

TAD TALKS: SPEAK OUT

The Winter Clinic gives you an opportunity to share your knowledge, experience — even your opinions (up to a point) — in a creative, casual setting.

► page A2

**DOING WELL BY DOING GOOD**

Henry Schein Canada, as part of its Calendar of Caring program, shines the spotlight on what some of its customers are doing to 'give back.'

► pages A10–A11

**IMPLANT TRIBUNE****UPDATED GUIDELINES**

Guidelines finally catch up to legal-standard-of-care expectations for general dentists placing implants.

► page B1



Winter Clinic packs full-scale dental convention into single-day event

It's North America's largest one-day gathering of dentists

The Toronto Academy of Dentistry Winter Clinic, the largest one-day dental convention in North America, attracts dental professionals from every sector of the profession with its minimal time-commitment opportunity to learn from some of the world's top speakers and explore some of the industry's most innovative products and services.

The 76th Annual Toronto Academy of Dentistry Winter Clinic is Friday, Nov. 8. The single-day event features 24 separate programs in contemporary dentistry, offering something for the entire dental team.

This year's clinical program covers a broad spectrum of topics and includes: an examination of the way digital technology is transforming the workflow in the dental office; demonstrations of cutting-edge tools and equipment; specialized techniques for prosthetic tooth repositioning; the use of lasers in periodontal therapy; a discussion of current views on the use of X-rays as a diagnostic tool; advice on the latest legal requirements for health and safety in the dental office; and how to meet the demands of the modern dental practice through healthy habits and humour.

Clinical presentations and exhibits will take place at the Metro Toronto Convention Centre (South Building), 222 Bremner Blvd., in Toronto. Registration is on level 600. Sessions will be held on level 700. The exhibits and food service are on level 800.

Online registration closes Nov. 6

Online registration closes at midnight, Wednesday, Nov. 6. Onsite registration is open from 7 a.m. to 4 p.m. on the day of the event.

Sessions run from 8:30 a.m. to 4:30 p.m. (with start and end times varying for individual sessions throughout the day).

Exhibits are open from 10 a.m. to 6 p.m.

Lunch is from 11:30 a.m. to 1:30 p.m.

There is a cocktail reception from 4:30 to 6 p.m.

New: Complimentary lunch

This year, the Winter Clinic meeting organizers have added a complimentary lunch for all registered attendees. Lunch tickets will be attached to badges (one per registration). The lunches may be picked up between 11:30 a.m. and 1:30 p.m. from one of the stations located throughout the exhibit floor.

For more details or to register, call the Toronto Academy of Dentistry at (416) 967-5649, or go to www.tordent.com.

(Source: Toronto Academy of Dentistry)

Toronto Academy of Dentistry Winter Clinic, Friday, Nov. 8



Toronto's 'Flatiron Building,' technically the Goderham Building, is just one of the many historic landmarks in the hometown of the Toronto Academy of Dentistry Winter Clinic. The unique, one-day event features 24 separate programs in contemporary dentistry, offering something for the entire dental team. Photo/Provided by Tourism Toronto

► See page A2

MEETINGS**A2–4**

- Greater New York Dental Meeting expands the categories its educational programs cover
- Yankee Dental Congress expects about 28,000 for its 2014 annual gathering in Boston
- The 2014 Pacific Dental Conference will have 135-plus speakers, 144 open sessions and more than 300 exhibitors
- Journées dentaires internationales du Québec, which will be from May 23–27, will have more than 100 sessions in English and French

INDUSTRY**A5–11**

- Dr. Scott Benjamin presents a detailed explanation of why lasers are not all the same
- To earn \$1 million in 10 years, the first step for a dental professional is to ensure your body holds up
- Malaysian rubber gloves boast top barrier capabilities
- Doing well by doing good: Henry Schein Canada shines spotlight on dentists who are giving back
- Implants course in Bogotá builds strong reputation with small classes, intense hands-on training

Are you juggling with MULTIPLE BONDS?

FUTURABOND U can do it ALL!

The ONLY bond for ALL your adhesive dentistry, without the need of any extra primers or activators.

ASK YOUR RETAIL REP OR YOUR VOCO REP FOR THE 1+1 TRIAL OFFER

Futurabond U
Dual-Cure Universal Adhesive

VOCO
THE DENTALISTS

Call 1-888-658-2584 · www.voco.com

Photo/www.sxc.hu



TAD Talks: Speak out

Got about 18 minutes of stuff built up that you need to get off your chest?

If you answer yes, TAD Talks at the Toronto Academy of Dentistry Winter Clinic might be your perfect venue.

The program at the 2013 event gives you an opportunity to share your thoughts, knowledge, experience — even your opinions (up to a point) — in a creative, casual setting.

Not restricted to dental focus

Your talk does not only have to be about dentistry. It can be about anything (almost). Whatever is on your mind. If you think someone will be interested, the meeting organizers invite you to sign up.

Your talk can be about global issues, the arts (music, performance, comedy),

sports, media, technology — anything that's important to you.

Step up to the challenge

All Winter Clinic participants are welcome to share whatever is on their minds. Dentists, hygienists, assistants, administrators, technologists and dental industry representatives are welcome. Everybody who delivers a presentation gets to take home a certificate of recognition.

Sign up today and be discovered

Your topic and general outline must be reviewed by the Toronto Academy of Dentistry prior to the presentation, submitted no later than midnight, Nov. 1, with your name, address, tele-

phone number and email address. You will be advised of the time slot assigned.

For additional information on this program, you can contact the Toronto Academy of Dentistry at (416) 967-5649; FAX: (416) 967-5081 or email: dorthy@tordent.com.

The TAD Talks will be conducted on Exhibit Floor D between 11 a.m. and 2 p.m. on the day of the meeting, Friday, Nov. 8.

18 minutes or less

There's no minimum amount of time required for your talk, but you cannot exceed 18 minutes.

(Source: Toronto Academy of Dentistry)

DENTAL TRIBUNE

The World's Dental Newspaper - Canada Edition

PUBLISHER & CHAIRMAN

Torsten Oemus t.oemus@dental-tribune.com

PRESIDENT/CHIEF OPERATING OFFICER

Eric Seid e.seid@dental-tribune.com

GROUP EDITOR

Kristine Colker k.colker@dental-tribune.com

EDITOR IN CHIEF

Dr. Sebastian Saba feedback@dental-tribune.com

MANAGING EDITOR

Robert Selleck r.selleck@dental-tribune.com

MANAGING EDITOR

Fred Michmershuizen fmichmershuizen@dental-tribune.com

MANAGING EDITOR

Sierra Rendon s.rendon@dental-tribune.com

PRODUCT/ACCOUNT MANAGER

Will Kenyon w.kenyon@dental-tribune.com

MARKETING DIRECTOR

Anna Wlodarczyk
a.wlodarczyk@dental-tribune.com

ACCOUNTING ASSISTANT

Nirmala Singh n.singh@dental-tribune.com

EDUCATION DIRECTOR

Christiane Ferret c.ferret@dtstudyclub.com

Tribune America, LLC

Phone (212) 244-7181
Fax (212) 244-7185

Published by Tribune America

© 2013 Tribune America LLC
All rights reserved.

Tribune America strives to maintain the utmost accuracy in its news and clinical reports. If you find a factual error or content that requires clarification, please contact Managing Editor Robert Selleck at r.selleck@dental-tribune.com.

Tribune America cannot assume responsibility for the validity of product claims or for typographical errors. The publisher also does not assume responsibility for product names or statements made by advertisers. Opinions expressed by authors are their own and may not reflect those of Tribune America.

EDITORIAL BOARD

Dr. Joel Berg
Dr. L. Stephen Buchanan
Dr. Arnaldo Castellucci
Dr. Gorden Christensen
Dr. Rella Christensen
Dr. William Dickerson
Hugh Doherty
Dr. James Doundoulakis
Dr. David Garber
Dr. Fay Goldstep
Dr. Howard Glazer
Dr. Harold Heymann
Dr. Karl Leinfelder
Dr. Roger Levin
Dr. Carl E. Misch
Dr. Dan Nathanson
Dr. Chester Redhead
Dr. Irwin Smigel
Dr. Jon Suzuki
Dr. Dennis Tartakow
Dr. Dan Ward

AD

TORONTO ACADEMY of DENTISTRY
76th ANNUAL WINTER CLINIC PROGRAMME
FRIDAY, NOVEMBER 8, 2013

TORONTO CENTRAL DENTAL SOCIETY
TORONTO EAST DENTAL SOCIETY
NORTH TORONTO DENTAL SOCIETY
WEST TORONTO DENTAL SOCIETY

Tell us what you think!

Do you have general comments or criticism you would like to share? Is there a particular topic you would like to see articles about in Dental Tribune? Let us know by e-mailing feedback@dental-tribune.com. We look forward to hearing from you! If you would like to make any change to your subscription (name, address or to opt out) please send us an e-mail at database@dental-tribune.com and be sure to include which publication you are referring to. Also, please note that subscription changes can take up to six weeks to process.

Greater New York Dental Meeting expands education offerings

By Jayme McNiff Spicciatie
Greater New York Dental Meeting

The Greater New York Dental Meeting (GNYDM), Nov. 29–Dec. 4, expands to more than 1,500 exhibit booths housing more than 600 companies. The ongoing partnership between the GNYDM and the U.S. Department of Commerce International Buyer Program provides an opportunity to meet worldwide senior level volume buyers as well as receive export counseling from government specialists to increase sales.

• *Collaboration* brings dentists and technicians together by providing a designated laboratory exhibit area on the GNYDM exhibit floor, specialized education, demonstrations, digital dentistry and technology

to engage technicians and dentists side-by-side in an integrated, hands-on experience.

• *Three tech pavilions* are being added to the exhibit floor, focusing on CAD/CAM, cone-beam and lasers.

• *New dentists' program* focuses on startup strategies and pathways to practice ownership for the new dentist.

• *Women's program* focuses on challenges facing the female practitioner, including personal stories and professional advice on women's lifestyles in dentistry.

• *Dental assistant pavilion* will be open on the exhibit floor each day of the meeting.

• *"Real World: Dentistry for the Restorative Practice"* will be presented by Dr. Robert Lowe at the Friday, Nov. 29, opening session, at the New York Marriott Marquis Hotel in the Westside Ballroom fifth floor.

• *Botox, Dysport and dermal filler semin-*

ars, demonstrations and workshops: These hands-on workshops introduce procedures on actual patients.

• *Sleep medicine:* With three days of the latest research and awareness, you'll be able to learn how to treat patients successfully.

• *Learning and lunch panel discussions* are being offered Sunday and Tuesday. Attendees receive free C.E. and a free lunch at the close of the program. Space is limited.

To expand hospitality to attendees from across the world, the GNYDM is offering free multilanguage courses in French, Italian, Portuguese, Russian and Spanish.

The live dentistry arena, a 430-seat high-tech patient demonstration area, offers revolutionary concepts in treating patients with new materials and applications. The

demonstrations take place on the exhibit show floor every morning and afternoon Sunday through Wednesday. There is no cost to attendees.

With three major international airports, Newark Liberty (EWR), Kennedy (JFK) and La Guardia (LGA) — and with discounted hotel rates for those attending the meeting, it should be easy for attendees to enjoy all that New York City has to offer at the beginning of the holiday season.

The GNYDM has room blocks at 39 hotels in Manhattan, with free round-trip bus service to the convention center. Visit the hotels and transportation page online at www.gnydm.com for room rates. And, as always, registration for the GNYDM is free.

(Source: Greater New York Dental Meeting)

Yankee Dental Congress plans to draw 28,000

By Yankee Dental Congress Staff

Overall health starts with oral health, and it all links up at the 2014 Yankee Dental Congress, when approximately 28,000 dental professionals will gather at the Boston Convention and Exhibition Center from Jan. 29 through Feb. 2.

The YDC provides opportunities to discover best practices, products and other resources to improve your dental practice, increase your knowledge and better serve your patients — regardless of your role on the dental team. With more than 300 hands-on courses, lectures and workshops covering a wide variety of topics, the agenda has something on it for everyone.

The 2014 YDC will feature a number of new programs, including:

Botox and dermal fillers

Learn the anatomy, physiology, pharmacology, diagnosis, treatment planning and delivery of Botox and dermal fillers, brought to you by the American Academy of Facial Esthetics. These fast-paced, entertaining and educational courses are perfect for dentists and dental teams who are interested in joining the fastest growing area of dentistry.

Master practice marketing skills

This one-day symposium will help you expand your practice with the power of marketing. Master the essentials of marketing your dental practice using both conventional strategies and more modern Web-based tactics to expand practice visibility and excellence.

The exhibit hall floor will feature products and technologies from more than 450 exhibitors, along with C.E. programs brought back by popular demand, including: the "Dental Office Pavilion," "High-Tech Playground," "Healthy Living Pavilion" and "Live Dentistry."

Visit www.yankeedental.com to get more details on all of the courses and events that Yankee has to offer and to register for the event.

It All Starts Here!

YANKEE | 2014
Dental Congress®

January 29 - February 2, 2014
Exhibits: January 30 - February 1, 2014
Boston Convention & Exhibition Center

Connect with us:

**Overall Health Starts with Oral Health
and It All Starts at Yankee Dental Congress 2014**

SPEAKER HIGHLIGHTS	PROGRAM HIGHLIGHTS
 Kirk Behrendt PRACTICE MANAGEMENT	<ul style="list-style-type: none"> ➤ New Dentist Itinerary ➤ Hands-On Cadaver Programs ➤ Evolutionary Dentistry ➤ The Pankey Institute: Update 2014 ➤ Marketing Symposium ➤ Diagnosis and Treatment of Oral and Facial Lesions Fast Track ➤ Dental Team Playbook: Strategies for Success ➤ Social Media Hot Spot ➤ RDH @ YDC ➤ Ninth Annual Conference for Women in Dentistry ➤ Botox & Dermal Fillers Live Patient Hands-On Courses
 James Dunn, DDS TECHNOLOGY	
 Paul Fletcher, DDS IMPLANTS	
 Theresa Gonzalez, DMD GENERAL HEALTH	
 Shannon Pace Brinker, CDA AUXILIARY TECHNIQUES	
 Clifford Ruddle, DDS ENDODONTICS	
 Elizabeth Somer, RD NUTRITION	
 John Sorensen, DMD, PhD RESTORATIVE	
 Barbara Steinberg, DDS GENERAL HEALTH	
 Dennis Tarnow, DDS IMPLANTS	

yankeedental.com > 877.515.9071

AD

2014 PDC: 144 sessions, 300 exhibitors

Pacific Dental Conference also features live dentistry stage in exhibit hall

The 2014 Pacific Dental Conference, from March 6–8 (Thursday, Friday and Saturday) in Vancouver, British Columbia, features a varied selection of open C.E. sessions, hands-on courses and a live dentistry stage. One registration fee gives access to all 144 open sessions, which means no pre-selection of courses is necessary.

The variety of topics covered by more than 135 speakers means the entire dental team can access the latest information on dental technology, techniques and materials.

Speakers in the 2014 lineup include John Kois, John Cranham, Sergio Kuttler, Greg Psaltis, Ross Nash, Derek Mahony, Rob Roda,

Louis Malcmacher, Bart Johnson, Jesse Miller, Rhonda Savage and Nancy Andrews.

With the University of British Columbia Faculty of Dentistry celebrating its 50th anniversary, the PDC will present the “UBC Speakers Series,” featuring UBC alumni addressing a variety of topics.

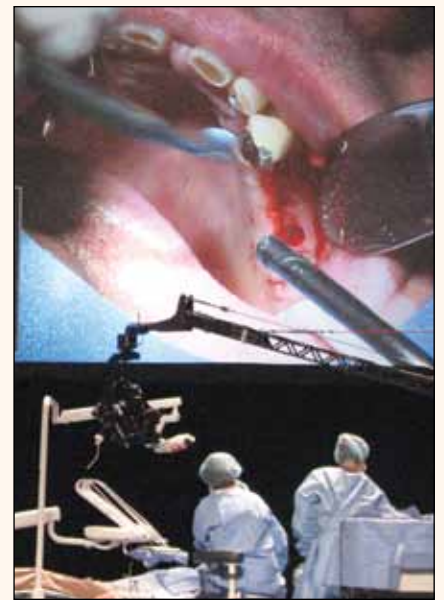
The Live Dentistry Stage is back on the exhibit hall floor, with demonstrations on Thursday and Friday. On Saturday, the “So You Think You Can Speak?” program features 50-minute presentations by speakers who responded to a call for presentations and were accepted by the meeting’s scientific committee. A number of timely dentistry topics will be covered.

The exhibit hall should be busy with more than 300 companies projected to fill approximately 600 booths. Exhibition hours are 8:30 a.m. to 6 p.m. on Thursday and 8:30 a.m. to 5:30 p.m. on Friday.

Booking early recommended

Special hotel rates are available to PDC attendees, with early booking recommended to ensure availability. Reservations can be made directly with conference hotels via links on www.pdcconf.com. Registration opens Oct. 15 with early bird rates for all members of the dental team.

(Source: Pacific Dental Conference)



Dr. Mark Kwon, at PDC 2013, performs ‘Implant with Sinus Surgery’ under the giant screen in the Live Dentistry Arena. Photo/Dental Tribune

AD

**THE LARGEST
DENTAL MEETING
IN CANADA**

**Palais des congrès de Montréal
MONTRÉAL CANADA
May 23rd to 27th 2014**

FOR INFORMATION

www.odq.qc.ca

ANNUAL CONVENTION
ORDRE DES DENTISTES DU QUÉBEC



**Journées dentaires
internationales
du Québec**

Journées dentaires internationales du Québec, May 23–27

Following what meeting organizers describe as a highly successful convention this past spring, planning is now in full force for the 44th edition of the Journées dentaires internationales du Québec, which will take place from May 23–27 at the Palais des congrès de Montréal.

At the 2014 meeting, JDIQ will host the Association of Prosthodontists of Canada. Among the benefits expected from this joint venture, which also involves the Association of Prosthodontists of Québec, will be a larger number of top speakers in implant and restorative dentistry — and a presence at the meeting of a larger number of prosthodontists from across Canada.

The annual meeting of the Ordre des dentistes du Québec continues to be one of the highest-attended dental meetings in North America.

In 2014, meeting organizers expect to host more than 12,000 delegates from around the world.

The meeting will feature a scientific program with more than 100 lectures and workshops presented in English and French. The JDIQ meeting is described by organizers as being Canada’s most highly attended bilingual convention.

More than 225 exhibitors will occupy approximately 500 booths in the exhibit hall, making it one of the largest in Canada. The exhibition will be open Monday and Tuesday, May 26 and 27, and it will feature a continental breakfast on both days for the early risers as well as a wine and cheese reception to close out both afternoons.

Featured 2014 speakers already in the lineup include Drs. Dale Miles, Robert Langlais, Steven Olmos, Stephen Niemczyk, Manor Hass, Jonathan Bregman, Michael Di Tolla, Gerry Kugel, Karl Koerner, Joe Blaes, Jason Smithson, Brian Novy, Ken Hargreaves, Thomas Dudney, Robert Gutneck, Tieraona Low-Dog and James Mah, to name just a few.

For more information about the meeting, you can call (800) 361-4887, you can visit www.odq.qc.ca or send an email to congres@odq.qc.ca.

(Source: JDIQ)

PERFORM and RELAX

POSIFLEX helps you be AT YOUR BEST!



«The Free Motion Elbow Supports bring me support, stability and allow me to relax. I have far less tension in my neck and lower back.»
Dr. Sylvie Jetté, Repentigny, Qc



«I am relying on this *elbow support* so much each day when I am treating my patient. It is really a great invention and good clinical companion for dentists who bend their neck, back and the lumbar part during their long working hours.»

Dr Henry Chang, Taiwan



«After four months of using the Posiflex stool with the *Free Motion Elbow Supports*, the pain has been reduced by 80%. I no longer take pain reliever and I have stopped visiting my physiotherapist.»

Michelle Fontaine, RDH



«I'm in perfect control with my Posiflex.»
Dr. Marc Thériault, Ancienne Lorette, Qc

**COMPREHENSIVE LINE OF
ERGONOMIC SEATING AND
FREE-MOTION ELBOW
SUPPORTS SYSTEM THAT
FITS MOST STOOLS**

CLINICALLY PROVEN TO PREVENT AND REDUCE MUSCLE TENSION



Ask your local distributor!

1-888-767-4353 / www.posiflexdesign.com

To ensure you can keep working, use pain-free seating

Protect your income with Posiflex Free Motion Elbow supports

The list is disturbing: fatigue; injury problems; serious neck, upper-back and shoulder pain; and posture so poor that it affects general physical performance. All are alarmingly common symptoms experienced by practitioners across the dental profession. The result: Forced early retirement caused by neck, shoulder and back problems is a frequent occurrence for dental professionals.

Studies demonstrate that the two major factors that help dental professionals keep a good posture and reduce muscle tension are the position of the patient chair and the use of an upper-body support mechanism, such as elbow supports.

The main cause of physical problems (muscle tension, musculoskeletal disorders and disk herniation) is the constant contraction of muscles, which in turn can cause an impairment of blood flow of up to 90 percent.

This situation leads to lactic acid build-up (lactate) in muscles to the extent that people begin to suffer from hyper-contraction. That means that even when

an individual is not working, his or her muscles are never truly at rest.

According to the product developers at Posiflex Design, understanding the proper positioning of the patient chair and using upper-body supports such as Posiflex Free Motion Elbow Supports can significantly diminish contraction of the muscles and restore proper blood flow.

Furthermore, according to the company, independent research results have confirmed that Free Motion Elbow supports help people maintain a straight posture, which enables users to benefit from properly designed lumbar support.

Less stress on the upper body (shoulders, neck and back), proper blood flow and a straight posture position create correct support of the spinal structure and the lumbar area. According to the company, these adjustments will also ensure that body functions are working properly. For the majority of dental-stool users, keeping a straight position and reducing muscle tension while focused on precision tasks in dentistry is nearly impossible without lumbar support and



Quebec dentist Claude Martel, DMD, is one of many dental professionals benefiting from the use of Free Motion Elbow Supports by Posiflex Design. Photo/Provided by Posiflex Design

upper-body support.

If your neck, shoulder and back pain and/or fatigue are so bad that you find it necessary to spend money and time on temporary treatments, the people at Posiflex Design encourage you to try their Free Motion Elbow Supports.

All of your years of training, skill acquisition and capital investment could end up being worth little if you can't hold up to the physical demands of a dental practice and retire healthy.

If you love what you are doing and want to continue in your profession safely and comfortably, Posiflex invites you to visit www.posiflexdesign.com to learn more. With a product that is clinically proven to reduce muscle tension and prevent musculoskeletal disorders, the company is confident it can help ensure you'll be able to continue enjoying your livelihood for many years to come.

(Source: Posiflex Design)

'Barrier protection' is critical in dental professionals' gloves

Gloves should enhance safety of both patients and users

While caring for their patients, dental and health care professionals are constantly exposed to bodily fluids that may carry viruses and other infectious agents.

It is therefore critical that the gloves these professionals use provide the best possible barrier protection.

Many types of gloves are available today, but it is important to know that not all gloves have the same barrier capability, depending on the type of material used. For example, natural rubber latex gloves have long been acknowledged for their very effective barrier properties, while non-latex gloves, such as vinyl (polyvinyl chloride), have inferior barrier capability as shown by numerous studies.

Other synthetic gloves, such as nitrile and polyisoprene, perform much better than vinyl but are more costly,

especially polyisoprene gloves. Using gloves with inferior barrier capability could expose both the patient and user to harmful infections.

Quality, safety top priorities

Malaysia is the world's largest medical gloves exporter (latex and nitrile). Both quality and users' safety are of top priority to the nation's glove industry. To this end, a quality certification program (the Standard Malaysian Gloves, or the SMG) has currently been formulated for latex examination gloves.

All SMG-certified gloves must comply with stringent technical specifications to ensure the gloves are high in barrier effectiveness, low in protein and low in allergy risks, in addition to having excellent comfort, fit and durability — qualities that manufacturers of many synthetic gloves are trying to replicate.

Natural, sustainable resource

Latex gloves are green products, derived from a natural and sustainable resource, and are environmentally friendly. (You can learn more online at www.smg-gloves.com and at www.latex-glove.info).

The use of low-protein, powder-free gloves has been demonstrated by many independent hospital studies to vastly reduce the incidence of latex sensitization and allergic reactions in workplaces.

More important, latex allergic individuals donning non-latex gloves can now work alongside their co-workers wearing the improved low-protein gloves without any heightened allergy concern.

However, for latex-allergic individuals, it is still important they use appropriate non-latex gloves, such as quality

nitrile and polyisoprene gloves, that provide them with effective barrier protection.

Extensive array of brands, features and prices

Selecting the right gloves should be an educated consideration to enhance safety of both patients and users. For decades, gloves made in Malaysia have been synonymous with quality and excellence, and they are widely available in an extensive array of brands, features and prices.

They can be sourced either factory direct (www.mrepc.com/trade and click "medical devices") or from established dental product distributors in the United States.

(Source: Malaysian Rubber Export Promotion Council)

Work with confidence



Malaysia: Your #1 Source For Quality Medical Gloves Protection and Performance You Can Trust

Malaysia is the largest source for U.S. imports of natural and synthetic rubber gloves as reported in tariff and trade data by the U.S. Department of Commerce and the U.S. International Trade Commission



www.mrepc.com
www.smg-online.biz
www.latexglove.info



**BUY MALAYSIA
SMART CHOICE**



MALAYSIAN RUBBER EXPORT PROMOTION COUNCIL

Understanding lasers: They are not all alike

By Scott D. Benjamin, DDS

The promotion, popularity and successful outcomes of laser treatment in many areas of health care, particularly ophthalmology, have made patients and clinicians alike more interested and inquisitive about the use of lasers in dentistry. However, the selection of the appropriate device and proper implementation is not as simple as it seems.

Two of the most frequently asked questions that I receive are, "Aren't all lasers basically the same?" and "When are we going to have one laser that will be great at everything?" The answers to these questions are relatively simple: No, lasers are not all the same and we will never have one laser wavelength that will be the best at everything unless the laws and principles of physics change. Despite what we as clinicians hear from salespeople, the laws of physics do not change from one company or product to the next, and the principles of physics will always remain the same. Tissue interactions are dependent on the scientific properties of each device. It is our responsibility as health care providers to learn and understand the scientific principles of every procedure we perform and the basic laser physics of each devices' use to perform these tasks.

It is the absorption of light energy into the target tissue that enables a laser to perform specific tasks and procedures. All lasers perform only two basic functions when they interact with biologic tissue: They vaporize the target and its related biofilm; or they stimulate a tissue response,

such as tissue fluorescence, or a healing response. Material is vaporized and removed when its temperature is instantaneously raised to its vaporization point and its components become a gas— and the cell expands and explodes. This vaporization is accomplished when the laser energy is absorbed into the target using either an ablation, incisional or excisional technique, or, more commonly, with a combination of these techniques.

The wavelength of the light energy emitted by a laser is one of its most important properties and determines how efficiently it is absorbed into the tissue and materials to produce the desired response. The composition of the laser's active medium is what determines the wavelength of the electromagnetic energy that it produces when the medium is stimulated. The components of the materials that absorb the light energy are called chromophores.

One of the primary considerations in the selection of a laser is matching the wavelength of the laser with the chromophores contained in the target tissue. The soft tissue of the oral cavity is approximately 70 percent water, which makes water a primary chromophore for absorption in these structures.

Despite the fact that water is naturally present in the crystals in enamel, dentine, cementum and bone it is significantly less than the water content of the body's soft tissue. This requires a wavelength of light energy that is very highly absorbed in water, which has peak absorption of light energy at approximately 3,000 nm. These facts make Er:YAG lasers with a wavelength 2,940 nm an ideally matched device for the

laser vaporization of the hard tissues and when using Photon Induced Photoacoustic Streaming (PIPS®) for endodontic procedures. When comparing lasers and the light energy that they emit there is a significant difference in their absorption in water.

The higher the power that a laser has and how it is controlled is also an extremely important aspect in its efficiency and efficacy. The peak power of a laser is the maximum amount of energy that is emitted during a single pulse. While average power is the amount of energy that is emitted in one second, and is determined by the peak power and the amount of thermal relaxation time that occurs during that second. Clinicians are often confused about the different roles and value of peak versus average power.

Today, quality lasers give practitioners the ability to manage this high peak power with digital pulsing, which enhances clinicians' ability to control the laser light interaction with its target to accomplish their desired goals. With a comprehensive understanding of how these devices function, clinicians are easily able to accomplish their treatment goals with improved outcomes and patient satisfaction.

The science of how a laser performs is only one of the considerations that practitioners should focus on when selecting



PIPS endo case. Photo/Provided by www.pipsdocs.com

TAD
BOOTH
NO. 714

LightWalker system from National Dental Inc. (NDI) lets you to choose between two laser sources. Learn more at www.nationaldental.com. Photo/Provided by NDI



a device. Other considerations include the ergonomics and quality of the device and its accessories, as well as the cost and accessibility of the consumables such as tips, fibers and handpieces. The value of the device, reliability, the reputation of the manufacturer and your timely access to support and service are of the utmost importance.

After understanding the science and investigating all of the above-mentioned considerations for selecting and evaluating lasers, the single most important aspect should be device-specific training. Each device is different, with unique programming and features that need to be understood for safe and effective utilization. The physics are easily applied once understood and the laser just becomes a better way to perform procedures making dentistry easier, better and faster for the patient and the practice.

About the author

DR. SCOTT BENJAMIN is in private practice in rural upstate New York and is an associate professor and director of advanced technologies and informatics at Roseman University of Health Sciences, College of Dental Medicine. He is the chairman of the ADA Standards Committee Working Group on Dental Lasers and is an officer on the board of directors of the Academy of Laser Dentistry.

AD



AB
Superior Implant Technology

ALWAYS ONE STEP AHEAD

AB Dental is a leading international company specializing in the development, manufacturing and marketing of Dental implants and oral rehabilitation solutions to satisfy all clinical needs





I2
Two pieces screw type cylinder implant



I5
Two pieces conical implant



I6
One piece conical, narrow, integral implant combined with abutment



I6b
One piece narrow implant with ball attachment on top



Short Implants
I15 Two pieces short & wide implant I5 length 6mm - Two pieces short & conical implant, available with diameters of 4.5, 5, 6, 7, 8mm and length of 6mm

We continue to honor the ODS and JDQ dental exhibitions Specials:
 AB Implant 50% off: Pay \$89 for a great superior technology implant (No minimum quantity) AB implant + analog + abutment at \$165
 Online Catalogue: www.ab-dent.com
 AB Implants Canada | 1-514-941-4450 | abimplants@gmail.com | www.ab-dent.com |  AB implants Canada



Community Service

We provide hundreds of backpacks filled with school supplies and clothing annually to give underprivileged children a sense of confidence as they head back to school.

To date, Henry Schein has **provided more than 15,000 backpacks to children** across North America.



Going Green

Reducing paper, planting trees and saving energy are all top of mind with Henry Schein.

Our Eastern Distribution Centre in Niagara-on-the-Lake, Ontario has gone paperless, **eliminating 17,000 lbs of paper usage per year**. Team Schein Members also plant trees each spring as a part of our Earth Day initiative.



Disaster Relief

We **ship more than \$1 million of healthcare products a year to aid** when natural disasters strike globally.

In the past, we have provided aid to Haiti, Japan, China, Chile, Pakistan, New Zealand and many more disaster ravaged areas. When disaster strikes, Henry Schein is there to help!



Giving Back

Henry Schein **helps communities and people receive dental care they normally couldn't afford.**

We partner with local facilities that treat patients who cannot afford needed dental work. Henry Schein is proud to **provide much needed supplies to help these care efforts.**

