



"EXPERIENCE THE LORD'S DIFFERENCE"

1966 - 2003

37

YEARS OF EXCELLENCE

Lord's Dental Studio, Inc.

Articulator

Published By Lord's Dental Studio, Inc.

Summer 2003

DONATED DENTAL SERVICES

Donated Dental Services (DDS) is a program directed at those people who are unable to afford needed dental care because of a limited income which is clearly linked to a permanent disability, chronic illness or advanced age (65 or over). Four hundred and seventy-nine members of the Wisconsin Dental Association (WDA) donated a record \$1 million in services to 484 disabled, senior, poor, and uninsured state residents between April 1998 and July 2002 through DDS, a partner program between the WDA and the State of Wisconsin. The program is affiliated with the National Foundation of Dentistry for the Handicapped. Lord's is proud to be a laboratory participant in this program.

If you are interested in learning more about Donated Dental Services, please check the box on the enclosed response card.



Dr. Erin Danielson (left) and assistant, Wendy Fulcer (right), share a smile with Jean Schommer (seated) following the insertion of an upper and lower partial denture provided by Lord's. Jean received her treatment due to the Donated Dental Services Program.

The Static Impression Technique for Removable Prosthodontics

by Joseph J. Massad, DDS

The Static Method of making edentulous impressions is a system or combination technique using specially fabricated impression trays and two types of irreversible hydrocolloid impression materials. The means by which these trays and materials are manipulated is a key ingredient for the success of this technique.



Joseph J. Massad, DDS

Impression Trays

While the practitioner could fabricate impression trays, specially prepared and contoured trays are commercially available for this technique. The impression trays are significantly short of all border areas, except the mandibular posterior lingual, and closely follow natural resorbed contours of alveolar ridges. This is especially important in the mandible. Trays for this technique only carry and retain a properly mixed and complexed hydrocolloid material. They do not establish impression borders in any way- properly mixed impression material will establish the appropriate width, height, and length of the borders completely and independently of impression trays.

- See Massad continued on page 5

"Our practice believes strongly that dentistry is a service profession. It brings a great amount of gratitude and joy to help someone who is truly in need."

*- Dr. Erin Danielson
Appleton, WI*

CONTENTS

President's Forum	page 2
IPS Empress™	page 3
Improved Shade Taking	page 3
New Tax Incentives	page 4
Technically Speaking	page 6
Doctors Looking for Doctors	page 6

PRESIDENT'S FORUM

by Don Warden



DENTISTS' COUNCIL REVIEWS CAD/CAM TECHNOLOGY, ZIRCONIA™ IMPLANT ABUTMENTS AND MONODONT™ BRIDGE/CRA STUDY

The 37th session of the Lord's Dentists' Council meeting convened on Thursday, May 15, at Lord's Dental Studio.

As is always the case with our May meeting, a significant period of time is dedicated to the Council Roundtable. The Roundtable gives participating dentists the opportunity to share the "state of their practice" with the other Council members. Topics include an economic overview of the community, patient demands, staffing issues, insurance coverage and technology trends, to name a few. Questions are asked and ideas are shared around particular issues, and the conversation usually spills over into dinner that evening. Members feel it is a great way to do a "peer check" with dentists from different geographical areas.

The Monodont™ Bridge/CRA study was discussed in detail. The first

step will be getting permission from dentists who have placed this unique product to share their name and address information with CRA. A survey will then be sent out by CRA with questions related to the performance of the units now in place. If this data proves to be satisfactory, a two-year clinical study will then commence. Lord's is very excited once again to participate in a study with CRA.

The Council provided Ken Waldo with feedback on "Technical Tips for Denture Systems." The technical bulletin is enclosed within this mailing.

Tim Weinschenk reviewed the Nobel Biocare World Conference held in Las Vegas that he and Rick Smith attended. One of the highlights included the Zirconia™ implant abutment, a product for which Lord's has already received some rave reviews.

Rick and Kris VanLaanen reviewed a revolutionary new CAD/

CAM technology, which included a short presentation by representatives of the company. Because of the proprietary nature of this system at this point, no further information can be shared outside of the Council. The R&D phase of the Phoenix™ Full Cast Crown was also discussed.

Finally, after addressing issues raised at the January Council meeting, Julie Stadtmueller presented an updated draft of the Partner Loyalty Program. This program is a response to suggestions from dentists who have utilized partner credits in the past. The enhanced program will be rolled out at the beginning of 2004 and includes some exciting new options.

A wonderful evening dinner and an afternoon of golf was enjoyed at Thornberry Creek Country Club. Thank you to all who helped make this meeting one of the best Council events ever!



Welcome New Members: (l to r) Dr. Paul Kollath, Green Bay, WI; Dr. Virginia Scott, Pardeeville, WI; Don Warden, Lord's President; Alan Scott, Pardeeville, WI; and Dr. Ken Scholz, Fond du Lac, WI.



Thank You to our Departing Members: Dr. Bill Skarie, Tigerton, WI (left); Don Warden, Lord's President (right). Dr. Steve Weber, Appleton, WI is not pictured.

EMPRESS™ AND LORD'S CELEBRATE 15 YEARS OF CLINICAL SUCCESS

IPS Empress™ (Ivoclar) has earned a reputation as a solid performer in the field of cosmetic dentistry. With over 15 years of proven clinical success, Empress has become a standard for world-class esthetics.

Lord's has successfully fabricated thousands of Empress restorations. We are committed to assisting our customers who wish to create life-changing smiles with this product. Our experienced team of technicians has attended continuing education courses in the latest Empress techniques.

The chameleon effect of Empress

The color of Empress is a balancing act between the influence of the underlying stump shade and the opacity and color of the restoration. The laboratory strategy for selecting the proper ingot for each case is based

upon the stump shade and the desired color outcome.

Empress and Eris™. What do I ask for?

Empress is a leucite-reinforced glass-ceramic used for inlays, onlays, veneers, and crowns. It *must* be cemented with an adhesive bonding system such as Variolink II.

Eris is a hand-layered restoration used for anterior and posterior single crowns, and can be conventionally cemented using a low expansion glass ionomer cement when clinical conditions prohibit the adhesive technique.

How is Empress fabricated?

Empress is fabricated using the "lost wax" technique. The restoration is waxed to full contour, sprued, and invested into a mold. A ceramic ingot

is chosen, then melted and pushed into the investment material using a special pressing oven. The resulting ceramic restoration is stained on a special die which matches the shade of the stump.

Eris begins with a strong lithium disilicate core which is fabricated using the lost wax technique. Lithium disilicate gives the restoration the strength necessary to allow for conventional cementation.

What is the Empress Layered Veneer?

This veneer technique was developed by Lee Culp, CDT (IOAD). It is typically used for larger restorative cases involving all of the anterior teeth.

The incisal third of the veneer is reduced, internally stained, then hand-layered with opalescent enamel porcelains. Life-like incisal structures with increased depth and vitality are made possible with this advanced technique.

What about strength?

Both Empress and Eris have excellent clinical track records in anterior applications.

Posterior inlays, onlays, and crowns are used successfully in non-stressed applications.

PFM, Captek™, full-cast gold, and zirconia restorations have higher flexural strengths for molar crowns.

Predictable and fantastic outcomes are possible with Empress and Eris, combined with the experience of the Lord's team.



Kathy Kelly (middle) and Denise McNeill (right), Lords' Ceramist and Shade Taking Consultants, take the shade of patient Kim Nelson (left) in Lords' new shade taking facility. The operatory is equipped with digital photography (Canon D60 digital camera), the Vita Easyshade™ digital shade taking system and a color/light meter to measure the correct amount of lighting. Doctors are encouraged to utilize Lords' upgraded facility and two full-time shade taking consultants by calling Lisa to schedule an appointment. (It is advised to consult with the patient to be sure any bleaching is done two weeks prior to the shade taking appointment.)

ALL THAT GLITTERS

by Rick Smith, Lord's C&B Consultant & Trainer

...turns out to be gold. An upgraded full-cast gold restoration is currently being evaluated by Lords' Dentists' Council members, past and present. We have requested their feedback on criteria including fit, function, tooth morphology, and marginal integrity of the proposed new crown, which will be called the Phoenix™ Full-Cast.

Several important details will differentiate this crown from others.

First, the alloy we have chosen has been engineered to meet the specifications of the prestigious Academy of Richard V. Tucker Study Clubs. This 77% gold alloy has an exceptional rich yellow color, and has properties which contribute to its wear-kindness, biocompatibility, and strength. The elongation properties of the alloy enable our technicians to burnish the margins using a duplicate master die. Also, verification of accu-

rate proximal contacts will be done on two solid models in addition to the master.

Secondly, the cornerstone of the Phoenix Full-Cast is the Occlusal Compass, a concept our technicians have learned through mentoring with Russell DeVreugd, CDT.

The Compass has proven to eliminate incline plane interferences, thus minimizing costly chairside adjustments. Patients enjoy the comfort of this functional occlusal anatomy.

Why gold?

Gold is natural and beautiful, complementing the colors of the surrounding tissue and dentition. A skillfully crafted gold restoration could last a lifetime. Gold is hygienic, harboring less plaque due to its smooth surface. Imperceptible margins are now possible with this burnishable gold alloy, resulting in less chance of debris accumulation. Market indicators suggest that gold restorations will increase in percentage of unit volume in the future.

Time and talent are the key ingredients that go into hand-crafting a quality gold restoration. A significant amount of training has resulted in a small team of Lords dental technicians who will fabricate the Phoenix Full-Cast restorations. It is our hope that your requests for an enhanced gold restoration will be realized with this product. The evaluation period will enable us to measure perception of value, and to gather input regarding the specific details which are important to our doctors who are interested in using a high-quality gold restoration.



Lords' Phoenix™ Full-Cast Crown Team studies the occlusal compass concept. Pictured from left to right are: Nick Stewart, Marty Dudek, Tammy Mocco, Rob Chambers, Rick Smith, Kim Letter and Michelle Turnquist.

DENTISTS BENEFIT FROM NEW TAX INCENTIVES

By Ken Mathys, CPA and Jim Dietsche, CPA



Kenneth H. Mathys, CPA



James A. Dietsche, CPA

The President just signed into law sweeping new tax cuts that provide significant benefits to dentists. The majority of the tax breaks are retroactive to January 1, 2003. Highlights include:

- Lower individual marginal tax rates
- Lower taxes on dividend income and capital gains (eff. May 6, 2003)
- Marriage penalty re-

lief for tax years 2003, 2004 and 2005

- Alternative minimum tax relief
- Increased small business equipment write-off
- Increase in bonus depreciation (eff. May 6, 2003)

The increase in business equipment write-off represents perhaps the most significant benefit for our clients because it increases the annual expense from \$25,000 to \$100,000 for 2003, 2004 and 2005. Plus, it amends the verbiage to include off-the-shelf computer software! Remember, the immediate write-off of this equipment

and software only applies to purchased items so be sure to account for it in your lease v. buy decisions.

The new law also includes increasing "bonus depreciation" from 30% to 50% for assets acquired on or after May 6, 2003 and before January 1, 2005. Bonus depreciation is in addition to regular first-year depreciation.

In summary, if you have been contemplating the purchase of new equipment and/or software now is a great time to do it! As always, consult with your tax advisor on how the specifics impact you.

Feel free to call Ken or Jim at 920-662-2938 with any questions.

Impression Material

Two irreversible hydrocolloid impression materials are used in this technique: (1) a low-density injectable hydrocolloid (Syringe Accu-Gel™) and (2) a very high-density tray hydrocolloid (Tray Accu-Gel™) (Figure 1). It should be noted that this material is designed for the edentulous patient. A modified injectable and tray hydrocolloid is available for the dentulous or partially dentulous patient.

Hydrocolloid Preparation

Both syringe and tray hydrocolloids are mixed with a measured amount of water. Low-density hydrocolloid is loaded into a large-bore syringe (Figure 2). High-density tray material is placed into an appropriate preselected tray and a laminar zone is prepared on the surface of this material. The laminar zone is created by means of a gentle flow of cold water while smoothing the surface of the high-density alginate with finger action just before insertion in the mouth. The first 5mm of the laminar zone becomes softer than the bulk of the high-density hydrocolloid, of which it is a part, and optimally blends and fuses with the low-density syringe hydrocolloid. A regular plaster bowl and spatula can be used to mix the hydrocolloids. However, mechanical spatulating devices facilitate rapid, dense, and bubble-free homogenous mixes, especially when mixing high-density hydrocolloids (Figure 3).

The Maxillary Hydrocolloid Impression

Excess moisture is wiped from the maxillary vestibular area, palate, and alveolar ridges with gauze. Low-density impression material is then syringed into the vestibular area from the maxillary tuberosity of one side

around to the opposite side. Remaining syringe material is injected into the palatal vault area to minimize voids and improve the flow of materials around rugae. The impression tray, which is already loaded with high-density hydrocolloid and in which a surface laminar zone has been developed, is lightly placed into the patient's mouth. The tray is gently finessed into place with minimum pressure and movement. Border molding is initiated in the anterior frenum, buccal frenum, and posterior zygomatic space (vestibular area from approximately the first molar to the tuberosity area) and hamular frenum. After hydrocolloid materials set, the impression tray is gently removed and checked for accuracy.

The Mandibular Hydrocolloid Impression

It is useful to understand the design of the mandibular impression tray, which has a large lingual extension. This extension depresses the floor of the mouth and facilitates capturing the entire mylohyoid ridge in an impression without intrusion of distorting folds of tissue. The mandibular impression is taken in much the same manner as the maxillary impression: (1) low and high-density hydrocolloids are mixed (Figure 3); (2) syringe material is injected within the entire facial and lingual fossa; (3) an impression tray with high-density hydrocolloid having a laminar zone is gently placed in the mouth; (4) the impression tray is gently finessed into place; and (5) the set-up impression is removed and critically checked for accuracy. The lower impression will appear fully extended. This ensures that critical anatomical landmarks are properly captured, such as the mylohyoid ridge, external oblique ridge, masseter fibers, sigmoid notch, and retromolar triangle. These

anatomical landmarks are important and are used to outline baseplate borders on the master cast. The borders will represent the extent of the completed denture base in the mouth.



Figure 1 – Unit packages of syringe (low-density) and tray (high-density) irreversible hydrocolloid material and syringe for injecting the low-density material.



Figure 2 – Low-density hydrocolloid loaded into a syringe.



Figure 3 – Mechanical spatulating devices generally produce a more homogenous and bubble-free mix, especially with high-density alginates, than that obtained by hand spatulation.

*This article has been taken, in part, from volume 7, number 4 edition of **Dental Learning System's Postgraduate Dentistry** publication, a supplement of **The Compendium**. To receive a complimentary publication in its completed format, simply check the box on the enclosed response card.*

*Dr. Massad will be speaking to Wisconsin dentists on September 12, 2003 in Green Bay, WI on the **Static Impression Technique** as well as other advances in removable prosthetics.*

TECHNICALLY SPEAKING!

Q. I'm a beginner in digital photography. What advice can you give me on digital cameras?

A. There are generally three types of digital cameras that are typically considered for dental use.

Off-the-shelf cameras: These are the digital cameras you can purchase directly from any retailer. They are typically point-and-shoot in design. Almost any digital camera on the market today (with resolution at or above 3.1 meg pixels) can take a good portrait photo which can be used for multiple dental purposes including cosmetic imaging. The difficulty arises when you want to take more demanding photos such as close-up smiles or intraoral and retracted shots. These shots require the camera to have some special capabilities, the most important being macro focus and macro flash exposure compensation as close as 8 inches. Very few cameras meet these basic requirements. Of them, the Canon G2 and the Olympus 3000, 3020, 3030, and 4040 seem to work best. These cameras cost in the range of \$500 to \$1000.

Cameras modified for dentistry: These are typically off-the-shelf cameras that have been modified to function for dental photography. This means that the manufacturer or third party has added hardware to a camera that does not meet the specifications mentioned above. The added hardware is designed to improve the macro capability of the camera as well as the ability of the flash to disperse and expose correctly under macro conditions. These modifications tend to meet or exceed the specifications outlined above. Modified off-the-shelf cameras can make it easier to get reproducible good dental photos when compared to the off-the-shelf cameras. These cameras are usually sold in kits which include various accessories ranging from \$1700 to \$2600.

Professional level SLR cameras: These cameras are the top of the line. They are single lens reflex camera

bodies that allow the addition of your choice of lenses and flash attachments. Typically, the camera bodies are configured with macro zoom lenses and ring flashes. Because of the professional nature of the camera they can result in the most accurate photos. The problem is, they are difficult to manage because of their size and weight and unless you are familiar with all the proper settings, difficult to figure out. Fuji, Canon, and Nikon have several models that are popular with dental photo enthusiasts and cost in the range of \$3500 to \$6500.

.....
“Ultimate Digital Photography for Dental Teams”

is coming to Green Lake, WI on October 10 and 11, 2003. This 2-day hands-on course will train you on digital photography, imaging, case presentation, Microsoft PowerPoint, printing and marketing.

.....
Do you have a question regarding materials, techniques, or products?

**Send your e-mail to:
lords@lordsdental.com**

All questions will be answered by follow-up e-mail, and your question may be considered for an upcoming issue of the Articulator.
(Names will not be used.)

DOCTORS LOOKING FOR DOCTORS

The following Lord's partners are looking for an associate or for someone to purchase their practice.

For more information call (1-800-821-0859) or email (jstadtmueller@lordsdental.com) Julie Stadtmueller at Lord's.

Dr. Robert Bandt
Manitowoc, WI

Dr. Paul Gerrish
Marquette, MI

Dr. Steven Hein
Green Bay, WI

Dr. Todd Reich
Black River Falls, WI

Dr. Jason Thiel
Mishicot, WI

Dr. Chris Hansen
Green Bay/Manitowoc



Canon D60 Digital Camera