Find it in Atlanta: ‘Foundation for the Future’ of dentistry

Education, exhibits, entertainment at 103rd Hinman

The Thomas P. Hinman Dental Meeting — one of the nation’s leading dental meetings and a comprehensive source of continuing education in dentistry — will provide a ‘Foundation for the Future’ in Atlanta from March 26–28. The 103rd Hinman will feature more speakers than ever before, with 85 leading dental authorities, plus more than 230 courses; a new GOLD (Graduates of the Last Decade) Program; “Career Connections” to match employers with candidates, all-day educational tracks for dentists, dental hygienists, assistants, laboratory technicians and office staff, and more than 430 companies demonstrating the latest products, services and clinical techniques in dentistry.

“Hinman offers the very best in continuing education and world-class exhibits that help build a foundation for the future for everyone in attendance,” said Dr. Dave Lee, general chairman of the 2015 Hinman Dental Meeting. “We have assembled truly the best in the profession, more speakers than ever before, as well as special programs and courses designed to elevate learning for our more than 22,000 dentists and dental professionals who attend our annual meeting.”

Continuing education program
Across three days, Hinman will offer more than 230 courses, including 72 participatory and interactive courses, giving dental professionals an opportunity to learn new procedures, as well as fine-tune their skills. The new GOLD Program, designed for dentists graduating in the last 10 years, provides critical clinical and business guidance to enable long-term success in independent practice ownership. The program is on Friday, March 27, from 8 a.m.–5:30 p.m. and features key experts in dentistry, including Imtiaz Manji, John Connolly, Charles Loretto, Dr. Mark Hyman, Dr. Mollee Winston, Dr. Lee Ann Brady, Dr. Steve Ratcliff and Kirk Behrendt.

Special course topics range from live patient courses on TMJ occlusion and implants and disturbing trends in dentistry to a live court case and Botox and dermal fillers. This year, Hinman also offers unique course pairings that combine speakers who address both diagnosis and therapeutics for select topics. A “Hinman Study Club” program will be provided by Georgia Regents University speakers on

• See ATLANTA, page A4

More than 430 companies demonstrating the latest in dentistry, will be in the exhibit hall at the 103rd annual Thomas P. Hinman meeting in Atlanta, March 26–28. Photo/Provided by www.dentaltribune.com

NEWS

• Beavers’ teeth reveal way to toughen enamel
• Root Canal Awareness Week: Americans say, ‘I would rather have a root canal than the flu’

EVENTS

• In May: JDIQ, ‘Canada’s largest bilingual dental meeting’
• Earn C.E. on family vacation at Smiles in the Sun
• Pediatric dentists convening in Seattle from May 21–24
• Florida Dental Association meeting focuses on career and life balance
• AGD plans ‘Golden Opportunity’ in California
• In Jamaica: Five days of comprehensive implant training

INDUSTRY NEWS

• Rhein’83 threaded spherical interchangeable attachments have threaded titanium sleeve option
• PNC Bank: Planning for partial retirement takes extra planning for dentist
• Planet Success: Reputation management facts for today’s dentist
• LM Dental’s LM Extraction instruments combine ergonomics, Scandinavian design
• Obsessive quality control starts at molecular level
Beavers reveal way to toughen enamel

Researchers find protection against caries in chemical structure of beavers’ teeth

Beavers don’t brush their teeth, and they don’t drink fluoridated water, but a new Northwestern University study reports beavers do have protection against tooth decay built into the chemical structure of their teeth.

This pigmented enamel, the researchers found, is both harder and more resistant to acid than ‘regular’ tooth enamel, including that treated with fluoride. This discovery is among others that could lead to a better understanding of human tooth decay, earlier detection of the disease and improving on current fluoride treatments.

Material surrounding the nanowires

Layers of well-ordered hydroxylapatite “nanowires” are the core structure of enamel, but Derk Joester and his team discovered it is the material surrounding the nanowires, which makes it is the minority ions controls enamel’s acid resistance and mechanical properties.

Enamel is a complex structure, which makes studying it challenging. Joester’s team is the first to show unambiguously that this “amorphous” (or unstructured) phase exists in enamel, and they are the first to show its exact composition and structure.

“We have made a really big step forward in understanding the composition and structure of enamel — the tooth’s protective outer layer — at the smallest length scales,” said Joester, lead author of the study and an associate professor of materials science and engineering in the McCormick School of Engineering and Applied Science.

“An unstructured material, which makes up only a small fraction of enamel, likely plays a role in tooth decay,” Joester said. “We found it is the minority ions — the ones that provide diversity — that really make the difference in protection. In regular enamel, it’s magnesium, and in the pigmented enamel of beaver and other rodents, it’s iron.”

The unprecedented imaging study of tooth enamel at the nanoscale was published Feb 13 by the journal Science.

Dental caries is the breakdown of teeth due to bacteria ("Caries" is Latin for "rottenness") It is one of the most common chronic diseases and a major public health problem, despite strides made with fluoride treatments.

According to the American Dental Association, $111 billion a year is spent on dental services in the United States, a significant part of that on cavities and other tooth decay issues. A staggering 60 to 90 percent of children and nearly 100 percent of adults worldwide have or have had cavities, according to the World Health Organization.

Experiments on rabbit, mouse, rat and beaver enamel

In a series of experiments with rabbit, mouse, rat and beaver enamel, Joester and his colleagues imaged the never-seen-before amorphous structure that surrounds the nanowires. They used powerful atom-probe tomography and other techniques to map enamel’s structure atom by atom. (Rodent enamel is similar to human enamel.)

The researchers subjected the teeth to acid and took images before and after acid exposure. They found the periphery of the nanowires dissolved (the amorphous material), not the nanowires themselves.

The researchers next identified amorphous biominerals in the structure, such as iron and magnesium, and learned how they contribute to both the mechanical hardness and resistance of enamel to acid dissolution.

Of particular interest to Joester and his colleagues was the pigmented enamel of the beaver’s incisors. Their studies showed it to be an improvement over fluoride-treated enamels in resisting acid. (The presence of iron gives the teeth a reddish-brown color.)

“A beaver’s teeth are chemically different from our teeth, not structurally different,” Joester said. “Biology has shown us a way to improve on our enamel. The strategy of what we call grain boundary engineering — focusing on the area surrounding the nanowires — lights the way in which we could improve our current treatment with fluoride.”

The full title of the paper is “Amorphous Intergranular Phases Control the Properties of Rodent Tooth Enamel.”

(Sources: Northwestern University and the journal Science)
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Americans say, ‘I would rather have a root canal than the flu’

According to a recent survey by the American Association of Endodontists (AAE), 78 percent of respondents say they would rather avoid getting the flu than having root canal treatment. The same number also say they would rather avoid losing a permanent tooth, which is something root canal treatment can help keep from happening.

“Maybe it’s time to change the old, ‘I’d rather have a root canal...’ saying to ‘I’d rather have the flu...’ for something I really don’t want to do,” said AAE President Dr. Robert S. Roda, an endodontist in Scottsdale, Ariz. “The root canal procedures of your parents or grandparents are no more. Thanks to advancements in techniques and technologies, today’s root canal treatment is virtually painless.”

During its ninth annual Root Canal Awareness Week, March 22-28, the AAE wants to dispel myths surrounding root canal treatment and encourage general dentists to involve endodontists in case assessment and treatment planning to save patients’ natural teeth.

“Being part of a team of generalists and specialists is the best way to develop true multidisciplinary treatment planning and provide the greatest chance for good outcomes,” Roda said. “Together we provide patients with comfortable treatment and positive experiences resulting in high-quality care to help them save their natural teeth.”

A recent AAE study found that 94 percent of general practitioners have a positive or very positive perception of endodontists, and the same percentage agree that endodontists are partners in delivering quality dental care. By partnering with endodontists, general dentists can help patients feel less anxious. The AAE’s Root Canal Awareness Week study found that most root canal treatment continues to be the dental procedure that makes patients most apprehensive, however, 89 percent of patients report being satisfied after root canal treatment by an endodontist.

To encourage collaboration between general dentists and endodontists, the AAE offers many free resources:

• The Root Canal Safety web page contains authoritative and reliable information about the safety of endodontic treatment, while debunking myths that root canals cause cancer or other health problems.
• Treatment Options for the Compromised Tooth: A Decision Guide includes case examples with radiographs of successful endodontic treatment in difficult cases and encourages general dentists to assess all possible endodontic treatment options to save the natural tooth.
• The Case Difficulty Assessment and Referral Form offers guidance to help evaluate a patient’s condition and assess risk factors that may affect the outcome of treatment.
• The ENDODONTICS: Colleagues for Excellence newsletter highlights clinical topics of interest to dentists who perform their own endodontic treatment and benefit from coverage of best practices and the latest advancements in the specialty.
• Endodontists: Partners in Patient Care is a video that explains what an endodontist is and how specialists work with general dentists to provide the highest levels of patient care. It is a great resource to show patients when a referral to a specialist is needed.

By using these tools during Root Canal Awareness Week and throughout the year, general dentists ensure they are developing the best treatment plans to save natural teeth and keep patients satisfied.

To help promote Root Canal Awareness Week, dental professionals can print the AAE poster to share in offices or clinics. For more information, visit www.aae.org and share on Facebook and Twitter or search #rootcanal.

(Source: AAE)

**March 22-28 is Root Canal Awareness Week.** Photo/Provided by AAE

**If you need a root canal, see an endodontist.**

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**March 22-28 is Root Canal Awareness Week.** Photo/Provided by AAE

**Root canal don’t cause pain—they relieve it!**

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**Atlanta, page A1**

Saturday, March 28, from 9 a.m.–12:45 p.m., featuring topics such as anterior esthetics with crown lengthening, optimization of the implant site and 3D imaging with CBCT.

There are a number of all-day and half-day educational tracks and courses for the entire dental team. Highlights include:

• "Botulinum Toxin for Best Therapeutic and Esthetic Outcomes OnDemand Training Module,” with Dr. Louis Malcmacher, on March 26 from 8 a.m.–5 p.m.

• "Building A Better Business Office,” with Kirk Behrendt, Dr. Gary Doogan and Chuck Blakeman, on March 26 from 1–4 p.m.

• "Social Media Foundations,” with Tonya Lanthier, Laci Phillips and Denise Ciardello, on March 26 from 1–4 p.m.

• "Hygiene from the Ground Up,” with Karen Davis, Dr. Samuel Low and Dr. David Wong, on March 27 from 9:30 a.m.–12:30 p.m.

• "Laboratory Technicians Leading the Way to Excellence,” with Dr. Javier Vasquez, Skip Carpenter, Von Grow and Bill Marias, on March 28 from 8:30 a.m.–4 p.m.

**Meeting highlights**

In addition to a complete continuing education program, Hinman will feature more than 450 companies — located conveniently in one hall and on one level. Exhibitors will showcase new technology, equipment, products and services for the entire dental staff. The exhibit hall will be

**See ATLANTA, page A6**
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This year’s Hinman Dental Meeting is offering unique course pairings that combine speakers who address both diagnosis and therapeutics for select topics. Photo/Provided by Hinman Dental Meeting

**EVENTS**

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  open on Thursday, March 26, from 9 a.m. to 5 p.m.; Friday, March 27 from 9 a.m. to 6 p.m.; and Saturday, March 28 from 9 a.m. to 3 p.m.

  There will be plenty of opportunity for dentists and dental professionals to shop the floor and get their product and equipment questions answered by exhibitors in an efficient setting.

  This year’s meeting highlights also include:

  - Thursday’s keynote session featuring Jenna Bush Hager, an author, journalist and daughter of former President George W. Bush.
  - The “Dental Student Networking Event & Reception” held Friday afternoon at 4 p.m. to discuss topics not learned in school.
  - A special prize program that features Hinman’s “Big Raffle,” raising money for scholarships and giving away multiple prizes. Tickets can be purchased during registration. Prizes include a grand prize (50 percent of the net proceeds earned from raffle ticket sales), a 2nd prize ($2,000 Ritz-Carlton gift card) and 3rd prize ($1,000 Home Depot gift card).
  - Social activities, including a wine tasting event, AmericasMart shopping, a Hinman luncheon with Walter Reeves at the Atlanta Botanical Gardens, photo and video courses, an “Atlanta Brews” cruise of local craft breweries and brewpubs and golf outing at the prestigious Druid Hills Golf Club.
  - Two Hinman signature parties — the always popular “Dentist Reception” with the Stephen Lee Band and a “Great Gatsby Auxiliary Reception” — both held on Friday night in the Omni Hotel.

**Scholarship program**

As a nonprofit organization dedicated to the advancement of the dental profession, the Hinman Dental Society will present scholarships and gifts totaling more than $250,000 to approximately 90 dental, dental-hygiene, laboratory-technician and dental-assisting students at colleges and universities throughout the southeastern United States, as well as dental education groups and clinics. As in years past, the scholarships will be presented at the “Scholars’ Luncheon” held on Saturday during the meeting.

In addition, Hinman will contribute 50 percent of the proceeds from the “Big Raffle” to fund dental scholarships. During the past 14 years, the Hinman Dental Society has contributed more than $6.5 million in scholarships and large gifts in support of dental education.

**Registration process**

Interested attendees can find detailed information about the 2015 meeting and register online at www.hinman.org.

**The Hinman tradition**

The Hinman Dental Meeting is designed with a commitment to quality and professionalism and a high regard for the value of continuing education. The Hinman program meets the continuing education requirements set by the Academy of General Dentistry and state boards of dentistry.

For additional information about the Thomas P. Hinman Dental Meeting, you can visit online at www.hinman.org or you can telephone Sylvia Ratchford, executive director, at (404) 231-1663.

(Source: Hinman Dental Meeting)
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The Montréal Convention Centre (Palais des congrès de Montréal), home of the 2015 Journées Dentaires Internationales du Québec, May 22–26. Photo/MTTQ/Marc Cramer, Tourism Montréal

In May: ‘Canada’s largest bilingual dental meeting’

The Journées Dentaires Internationales du Québec, Canada’s largest bilingual dental meeting, according to organizers, is from May 22–26 (Friday through Tuesday) in Montréal. Online registration is available at www.odq.qc.ca.

Meeting apps for Apple and Android phones and tablets can be downloaded through www.odq.qc.ca, the app store or the Play Store. On-site at the meeting, free WiFi will be available to all delegates and exhibitors at the venue, the Palais des congrès de Montréal.

The meeting’s educational program has more than 125 prominent speakers from Canada, the United States and Europe presenting approximately 175 educational sessions in English and French during the five-day convention.


Many other lectures and workshops are scheduled, with details in the program online.

The exhibition hall will feature more than 225 companies in 500 booths in the 133,563-square-foot space.

More than 2,000 company representatives will be on hand to help you see, compare and make decisions on new furniture, equipment, instruments, techniques and other products and services — all under one roof.

One C.E. hour per day can be earned by visiting the exhibit hall. Just be sure to have your badge scanned at the entrance.

The exhibition hall hours are 8 a.m. to 6 p.m. on Monday, May 25, and 8 a.m. to 5 p.m. on Tuesday, May 26.

The organizers invite you to join the more than 12,000 expected delegates to meet, learn, share and enjoy this gathering of friends and colleagues.

(Source: JDIQ)

Earn C.E. on family vacation


Now you can earn C.E. credit while your family has a vacation that you can enjoy with them. All the programs are in the morning — leaving you the balance of your day to spend time with your family. Reduced rates are available at the family-friendly Longboat Key Club and Resort.


Register at smilesinthesun@verizon.net, www.smilesinthesun.net, or call (631) 423-5200.

(Source: Smiles in the Sun)
Pike Place Market, the Space Needle, the EMP Museum and some of the top thought leaders in pediatric dentistry are among the reasons to be in Seattle May 21–24 for the American Academy of Pediatric Dentistry (AAPD) annual session.

Scientific sessions are at the Washington State Convention Center, in the heart of downtown, adjacent to hotels, restaurants, nightlife and shopping. Taking advantage of the location, the welcome reception on Thursday, May 21, features exclusive access to the Space Needle, EMP Museum and Chihuly Gardens.

The keynote, on May 22, features Frank Abagnale with “The True Story of Catch Me If You Can.” An authority on forgery, embezzlement and secure documents, Abagnale became an expert of sorts 40 years ago as a world-famous con man, as depicted in his best-selling book, “Catch Me If You Can.” Leonardo DiCaprio and Tom Hanks starred in a Steven Spielberg film based on the book.

Attendees must register for the meeting prior to making hotel reservations to get the meeting rate. Hotels in the AAPD official block are the Sheraton Seattle (headquarter hotel), the Grand Hyatt Seattle, the Hyatt at Olive 8, the Fairmont Olympic, the Crowne Plaza, the Hilton Seattle and the Renaissance Seattle.

Three-day exhibit hall
Products and services in the meeting’s exhibit hall will be geared toward pediatric dental practices. An AAPD booth will have a bookstore, which will have copies of the Coding Manual, the new pediatric dentistry handbook. Also in the exhibit hall will be the Healthy Smiles, Healthy Children Donor Lounge, where you can learn more about Access to Care Grants and donate to its supporting foundation.

The exhibit hall schedule provides attendees plenty of time to explore without conflicting with education courses, while also leaving time to enjoy the city. A hospitality area on the exhibit hall floor will offer a continental breakfast, and there will be complimentary beverages each morning and afternoon and lunch available for purchase.

You can register for the meeting online by visiting www.aapd.org/annual.

(Source: AAPD)
Florida dental meeting focuses on career and life balance

The Florida Dental Association will hold its annual meeting, the Florida Dental Convention (formerly the Florida National Dental Convention — FNDC), at the Gaylord Palms Resort & Convention Center in Orlando from June 11-13. (Unlike years past, for a change this year’s event does not fall on Father’s Day weekend.)

This year’s scientific program, “Dentistry Beyond the Tooth — Career & Life in Balance,” features a broad spectrum of topics, ranging from “Balancing the Occlusion” to “Creating a Balance in Life.” With more than 100 lectures, 33 workshops and three mini-residencies, there is likely to be a course for everyone on the dental team.

The convention program experience is designed to touch on each of the following elements: healthy practice, healthy mouth, healthy mind, healthy body and healthy life. Each day begins with a “High Energy — High Impact” motivational speaker, with a topic oriented toward the entire team. These dynamic, kick-off speakers were specifically selected for their demonstrated ability to move and inspire audiences.

Dr. Uchi Odiatu will set the tone with his opening keynote session on Thursday, “Living Your Dreams.” As a general dentist, motivational speaker, lifestyle coach, TV personality, wellness author, certified trainer, lecturer, nutritionist and athlete, Odiatu is known for his inspiring and thought-provoking presentations.

On Friday, the meeting will welcome Dave Weber with “Conquering Your Goliaths.” Weber’s fun, high-energy and entertaining style has made him one of the nation’s most sought after speakers. He is a crowd pleaser. He’s known for his ability to motivate, challenge and inspire his audiences.

Morris Morrison will be the finale keynote speaker, presenting “Lead-ur-ship Starts With You.” Morris has a unique motivational style that enables him to connect with his audience in a personal and inspirational way. He is sought after by Fortune 500 companies and major sports organizations, including the NBA.

The 2015 scientific program will feature nationally renowned speakers, including Gary Dewood, Lee Ann Brady, Charles Blair, Lois Banta, Sam Low, David Little and Harold Crosley. Clinical courses and workshops are designed to equip you and your team with the tools necessary to incorporate new and emerging technology and techniques to optimize clinical skills business growth and team building. Hot topics include: composites, one-step dentures, sleep dentistry, head and neck dissection, cone-beam anatomy, HPV and biofilm control and prevention.

Meeting organizers invite you to join your colleagues for the high-value C.E. sessions, many of which are available at no extra cost.

New this year will be special courses geared toward the new dentist. Also, as a tribute to the industry’s hard-working hygienists, the meeting will offer a “free” C.E. course on Saturday, designed specifically for the practice of dental hygiene. In addition, attendees can consider one of the one-hour, “hot topic” sessions.

Meeting organizers invite you to come for the C.E. and stay for the fun. The nightly parties are designed to be family friendly and include a “magical” night out at Disney’s Magic Kingdom on Saturday. Learn more at www.floridadentalconvention.com or call (800) 877-9922.

(Source: Florida Dental Association)

AGD plans Golden Opportunity’ in California

The only thing that remains constant is that everything is constantly changing. At AGD 2015, from June 18–21 in San Francisco, the Academy of General Dentistry (AGD) intends to not just embrace that change, but celebrate it.

Taking place at the Moscone West Convention Center, the 2015 annual meeting will showcase new technologies, new continuing education courses for dentists and staff, and a keynote address from Travelocity.com founder Terry Jones.

Meeting highlights

In addition to creating Travelocity.com, Jones is the founding chairman of Kayak.com and the executive chairman of Wayblazer. In a presentation sponsored by Colgate, he will share his knowledge on creating a culture of innovation within the dental practice and embracing the opportunities found in today’s age of information.

Innovation will be on full display at “Modern Practice for Today’s Patients” presented by Henry Schein Inc. Located in the exhibit hall, this display invites attendees to imagine the possibilities of a technologically enhanced dental office. Visitors will be able to try out cutting-edge equipment, use patient management software and catch a glimpse of the esthetic options available for transforming a practice space.

After catching a glimpse of the future in office design, attendees can get up close and personal with the future of the dental profession at the clinical and
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In Jamaica: Five days of implant training

The American Academy of Implant Prosthodontics (AAIP) will join with its affiliates, Atlantic Dental Implant Seminars (ADIS) and the Linkow Implant Institute, to present a five-day comprehensive implant training program in Kingston, Jamaica, at the University of Technology, School of Oral Health Sciences, from July 1-5.

The course will include a half day of lectures, surgical and prosthetic demonstrations and a half day of hands-on participation on anatomic manikins and cadavers, diagnosis and treatment planning of implant cases for a minimum of six patients, the construction of surgical templates, diagnostic wax-ups, and the insertion of a minimum of 10 implants by each participant. Qualified participants will perform sinus lifts, immediate implant placement and ridge splitting under supervision of the course faculty.

Upon completion of the 40-hour comprehensive implant training program, participating clinicians will be able to accomplish the following tasks: identify cases suitable for dental implants, diagnose and treatment plan for preservation and restoration of edentulous and partially edentulous arches; demonstrate competency in the placement of single tooth implants, soft-tissue management and bone augmentation; obtain an ideal implant occlusion, work as part of an implant team with other professionals; and incorporate implant treatment into private practice with quality results, cost effectiveness and profitability.

Implant treatment will be performed on provided patients in the dental clinic of the University of Technology, School of Oral Health Sciences, Kingston, Jamaica, with personalized training in small-group settings. The course is a cooperative effort of the Jamaican Ministry of Health, the University of Technology, School of Dental Sciences, Kingston, Jamaica, and the American Academy of Implant Prosthodontics.

A dental degree is required for all participants. The course is tax deductible and 40 hours of dental continuing education credits is awarded on course completion. No malpractice insurance is required for course participants.

Dr. Mike Shulman is course coordinator, Dr. Leonard I. Linkow is course director, and Dr. Sheldon Winkler is course advisor. Course faculty, in addition to Shulman, Linkow, Winkler, include Drs. Robert Braun, Ira L. Eisenstein, E. Richard Hughes, Charles S. Mandell, Virgilio Mongalo, Harold F. Morris and Robert Russo. The number of instructors participating in each course is dependent upon the registration.

Implants and components for AAIP/ADIS implant seminars are provided by Optimum Solutions Group. Dental laboratory support is provided by DCA Laboratory Inc., Citrus Heights, Calif., and Dani Dental Studio, Tempe, Ariz.

About the organization
Founded by Dr. Maurice J. Fagan Jr. in 1982 at the School of Dentistry, Medical College of Georgia, the objective of the Academy of Implant Prosthodontics is to support and foster the practice of implant prosthodontics as an integral component of dentistry.

The academy supports component and affiliate implant associations around the world, including organizations in Egypt, France, Italy, Israel, Jamaica, Jordan, Kazakhstan, Paraguay, Peru and Thailand.


American Academy of Implant Prosthodontics is designated as an approved PACE program provider by the Academy of General Dentistry. The formal continuing education programs of this program provider are accepted by AGD for fellowship, mastership and membership maintenance credit. The current term of approval runs from Jan. 1, 2014, to Dec. 31, 2015.

Complete information on the AAIP/ADIS Jamaica implant continuing education program, including tuition, faculty lectures, transportation and hotel accommodations, can be obtained from the course website, www.adiseminars.com, or by calling (551) 655-1909.

AAIP membership information can be obtained from the AAIP headquarters at 8672 East Eagle Claw Drive, Scottsdale, AZ, 85256-1058, telephone (480) 588-8062, fax (480) 588-8296, or from the AAIP website at www.aaipusa.com.

(Source: AAIP)
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JUNE 11-13, 2015

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As the digital evolution in dentistry continues, with the new CAD/CAM techniques, the Rhein’83 research laboratories, under the direction of vice president of technology Gianni Storni, have developed a new line of threaded interchangeable attachments. The various product lines include the Spherical OT cap line, in micro (1.8 mm diameter) and normo (2.5 mm diameter), together with the new Equator Profile, which is the smallest dimensional attachment in the market.

These threaded attachments are screwed directly inside the milled bar, mounting on the special 2.2 mm thread. Or, in cases where the CAD/CAM software produces an overdenture bar without threaded holes, Rhein’83 offers a threaded titanium sleeve that can be cemented into the hole of the bar. The threaded sleeve is glued into the hole that will receive the attachment, which is threaded into place.

To learn about the threaded interchangeable attachments and other Rhein’83 products in more detail and for more-comprehensive presentations on technical applications, email Rhein’83 at marketing@rhein83.it, or visit online at www.rhein83usa.com, or contact the distributor, American Recovery, by phone at (877) 778-8383 or by email at info@rhein83usa.com.

About Rhein’83
Rhein’83 was founded in 1983 in Bologna by Enzo Nardi, who was keen on research, specializing in overdentures. Spherical attachments had been on the market for some time, but were made mostly in metal. Rhein developed a series of castable attachments with elastic retention, introducing the first “silicon materials” on mobile prosthesis retention. Within a few years, silicon materials would completely replace metal attachments.

Today Rhein’83 works with many Italian and foreign universities to test the innovations produced by Rhein research and development. Awards include the MIUR certificate and the “Laboratory of Quality and Excellence” from the Ministry of Research and Development of Health.

Research has led to design and production of components for systems such as Sphero Block (normo and micro) and Sphero Flex allowing to correct divergent implant cases up to 46 degrees. Recently the new low-profile OT Equator attachment was developed with a complete system defined four in one, offering titanium abutments for all implant brands, castable solution for natural teeth, a passive bar connection and a complete line of attachments for CAD/CAM applications (available already in the most common dental software world wide).

All products are manufactured in titanium with an additional tin coating bearing the hardness of the surface to more than 1,600 Vikers. The company is also known and recognized for its dentists’ and dental technicians’ reports and its conferences and courses worldwide. Rhein is considered a world leading producer and distributor of dental attachments, with an active presence and distribution in more than 90 countries.

The company operates in accordance with European product certification (Directive 93/42 CE) in addition to UNI EN ISO 9001:08 - UNI CEI EN ISO 13485:12. It also has product certifications in many foreign countries, including the United States, Canada, Russia, Israel, Korea, Brazil and others.

(Source: Rhein’83)
Planning for partial retirement can be tricky

By Nicholas Spanakis, Group Practice Manager, PNC Bank

If you want to keep working, only on a less demanding schedule, you’re not alone. Many people these days are considering a “partial retirement.” According to a University of Michigan study, 20 percent of those ages 65 to 67 consider themselves partially retired, while in 1960 this group was nonexistent.

The reasons for this trend vary. Some partial retirees need to prolong income to support their lifestyle, but others simply enjoy their work and don’t want to stop. Can you participate in this trend? Possibly — but it takes planning. To help you clarify your goals and how to reach them, consider drafting a partial retirement plan.

Having a “planned duration” helps

The process of retiring, especially partially, is complex and can take years to achieve, largely because of their practices. If you’re the owner of a private practice, a partial retirement must be planned well in advance, and generally is more successful if there is a planned duration. But whether you’re negotiating with partners to scale back, or making a decision to move into an entirely different part-time job, planning is crucial.

Consider the following questions and discuss them with your business and life partners. Then share the answers with your accountant and/or financial professional.

• Do you want to change jobs, or stay at the same job and reduce hours?
• Have you made a financial plan that takes into account the reduced compensation resulting from fewer hours?
• Have you spoken with your financial advisor to prepare for partial retirement?
• Have you communicated your plans to your life partner and your business partners?

Once you’ve discussed these questions with all the players, the next step is to sit down with your accountant or financial advisor and draft an actual plan for your proposed retirement. This plan should cover financial matters, including how much you expect to earn and how that will cover your living expenses; work responsibilities including scheduling, such as on-call hours, regular hours worked and patients taken on, the expected duration of this arrangement, how a change in work habits will affect the ownership of the practice; and a clearly stated plan for the eventual transition to complete retirement.

All of the above goes double if you’re in a solo practice and plan to eventually sell or hand down your practice to the next generation. Preparing a business for sale takes years if you want to get the best price, and both you and your patients will benefit from long-term planning.

Nicholas Spanakis, group practice manager with PNC Bank, can be reached by phone at 866/636-6916 or by email at nicholas.spanakis@pnc.com

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Reputation management facts for today’s dentist

Reputation marketing is now the most trusted and effective form of online marketing for any dental practice. Moreover, sites such as Yelp and Google My Business differ from the buying decisions of millions of patients on a daily basis. Here are quotes from three highly respected business journals.

"In today’s world, a Google review can shape your business far more than a Google Ad."
— Forbes

"61 percent of customers read online reviews before making a purchase decision, according to recent surveys. After all, reviews provide a first stop for any potential customer to understand a product from a consumer point of view, delivering honest and impartial insight from peers."
— Entrepreneur

"Every marketer is aware of the rise of online reviews and other sources of peer-to-peer information, but many neglect this trend and market products much as they did a decade ago. We believe that many companies need to dramatically shift their marketing strategies to account for the rising power exerted on future customers by the opinions of existing customers."
— Harvard Business Review

Without question, every practice owner and office manager will tell you that referrals are the backbone of their success. In fact, word of month can be the difference between prosperity and continual struggle.

In today’s world, word of mouth is now represented by online reviews and social sharing. Some experts have referred to the blending of the two as “word of mouse.” But did you know that even with all this overwhelming information, and with online reviews generating new practices hundreds of thousands of dollars in extra annual revenue — some practices are slow to take advantage of these undeniable facts? In fact, Fox Business stated, "90 percent of consumers are influenced by positive online reviews — but only half of small business owners believe these reviews are important. Nearly 50 percent say online reviews are unimportant."

The solution for any practice is to become proactive in controlling its online reputation. It’s the difference between getting new patients or not.

The team at Planet Success created Reputation Express specifically to meet this challenge and put the control in the practice’s hands. Its purpose is simple: Drive in more patients by making your practice the obvious choice.

Planet Success wants you to be found, to be chosen and to be recommended more than you are now. The system was developed from a combined history of more than 50 years in marketing and consulting, working with practices from all over the United States.

For more information on how to make your practice the obvious choice you can visit Reputation Express online at www.reputationexpresspro.com.

(Source: Planet Success)
Extraction instruments combine ergonomics, Scandinavian design

LM Dental’s LM models feature nonslip ErgoTouch handles

By LM Dental Staff

LM Dental’s LM extraction instruments uniquely combine ergonomics, Scandinavian design and functionality for atraumatic tooth extraction. They feature comfortable, nonslip ErgoTouch handles and are well-balanced and lightweight.

LM-LiftOut instruments are designed to perform typical extractions atraumatically, an important consideration that enables rapid healing and future implant placement. The tip of the instrument is introduced into the periodontal space and slowly advances toward the apex of the root while moving gently back and forth.

LM-TwistOut instruments are indicated for tooth extraction in situations where strong force or torque must be applied, and LM-SlimLift instruments are created for the most atraumatic extractions. Because of their slim tips, the instruments fit in extremely narrow spaces and are ideal for implant preparations.

LM extraction instruments are supplied in a convenient cassette that protects both the instrument and the handlingduring the maintenance cycle. The cassette keeps instruments from puncturing the sterilization pouch, and the cassette can be color-coded. The blades, hand-finished and made from LM-DuralGradeMAX supersteel, stay sharp and are long-lasting when properly used and maintained.

Obsessive quality control starts at molecular level

DENTSPLY Pharmaceutical controls quality at every step, all the way to your office door

By DENTSPLY Pharmaceutical Staff

For more than 100 years DENTSPLY International has been supporting dentists worldwide in their profession. The company’s trusted and comprehensive range of anesthetics enables dentists and hygienists to start every procedure right. DENTSPLY Pharmaceutical ensures quality at each step of the product’s journey — from collection of active molecules all the way through to when the packages arrive at your office.

Ensuring quality of DENTSPLY pharmaceuticals begins when collecting active molecules and continues through double-sterilization of cartridges, laser inspection for defects, safety-focused packaging and breakage-avoidance shipping.

DENTSPLY Pharmaceutical starts at its earliest stages.

For each cartridge, the product’s journey begins when collecting active molecules and continues through double-sterilization of cartridges, laser inspection for defects, safety-focused packaging and breakage-avoidance shipping. Each cartridge is twice sterilized with a sterilizing filter followed by an autoclave method. Cartridges are then visually inspected with an electronic laser for defects and impurities, including but not limited to cracks, foreign particles, color and density. Each cartridge is mylar-pack labeled to restrain the individual pieces in case of a break — thus avoiding any injuries. Each set of 10 cartridges is then blister packed to avoid breakage. Finally, each cartridge is color coded as per industry standard ADA system.

Each cartridge is twice sterilized with a sterilizing filter followed by an autoclave method.

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Don’t just embrace change; celebrate it at AGD 2015.

(Source: AGD)
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Nordiska Dental
An update on non-rotating reciprocating endodontics

By Barry L. Musikant, DMD

There is an important distinction to be made between systems that involve 360-degree rotations, be they interrupted or continuous, and systems that purposely minimize rotation to 30 degrees. While a system that undergoes interrupted full rotations is less vulnerable to instrument separation than continuous rotations, it is still a problem and both are associated with the production of dentinal defects where concern exists that they may propagate and coalesce into vertical fractures over time.

Dentists acknowledge separation anxiety by using these rotating systems with a light touch, staying centered with minimal deviation from the conical shapes these instruments impart to the canal (see Fig. 1).

By limiting the amplitude of motion to 30 degrees, the torsional stress and cyclic fatigue associated with full rotations is reduced to the point where it virtually is no longer a factor in instrument separation. What this means in practice is the dentist’s ability to use the thinnest 02 tapered stainless-steel instrument in his/her arsenal without fear of breakage. For most dentists, this immediately leads to the use of K-files, instruments that with their horizontally oriented flute design are inclined to impact debris apically when the push stroke is employed, leading to loss of length.

Fig. 1: Endo-Express 30-degree reciprocating handpiece.

Photos/Provided by Barry L. Musikant, DMD

Many of us are familiar with the loss of length that occurs when shaping curved canals with K-files, thinking it is our fault when in fact a good deal of the blame is associated with the instruments’ design. We can drastically reduce the incidence of blockage, minimize resistance along length and shave dentin away far more efficiently if we employ 02 tapered instruments with fewer and more vertically oriented flutes that incorporate a flat along their working length starting with a 15.

After the tightest most tortuous canals are negotiated to the apex using our thinnest 02 tapered 06 tipped stainless-steel vertically fluted instrument manually, the same instrument is attached to a 30-degree reciprocating handpiece oscillating at 3,000 to 4,000 cycles per minute to widen the canal to a diameter larger than the instrument being used without distortion and creating a space where the next instrument in the sequence used in the reciprocating handpiece can reach the apex with minimal resistance.

This capability is utilized because the dentist quickly learns that separation simply will not occur, giving him/her the confidence to work these instruments against all the walls of the canal with special attention given to what is often the wider bucco-lingual plane. With each instrument widening the canal significantly beyond its own dimensions, the sequence to any desired dimension is rapid, risk-free and without hand fatigue.

From the point of view of dentin preservation, most of the instrumentation is done with 02 tapered instruments minimizing the amount of coronal tooth structure that is removed when greater tapered instruments are used. Straight-line access, a requirement for rotating NiTi that further compromises coronal dentin, is not a requirement when using the vertically fluted instruments in 30-degree reciprocation, further preserving tooth structure.

Where rotating NiTi prepares a conical shape along length even when the canals are highly oval and sheath-like, the thin 02 tapered stainless-steel relieved vertically fluted instruments will produce a space that reflects the original canal anatomy in larger form. If the canal was oval to begin with, the final shape will be oval, preserving tooth structure in the meso-distal plane and extending the preparation to include the buccal and lingual tissue extensions that are present in sheath-like pulpal configurations.

By confining motion to 30 degrees, a number of advantages become available to the dentist:

• There is a reduction in procedural stress because breakage is no longer a concern.
• Knowing the instruments are virtually free of breakage, they can be used with vigor against the canal walls, assuring a greater degree of cleansing into areas that rotating NiTi does not cleanse effectively.
• The instruments can be used several times with substantial savings.
• Short amplitudes of motion are not associated with dentinal defects.

• See RECIPROCATING, page B2
Preservation of tooth structure in what is often the thinner mesio-distal plane.

There is no longer a need for crown-down greater preparations that exaggerate the amount of tooth structure removed coronally.

Hand fatigue is eliminated, starting with the first instrument through the final sequence.

The preparation must be completed in a single visit.

With the knowledge that the width of preparations should be a minimum of 30 for effective irrigation, we can prepare an effective, well-cleaned space by using just two more instruments after preparing the glide path to a 20. By taking the 30/04-relieved NiTi instrument to within 3 to 4 mm of the apex and then following that up with the 30/02 relieved stainless-steel vertically fluted instrument to the apex, we can reach a fine point that when the canal is flooded with epoxy resin cement creates a three-dimensional seal.

Instead, we can go up one size to a fine-medium point if we then take the 30/04 to the apex. In both cases the seal is created by the epoxy resin interface present along length via its application, with a tool called the bi-directional spiral that gives the dentist the ability to flood the canal while at the same time preventing the extrusion of cement beyond its confines (see Figs. 3a, b).

If one takes a close look at the bi-directional spiral, one sees coronal flutes that drive back as it rotates, so apically as it rotates. The apical three threads have the opposite orientation as the coronal flutes and drive the cement coronally.

The result is two flows of cement that collide 3 mm from the applicator’s tip driving the cement laterally. The dentist uses the applicator with an up and down motion as it rotates in the slow-speed handpiece. Most often, nothing more than a single point is required to produce a three-dimensional fill. This method of obturation is dependent upon the bidirectional spiral and the properties of the cement, including:

- Physical and chemical bonding to both the gutta-percha and the canal walls.
- Its dimensional stability as it polymerizes.
- Being a polymer, its resistance to hydrolytic degradation.
- Being a room-temperature obturation system, the cement and gutta-percha expand 175 percent as it warms from room to body temperature.
- An effective seal in both thin and thick layers.
- A faster lower level of viscosity than the most thermoplastically gutta-percha.
- Great penetration of the cement into the dentinal tubules.
- Its well-documented antibacterial properties.
- More than 70 years of usage that attest to its effectiveness as an endodontic seal.

From a procedural standpoint, the obturation procedures recommended here do not lengthen:

- The application of excessive force via lateral and vertical condensation that can lead to over extension of the preparation, the expansion of already existing dentinal defects that in turn can lead to vertical root fracture.
- The application of heat that can lead to the over extension of obstruction material, damage to the periodontal ligament via exposure to excess prolonged heat.
- The creation of voids as overly compacted that drive rebounds to its original shape after the interface cement has been displaced.

It should be noted here that I am not against the use of lateral or vertical condensation, only the degree of force applied. When creating a space for the placement of auxiliary points, I will never use more force on a spreader than the weight of my hand. I do not want to apply sufficient pressure to distort the gutta-percha, knowing as it reboonds it will create a void. In addition, I do not want to add significant stress to the root that may already have preexisting defects or new ones as a result of rotating NiTi instrumentation.

If we consider the two aspects of endodontics, instrumentation and obturation, we can see where techniques can be simplified while adding safety and precision to the procedure. This is the true paradigm shift that has been obscured by the constant introduction of newer rotating NiTi instruments. All the new rotating NiTi entries require some degree of crown down preparation even if a so-called single instrument is used.

The result will predictably be excessive removal of tooth structure in the mesio-distal plane and inadequate preparation in the bucco-lingual plane exacerbated by the dentist’s concern that any deviation from the centered position increases the incidence of instrument breakage.

To further alleviate separation anxiety, difficult apical curves are to be first negotiated to a 20 with K-files, a holderover from an earlier time period making initial pathway a tiresome hand-fatiguing proposition.

Vertically fluted instruments relieved through a 10 and relieved thereafter with a flat long length used in the 30-degree reciprocating handpiece oscillating at 3,000 to 4,000 cycles per minute eliminate hand fatigue from the start. In the smaller dimensions, stainless-steel 02 tapered vertically fluted instruments are quite flexible while retaining enough body to effectively remove dentin when directed against all the walls. In these thin dimensions, NiTi by contrast would be too flexible for effective shaping of dentin when pressed against all walls.

As we work ourselves up to a 30 preparation, one might think that particularly in curved canals the stainless-steel instruments are too stiff to negotiate without distorting. To understand why this is not a problem, one must realize that the pathway has already been defined by the previous use of thin, highly flexible, stainless-steel instruments that have widened the canal space beyond their dimensions, creating an environment that less flexible instruments can follow.

Furthermore, the instruments used to negotiate the canals are relieved with a flat starting with a 15, making them more flexible just when unrelied comparably sized instruments might become excessively stiff. Most important, the amplitude of motion confined to 30 degrees keeps the instruments centered on the down stroke preventing distortion and can then be applied to all the walls on upstroke.

The idea is to replace complex with simple, unpredictable with predictable while preserving as much tooth structure as possible, maintaining the integrity of the dentin and virtually eliminating instrument separation as a concern, thus making the procedures safer, more effective and ultimately costing far less in their applications.

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 Endo Tribune? Let us know by emailing feedback@dental-tribune.com. If you are interested in forwarding to your friends if you would like to make changes to your subscription information, please send an email to feedback@dental-tribune.com and be sure to include which publication you are writing to. Also, please note that subscription changes can take up to 6 weeks to process.
Wykle Research offers Calasept Endo line

Wykle Research offers Calasept Endo products, which it distributes for Nordiska Dental of Sweden, the manufacturer of Calasept and Calasept Plus. Calasept Irrigation Needles are high-quality, double-side-vented, luer-lock irrigation needles that optimize the cleansing of canals, creating a “swirl effect.” The needles are available in 27 g or 31 g, in packs of 40 needles. Features include the following:

• Bendability
• Luer-lock hub
• Sterile and disposable
• Designed for ease in cleaning roots
• High-quality stainless steel

Calasept Irrigation Syringes are 3 ml luer-lock, single-use syringes. They are color coded to eliminate risk when using multiple irrigation liquids. They are available in packs of 20 syringes, 10 white and 10 green. Features include the following:

• High-quality, three-part syringe
• Color coded
• Luer lock

These products complement Wykle’s popular Calasept line, which includes Calasept and Calasept Plus calcium hydroxide paste for temporary filling of root canals, sold in packages of four syringes with 20 needles. Calasept EDTA is 17 percent EDTA solution. Calasept CHX is 2 percent chlorhexidine solution for irrigation. Both solutions are packaged with a luer adaptor for easy filling of syringes. For more information, contact Wykle Research at (800) 859-6641 or visit the company online, at www.wykleresearch.com.

(Source: Wykle Research)

EZ-Fill Xpress and Ti-Core Flow+

Essential Dental Systems Inc. (EDS) recently announced several improvements to its EZ-Fill Xpress obturative technology. The new improvements include easier flowability, increased radiopacity and easy expressibility.

EZ-Fill Xpress is used in conjunction with the EZ-Fill bi-directional spiral. The apical spirals rotate in an unwinding motion, whipping the cement laterally, creating a complete seal while preventing excess cement from going over the apex.

EDS also announced its new and improved Ti-Core Flow+ — a reinforced core material and post cement, all in one. According to EDS, the new improvements include enhanced NANO particle technology, increased radiopacity and easier flowability. It is more than 40 percent stronger, EDS says.

The products are available immediately through dental dealers worldwide. More information is available at www.edsdental.com or by calling (800) 223-5394.

(Source: Essential Dental Systems Inc.)

From left: Calasept Irrigation Needles and Calasept Irrigation Syringes. Photos/Provided by Wykle Research

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Privately Owned and Operated since 1961
Infection control in an era of emerging infectious diseases

By Eve Cuny
Pacific Urogoni School of Dentistry

M
ore than three decades have passed since the emergence of human immunodeficiency virus (HIV) as a global pandemic. More than any other infection, it is possible to single out HIV as the primary stimulus for changing infection control practices in dentistry. Prior to the mid-1980s, it was uncommon for dentists and allied professionals to wear gloves during routine dental procedures. Many dental clinics did not use heat sterilization, and disinfection of surfaces was limited to a cursory wipe with an alcohol-soaked gauze sponge. This was despite our knowledge that hepatitis B virus (HBV) had been spread in clusters in the offices and clinics of infected dentists and that dentists were clearly at occupational risk for acquiring HBV.

Plenty of reasons to remain vigilant

Today, many take safe dental care for granted, but there is still reason to remain vigilant in ensuring an infection-free environment for providers and patients. HIV has fortunately proven to be easily controlled in a clinical environment using the same precautions as those effective for preventing the transmission of HBV and hepatitis C virus. These standard precautions include the use of personal protective attire, such as gloves, surgical masks, gowns and protective eyewear, in combination with surface cleaning and disinfection, instrument sterilization, hand hygiene, immunizations and other basic infection control precautions. Sporadic reports of transmission of blood-borne diseases associated with dental care continue, but are most often linked to breaches in the practice of standard precautions.

Once-rare viruses now in headlines

Emerging and re-emerging infectious diseases present a real challenge to all health care providers. Three of the more than 50 emerging and re-emerging infectious diseases identified by the Centers for Disease Control and Prevention and the World Health Organization (WHO) include Ebola virus disease (EVD), pandemic influenza and severe acute respiratory syndrome. These previously rare or unidentified infectious diseases burst into the headlines in the past several years when they exhibited novel or uncharacteristic transmission patterns. Concern about emerging infectious diseases arises for several reasons. When faced with a particularly deadly infectious disease such as EVD, which can be spread through contact with an ill patient’s body fluids, health care workers are naturally concerned about how to protect themselves if an ill patient presents to the dental clinic. With diseases such as pandemic influenza and severe acute respiratory syndrome, which may be spread via inhalation of aerosolised respiratory fluids when a patient coughs or sneezes, the concern is whether standard precautions will be adequate.

In addition to standard precautions, treating patients with these diseases requires the use of transmission-based precautions. These encompass what are referred to as contact, droplet and airborne precautions for diseases with those specific routes of transmission. Transmission-based precautions may include patient isolation, placing a surgical mask on the patient when he or she is around other people. Additional protective attire for care providers, and in some cases, the use of respirators and negative air pressure in a treatment room. In most cases, patients who are contagious for infections requiring droplet or airborne precautions should not be treated in a traditional dental clinic setting.

Treatment delay can be best policy

Updating a patient’s medical history at each visit will assist dental health professionals in identifying patients who are symptomatic for infectious diseases. Patients with respiratory symptoms, including productive cough and fever, should have their dental treatment delayed until they are no longer symptomatic. Additionally, health care professionals who are symptomatic should refrain from coming to work until they have been free of fever without taking fever-reducing medication for 24 hours.

In most cases, a patient with symptoms as severe as those experienced with EVD will not present for dental care and therefore extraordinary screening and protection protocols are not recommended. If a patient is suspected of having a highly contagious disease, he or she should be referred to a physician, hospital or public health clinic.

Protect yourself and patients with vaccinations, proper hand hygiene

Dental professionals should take action to remain healthy by being vaccinated according to accepted public health guidelines, understanding that the recommendations may differ according to country of residence. Performing hand hygiene procedures at the beginning of the day, before placing and after removing gloves, changing gloves for each patient, wearing a clean mask and gown or laboratory coat, and wearing protective eyewear are all positive actions that help prevent occupational infections. In addition, vaccination against emerging infectious diseases should be considered.

Sporadic reports of transmission of blood-borne diseases associated with dental care continue but are most often linked to breaches in the practice of standard precautions.

‘Sporadic reports of transmission of blood-borne diseases associated with dental care continue but are most often linked to breaches in the practice of standard precautions.’

Photos/Kimberly Smith, CDC

3. CDC. Infectious Disease Information. Emerging Infectious Diseases. www.cdc.gov/ncidod/diseases/i/disease_sites.htm


EVE CUNY is the director of environmental health and safety and associate professor at Pacific Dogoni School of Dentistry in San Francisco. She is a consultant to the AOA Council on Scientific Affairs and expert reviewer to the Centers for Disease Control and Prevention. Cuny is past chairperson of the Organization for Safety, Aspreps and Prevention (OSAP) and is a member of the National Occupational Research Agenda Council with the U.S. Department of Health and Human Services. She has published articles and textbook chapters on safety and infection control and presented numerous continuing education programs domestically and internationally.

Health care providers should practice hand hygiene at key points to disrupt transmission of microorganisms to patients, including: before patient contact; after contact with blood, body fluids or contaminated surfaces (even if gloves are worn); before invasive procedures; and after removing gloves (gloves are not enough to prevent transmission of pathogens). Photo: Amanda Mills, CDC
Palmero Health Care's DisCide Ultra Disinfecting Towelettes and DisCide Ultra Disinfecting Spray achieved the Agency's stringent efficacy performance standards against Staphylococcus aureus, Pseudomonas aeruginosa, and Mycobacterium BCG (tuberculosis bacteria) and are confirmed as efficacious hospital disinfectants. In accordance to EPA's guidelines: DisCide Ultra Liquids and Towelettes have been found effective against Ebola virus and EnterovirusD68.

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Visit EPA website for more info
http://www.epa.gov/oppad001/atp-product-list.pdf
http://www.epa.gov/oppad001/list-l-ebola-virus.html

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See what EPA had to say
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How can DisCide help streamline a dental practice’s infection control processing?

DisCide ULTRA is a one-step, quaternary ammonium, high-level, alcohol-based disinfectant that’s laboratory-proven to kill deadly pathogens in one minute.1,2

Offered in a towelette and spray, DisCide ULTRA is noncorrosive and nonstaining, and leaves behind a pleasant herbal scent with no unsightly residue.

The product is registered with the U.S. Food and Drug Administration and Environmental Protection Agency, and it meets the disinfection requirements of the federal Occupational Safety and Health Administration’s (OSHA) bloodborne pathogens standard.

As shown on the EPA’s list, Palmero Health Care’s DisCide Ultra Disinfecting Towelettes and DisCide Ultra Disinfecting Spray achieved the agency’s stringent efficacy performance standards against staphylococcus aureus, pseudomonas aeruginosa and mycobacterium BCG (tuberculosis bacteria). The products are confirmed as efficacious hospital disinfectants.

How did your disinfectant rate?

You can go to the EPA website for additional details on this at www.epa.gov/oppad001/atp-product-list.pdf.

Per EPA’s guidelines, DisCide Ultra liquids and towelettes have been found effective against Ebola virus and EnterovirusD68. For more details, you can go to registration number 10492-4 and 10492-5, www.epa.gov/oppad001/list-l-ebola-virus.html.

So what’s the final takeaway?

Palmero’s DisCide line offers a choice of ready-to-use, hospital-level disinfectants that are easy to use. The products are ideal for dental offices. From fast-acting DisCide ULTRA spray to every other product in the line, clinicians will find these products to be economical and effective choices to meet all of their infection-control needs, according to the company.

Free samples

Request a free sample at www.palmerohealth.com/requestSamples and be sure to mention “MENTOR” as how you heard about it.

Call the company at (800) 344-6424, or visit www.palmerohealth.com.

References

1. Kills tuberculosis (Mycobacterium bovis or TB), methicillin-resistant Staphylococcus aureus (MRSA), HIV-1, AIDS virus, H1N1-Pandemic 2009 influenza A virus, hepatitis B virus (HBV), hepatitis C virus (HCV), vancomycin-resistant Enterococcus faecalis (VRE), respiratory syncytial (RSV), H1N2 avian influenza A virus, Influenza A virus (Hong Kong), adenovi- rus, herpes simplex virus type.

2. (HSV-2), coronavirus, Pseudomonas aerugi- nosa, Salmonella enterica, Staphylococcus aureus, Escherichia coli (E. coli), athlete’s foot fungus and more.

(Source: Palmero Healthcare)
Designs for Vision is excited to be presenting several new products at the 2015 Thomas P. Hinman Dental Meeting.

"Designs for Vision was started by my father, Dr. William Feinbloom, as an optical company, and during the 1970s our magnification and illumination products found applications in operating rooms and in operatories," said company President Richard Feinbloom. "The Hinman Dental Meeting has always provided that comfortable space where industry and professional can interact and exchange ideas. This year we are featuring our ULTRA Mini 2.5x Telescopes, Nike® Retro and DVI Sport frames, and the NanoCamHD™ loupe-mounted video camera. This is a unique opportunity to reach an important target market to introduce a major optical innovation."

Designs for Vision's new NanoCamHD records digitally at 1080 high-definition resolution. The NanoCamHD records magnified HD images from the user's perspective. The complete system includes 2.5x, 3.5x and 4.5x lens systems to match the typical magnifications, providing a true user's point of view.

As an added feature, still photographs can be taken from live video feed or during playback mode. The video or still images can be uploaded into a patient file, included in a presentation or course, or shared with a colleague or laboratory for collaborative consultations.

The NanoCamHD complete system includes a color corrected ULTRA Mini LED DayLite® headlight. The combination headlight/NanoCamHD can be attached to loupes or can be worn on a lightweight headband.

The system also includes a foot pedal to enable hands-free operation of the NanoCamHD. Record/pause, mute/unmute and still photography are controlled by the operator hands-free via the pedal.

For best results, combine the NanoCamHD with Designs for Vision's dental telescopes. Matching true magnification levels of 2.5x, 3.5x or 4.5x can produce realistic simulation from the user's perspective. The NanoCam can also be attached to the new Nike Retro frames or the new DVI Sport frames.

The Nike Retro frames are exclusive to Designs for Vision. Available in tortoise shell, black and translucent gray, the Nike Retro has a classic look. The DVI Sport frames can be used for all magnifications and can incorporate eyeglass prescriptions – providing the protective wrap without any distortion.

Also featured at Hinman, a pair of ULTRA Mini Telescopes weigh as little as 34 grams (1.2 ounces) and are 40 percent smaller than regular telescopes, thus allowing for easier peripheral vision.

"The ULTRA Mini Telescopes," Feinbloom said, "like our world-renowned Dental Telescopes, provide 2.5x magnification that is fully customized to the individual user, providing ergonomic advantages to our customers. Designs for Vision matches the focal length of each telescope to the ideal working distance of our customers. This way the depth of focus surrounds their ideal working distance, instead of adapting to a pre-set focal length.

“We have been working with dentists and hygienists who required true 2.5x magnification, but desired a lighter, smaller device for all-day use. Designs for Vision wanted to design and engineer a full feature system that offered all of the features our customers expect of a Designs for Vision product. The lens system uses the same precision-coated optics as our traditional magnification systems. We can also accommodate eyeglass prescriptions into the ULTRA Mini Telescopes.”

Visit Designs for Vision at the Thomas P. Hinman Dental Meeting at booths No. 828 or No. 1937 to See the Visible Difference® yourself.

(Source: Designs for Vision)
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Primary stability vs. viable constraint: A need to redefine

By Michael R. Norton, BDS, FDS, RCS(Ed)

Any regular reader of the Journal of Oral & Maxillofacial Implants or indeed of any other publication on dental implants could not fail to have noticed how much attention has been focused on primary stability. The concept of primary stability is not new, indeed, as early as the 1970s, there were studies emphasizing the need to establish mechanical stability to ensure uninterrupted healing of the bone. This was most evident in the orthopedic literature as it pertains to hip prostheses.

By the 1990s, numerous reports were being published on immediate loading of dental implants and the groundbreaking work by Neil Meredith on the application of resonance frequency analysis (RFA) came to the fore with statements that achievement of implant stability was a prerequisite for long-term positive outcomes.

At the same time, Meredith recognized it was possible for clinically firm implants with poor axial stability to still be prone to failure. Of course, Brånemark recognized this in his early work, proposing as he did a period of submerged healing because of his concern for any destabilization of the bone-to-implant interface during the early healing phase. However, today, we all recognize that such protective protocols are frequently unnecessary, with widespread acceptance of not only transmucosal healing but also immediate temporization and/or loading.

So how do we define primary stability? The most simple definition is one of mechanical friction between the implant and bone. Certainly, we can all appreciate that this contrasts with secondary implant stability where secondary stability is achieved by biological integration, i.e., osseointegration.

The gradual shift from primary stability to secondary stability is critically poised at around three weeks. This is seen to be the least stable time point where viscoelastic stress relaxation of the bone along with remodeling results in a loss of primary mechanical stability but with an as yet poorly established degree of secondary stability or osseointegration.

This is also apparent in RFA curves, which, like a heartbeat, always register a certain pattern in healthy bone that reflects this loss of stability at the third or fourth week, regardless of bone density.

That said, we still need to define what constitutes primary stability, i.e., that which sets it apart from biological integration. As stated above, mechanical stability is one where a friction occurs between the implant and the surrounding bone, giving rise to a resisting torque at time of insertion.

This resisting torque is proportional to the effort required to seat the implant or peak insertion torque, they are in essence one and the same and depend largely on the characteristics of the implant, the density of the bone and the differential size of the osteotomy as it pertains to the diameter of the implant.
Mathematically, it can be defined as follows:

\[
\text{Resisting torque} = \mu \cdot F \cdot D
\]

Where: \( H \cdot D \cdot \) = surface area of implant in contact with bone, \( H \) = height of the implant cylinder and \( D \) = diameter of implant cylinder

Critical pressure on the bone \( \mu \cdot \) Coefficient of friction

The important factor in this equation is \( F \), the critical pressure on the bone, as high pressure results in unfavorable bone strain, particularly within the cortical compartment. However, the formula indicates that the resisting torque is proportional to the diameter (D) raised to the power of 2. This means that if you double the diameter the resisting torque becomes four times higher. Put another way, if we use the same insertion torque for a 3 mm wide implant and a 6 mm wide implant, then the critical pressure will be four times lower for the wider implant!

For example, an implant of 3 mm diame ter inserted into 1 mm thick cortical bone (a torque of 10 Ncm) will transmit the same pressure to the bone as an implant of 6 mm diameter inserted into 2 mm thick cortical bone with a torque of 16 Ncm. This assumes that 100 percent of the torque originates from the pressure on the cortical bone, and the contribution to torque from bone cutting, etc., is neglected. Yet manufacturers persist in providing a single target value of insertion torque (160 Ncm). (This assumes that 100 percent of the torque is neglected). Yet manufacturers persist in providing a single target value of insertion torque (160 Ncm). Yet manufacturers persist in providing a single target value of insertion torque (160 Ncm).

By contrast, implants with an ISQ of less than 50 rarely go on to integrate success fully, and ISQ has been described as a good predictor of success.\(^{10,\,11,\,12}\) It is this dichotomy that has got me thinking and has led me to write this editorial piece. Could it be that axial stiffness is far more pertinent than rotational friction in ensuring an implant integrates? We already know from the literature that an implant can tolerate a degree of micro-motion, thought to be circa 0.5 microns,\(^{1,\,2}\) and this is in essence what ISQ measures.

Studies have also demonstrated that insertion torque correlates closely to the degree of micro-motion.\(^{11,\,12}\) However, it is not the aim to seek complete elimination of micro-motion, a valuable lesson learned in orthopedics.\(^{13,\,14}\) If it is possible to place an implant with lower insertion torque and still achieve axial stiffness with an ISQ >60, surely this provides us with a more optimal evaluation of primary stability.

Our goal must be the rapid onset of secondary stability, with minimal critical pressure to the poorly vascularised cortical bone so unfavorable interceptive responses and delayed healing are avoided. At the same time, we need to employ an objective measure of constraint that reliably ensures the implant can tolerate axial movement. We already have learned in orthopedics.\(^{27}\) If it is possible to place an implant with lower insertion torque and still achieve axial stiffness with an ISQ >60, surely this provides us with a more optimal evaluation of primary stability.

I have labeled this objective measure of bone viability constraint (\(vC\)), whose central purpose is to obtain a clinically relevant degree of stability while maintaining a low critical pressure on the vulnerable cortical tissues through which our implants are inserted.

Bone is not wood. It is not inanimate. It would behove us all to remember this, and avoid the carpenter’s approach to implant dentistry.

So I would take this opportunity to ask that we think in terms of viable constraint. It will, of course, take controlled prospective studies to determine the optimal conditions for \(vC\), but if I were a gambling man (which I most certainly am!), I would guess for a 4 mm implant in bone with a cortex of 1.5 mm thickness that a maximum torque of 20 Ncm and an ISQ of 60 represent the optimal measures we are looking for to ensure safe immediate loading.

In the past, we used to think length was important with implants, whereas today there is increasing focus on short implants. However, I would point out that a strong correlation has been shown to exist between ISQ and implant length.\(^{2,\,10}\) and, as such, for immediate loading, I also believe a longer implant with a higher ISQ, inserted at a lower insertion torque, will yield a more favorable outcome.

References available upon request from the publisher.

Note

This content originally appeared as an editorial in The International Journal of Oral & Maxillofacial Implants, published by Quintessence Publishing.

About the author

**DR. MICHAEL R. NORTON**

BDS, DS, RCS (Eng), graduated from the University of Wales, School of Dental Medicine, in 1988. He runs a world-renowned practice dedicated to implant and reconstructive dentistry in Harley Street, London. He is a specialist in oral surgery and, in 2007, was awarded a prestigious fellowship of the Royal College of Surgeons, Edinburgh, without examination, for his contribution to the field of implant dentistry. In 2015, Norton was elected clinical professor to the Department of Periodontology at the Ivy League Dental School at the University of Pennsylvania.

For more than 20 years, Norton has led the way for implant dentistry in the United Kingdom, becoming one of the world’s most respected and renowned implant surgeons. His considerable portfolio of research has been groundbreaking, and he has become one of the most sought after lecturers in his field.

He is past editor of the AO’s Academy News and is currently associate editor of the International Journal of Oral & Maxillofacial Implants (IJOM). He also serves as a referee for a number of other peer-reviewed journals. From 1981 to 2010, he was joint owner and editor of Dental Implant Summaries. He is past editor of the AO’s Academy News and is currently associate editor of the International Journal of Oral & Maxillofacial Implants (IJOM). He also serves as a referee for a number of other peer-reviewed journals. From 1981 to 2010, he was joint owner and editor of Dental Implant Summaries.
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For more information visit www.jointheev.com
Bone regeneration through tissue engineering offers new prospects for oral procedures

Regeneration of bone tissue could greatly benefit people with jawbone deficiencies due to tooth loss, infection or trauma. While an ideal method of bone tissue engineering is not yet available, research with a collagen-hydroxyapatite-Mesenchymal stem cell composite is showing promise. Hydroxyapatite is the main component of bone mineral and tooth enamel. A report in the Journal of Oral Implantology details researchers’ efforts to synthesize a collagen-hydroxyapatite composite through mineralization of collagen fibrils with nanometer-sized apatite crystals. The biological properties of the composite were evaluated by culturing with mouse and human mesenchymal stem cells. Currently, the methods of bone repair and regeneration include the following bone graft types:

- Autografts: grafting bone from the same person
- Allografts: taking bone tissue from another person
- Xenografts: collecting material from a nonhuman species
- Alloplasts: using synthetic materials

Each of these methods has limitations that tissue engineering involving scaffolds and living cells can surpass. The scaffold is an artificial structure that is combined with living Mesenchymal stem cells to form a tissue engineering construct that can repair or regenerate bone. Mesenchymal stem cells, which can differentiate into a variety of cell types, are used to precipitate bone growth.

The current study tested three ratios of collagen to hydroxyapatite: 80:20, 50:50, and 20:80. Both the 80:20 and 50:50 composites supported attachments and proliferation of mouse mesenchymal stem cells and human periodontal ligament stem cells in laboratory tests. The 50:50 ratio had the best mechanical properties suitable for bone grafting applications. The authors report that these findings indicate a strong potential for collagen-hydroxyapatite composite complexes in bone tissue regeneration. The composites are porous and sponge-like, and show good biocompatibility and biomimetic properties.

Alveolar bone deficiency is a limiting factor for dental implant-supported prosthetic therapies. The effective formation of new bone offers a basis for further procedures to successfully repair teeth and jaws.


About Journal of Oral Implantology

The Journal of Oral Implantology is the official publication of the American Academy of Implant Dentistry. It is dedicated to providing valuable information to general dentists, oral surgeons, prosthodontists, periodontists, scientists, clinicians, laboratory owners and technicians, manufacturers and educators. The JOI distinguishes itself as the first and oldest journal in the world devoted exclusively to implant dentistry. For more information about the journal or society, visit www.joionline.org.

$1.5 million gift establishes first endowed professorship at UMSOD

The University of Maryland School of Dentistry (UMSOD) has received the largest one-time gift in the school’s 175-year history, a $1.5 million donation from alumni Frederick G. Smith, MS, DDS ’78, and Venice K. Paterakis, DDS ’81, that will establish the institution’s first endowed professorship.

This donation will provide resources to fund the work of the school’s distinguished faculty.

“As the world’s first college of dentistry, established in 1840, we celebrate our 175th anniversary this year. This historic gift pays tribute to the school’s illustrious past as a leader in dental and dental hygiene education while ensuring that the UMSOD will remain among the premier dental schools in the world,” said Dean Mark A. Reynolds, DDS ’86, PhD. “I speak for all of us here at the School of Dentistry when I express my heartfelt gratitude to Dr. Smith and Dr. Paterakis for their generosity.”
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Bringing innovation back
Nobel introduces a ‘complete posterior solution’

By Nobel Biocare Staff

Large extraction sockets, limited accessibility, tough-to-remove excess cement and high occlusal forces. These are just some of the challenges a clinician faces when restoring a single tooth in the posterior. And, with molar replacement being among the most common indications, these challenges are encountered repeatedly.

A solution that addresses all these problems in an efficient and predictable way will make life easier for dental professionals and patients. That’s precisely why Nobel Biocare is bringing innovation back to the posterior region with its new complete posterior solution — an original combination of new wide-platform implants and restorative options, all specially designed for molar sites.

An implant like no other
Multiple Nobel Biocare innovations combine to make this solution complete, but the foundation for treatment success is the implant itself. Here Nobel Biocare offers several options, each engineered for the specific demands of the posterior. All are intended to shorten time to teeth for the patient by enabling immediate loading whenever possible.

One option is NobelActive. Many clinicians are already familiar with this award-winning* implant. Its distinctive design and the surgical protocol form a unique combination that can enable Immediate Function in cases where it might otherwise not be achievable.1,2,3

To condense bone gradually, its tapered body features threads that narrow towards the apex, while the apex itself features drilling blades to preserve bone by allowing a smaller osteotomy. These features are all designed for high primary stability, even in soft bone and extraction sockets.

Now, a new variant offers the benefits of the NobelActive family but with dimensions ideal for the molar region. NobelActive wide platform (WP) possesses a wider diameter implant body (5.5 mm) to better fit the large extraction sites in the molar region and a wider implant platform for an optimal emergence profile. NobelActive WP also comes in an option with a shorter body (7 mm) to avoid critical anatomical structures such as nerves.

Stability and flexibility in parallel
Alternatively, clinicians can opt for NobelParallel Conical Connection (CC). Combining a parallel-walled implant body that is well documented with an advanced internal connection, NobelParallel CC offers extraordinary flexibility. It is engineered for use in all bone qualities and for a wide range of indications. The 5.5 mm Wide Platform option is designed for an optimized emergence profile for large molar sites.

Both experienced clinicians and those early in their implant careers will appreciate NobelParallel CC’s straightforward surgical protocol. It offers flexibility and shortens treatment time, benefiting the patient too. Together, the surgical protocol and implant design form a unique combination that’s intended to allow Immediate Function in more cases by providing high primary stability. The thread design and tapered apex of NobelParallel CC are designed for underpreparation of the surgical site and bicortical anchorage — techniques that support immediate loading.4,5

High stability during the initial healing phase is then maintained by Nobel Biocare’s unique TiUnite surface.6 In addition, patented grooves enhance osseointegration4 for a predictable end result.

Connecting strength and flexibility
Both new implants benefit from Nobel Biocare’s internal conical connection. This advanced connection’s conical seal and hexagonal interlocking mechanism provide high mechanical strength.7 It offers restorative flexibility too, being compatible with Nobel Biocare’s most innovative restorative solutions, including those designed specifically for the posterior. These include the new PEEK Healing and PEEK Temporary Abutments, which are anatomically shaped to match the molar contours. As the PEEK Abutments come ready-shaped for an optimized emergence profile, fewer adjustments are needed. This can simplify treatment and reduce costly chair time.

The crown that ‘rules them all’
When it comes to the final restoration, the FCZ (full-contour zirconia) Implant Crown is designed for strength and predictability even under the high occlusal forces of the posterior. There’s no worrying about chipping either, as the full-contour nature of the NobelProcera FCZ Implant Crown removes the need for veneering.

The biocompatibility of the materials used contributes to biological stability in the areas it matters most. Plus, being screw retained, the FCZ Implant Crown is completely cement free, avoiding the risks associated with cement excess entirely. Even the titanium adapter is mechanically retained.

The ability to use an angulated screw channel (ASC) allows the screw access hole on the FCZ Implant Crown to be placed anywhere between 0 and 25 degrees in a 360-degree radius. This means it can be angled towards the front of the mouth for easy access, even in the posterior. It also helps avoid placing the access channel on the cusp of a tooth, where it could affect occlusion. The associated Omnigrip Screwdriver further simplifies work on the restoration. Its effective pick-up function and secure grip on the screw help the clinician to work safely and efficiently.

Natural-looking tooth color is another benefit offered by the FCZ Implant Crown. Whichever of the eight available shades is used, the color is applied throughout the material. This means discoloration isn’t a concern when making adjustments. Cutbacks and staining can also be used to achieve the desired esthetic effect.

Several components, one complete solution
While each product within Nobel Biocare’s complete posterior solution stands out on its own, they stand stronger together. Like all Nobel Biocare innovations, they are tested together as one system, as they exist in the patient’s mouth.

Combining Nobel Biocare components means all elements are designed to work in synergy for the optimal treatment outcome. Restoring single molars represents a clinical challenge for many reasons, but now, by uniting new and proven innovations, Nobel Biocare has the answer.

Find out more at nobelbiocare.com/bringinginnovationback.

References are available upon request from the publisher.
Straumann introduces a flexible collagen membrane that’s easy to handle and place

By Straumann Staff

Straumann is once again expanding its portfolio of regenerative solutions to better meet customer needs. Now, Straumann® Membrane Flex™ joins Straumann® Membrane Plus™, Straumann® XenoGraft, Straumann® AlloGraft, BoneCeramic™ and Emdogain™ to provide a single trusted source for dental implant and regeneration needs, according to the company.

A quick look at Membrane Flex
- Desirable handling characteristics.
- Because it’s not side specific, it’s easy to handle and to place.
- With outstanding flexibility, it easily drapes over defects and naturally conforms to contours.
- Flexibility with placement as it can be easily repositioned for precise placement.
- Can be placed dry or hydrated.
- Even when hydrated, does not adhere to gloves or instruments.
- Takes sutures or tacks with ease, for simple yet secure fixation.
- Dependable strength.
- Proven biomechanical strength enhances fixation assurance.*
- In pre-clinical testing, the suture pull out strength was three times higher than a similar product.*
- Because of its significantly higher suture pullout strength, can be firmly anchored to surrounding tissue with minimal risk of tearing or detachment.*

Supports wound healing
- Biocompatible because it’s meticulously manufactured from highly purified intact porcine collagen and minimally cross-linked for predictable resorption.
- Reduced degree of inflammation and foreign body response as compared to other similar products in pre-clinical testing.*
- Protects the graft area from unwanted soft tissue infiltration during the initial phase of healing while still allowing for healthy nutrient transfer.
- Resorbs predictably over three to four months as new host collagen is simultaneously regenerated.
- With a slower initial rate of resorption than other similar products, it provides greater initial stability during the critical early weeks of healing.*
- Shown through in vitro and in vivo pre-clinical testing to exceed many of the performance characteristics of other similar products.*
- Available sizes: 15 x 20 mm, 20 x 30 mm, 30 x 40 mm

This new offering — along with other recent additions to the Straumann portfolio — is one of the latest products the company provides customers with for a total solution that yields patient satisfaction and practice success.

To learn more about the new Straumann Membrane Flex, visit www.straumann.us/bone/

* Data on file with manufacturer

About Straumann
Headquartered in Basel, Switzerland, Straumann (SIX: STMN) is a global leader in implant, restorative and regenerative dentistry. In collaboration with leading clinics, research institutes and universities, Straumann researches, develops and manufactures dental implants, instruments, prosthetics and tissue regeneration products for use in tooth replacement and restoration solutions or to prevent tooth loss.
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