles. Their goal was to establish control of as many variables as possible while comparing baseline performance characteristics throughout the evaluation period. Each handpiece was properly maintained and subjected to simulated clinical use prior to every sterilization cycle. DIS concluded that the dentist can



expect a handpiece to survive approximately 500 sterilization cycles without significantly reduced performance, if the handpiece is properly maintained.

In October 2000, Clinical Research Associates (CRA) published very similar results from a long-term study performed with four different models of handpieces. CRA concluded that with proper maintenance the handpiece models tested should achieve at least 539 use/sterilization cycles before failure. Five hundred cycles for a handpiece used and sterilized twice a day, five days per week, would translate into approximately one year of clinical service.

In The Next Issue:

Like aging boomers who are rejuvenated, handpieces can undergo a makeover and the ravages of repeated sterilization can be reversed. Understanding how handpieces work and learning how to maintain them can help clinicians keep their costs down and get long, dependable service from their handpieces.

About the Author

Glenn Williams has twenty years of experience in the dental industry as a handpiece manufacturer's representative. Since 1994 he has operated his own successful independent handpiece repair service in Northern California. To better serve the dental profession, Glenn founded an association of independent handpiece repair professionals dedicated to establishing and preserving high standards within the repair industry.

For more information please visit:
www.myhandpiecerepair.com



Handpiece Repair

If you have a handpiece you need us to repair, simply cut out this convenient postage paid label. Tape the label securely to the outside of any box, enclose your handpiece with a business card, and give it to your mail carrier. We will receive your handpiece the next day and call you with an estimate.

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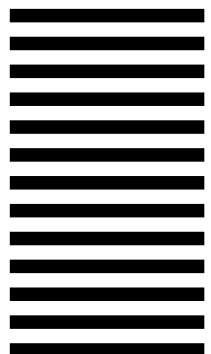
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Rapid Handpiece Repair

HANDPIECE EXPRESS

Handpiece Express is a family owned and operated business that repairs all brands of highspeed and lowspeed handpieces. We have been providing fast, personal handpiece repair to dentists throughout the Bay Area since 1994.

Glenn and Lori Williams started Handpiece Express after Glenn's experience as a manufacturer's representative for Star Dental. Over the last ten years we have serviced over 30,000 handpieces for hundreds of satisfied Bay Area dentists. We are dedicated to the concept of a convenient, local repair service with one day turnaround.

Handpiece Express maintains Honor Roll Member status in the Golden Gate Better Business Bureau. We are founding members of the National Dental Handpiece Repair Association, an organization of independent repair centers dedicated to ensuring quality standards for the industry to protect dental professionals. We subscribe to the NDHRA Code of Ethics and offer some of the longest warranties in the business.

We hope you enjoy our newsletter. We tried to provide some valuable information along with a little fun!
Thank you for the opportunity to earn your business...



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