2016 • Volume 3 • Issue 7

Flossing: Yes or No?
What to Tell Your Patients
P. 9

Pediatric Leukemia Patients
Dental Considerations
P. 30

HPV-Associated Cancers
Opening the Conversation
P. 33, 37

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The Canadian Dental Association Magazine

Special Care Dentistry

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Pages 19-29

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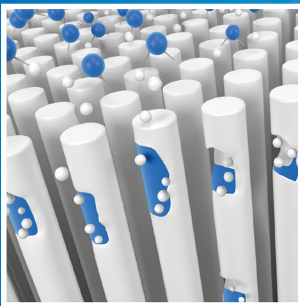

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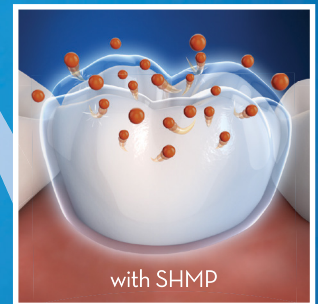

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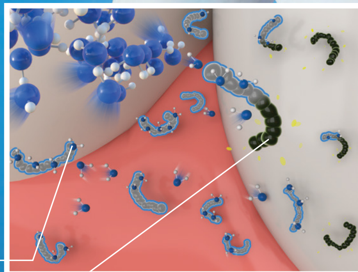

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CDA *essentials* is the official print publication of CDA, providing dialogue between the national association and the dental community. It is dedicated to keeping dentists informed about news, issues and clinically relevant information.

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What to Tell Your Patients About the Safe Use of Acetaminophen

Page 16

Long-Term Care Facilities: Consensus Statement on Oral Health Care Standards

Page 13

CDA at Work

7 Closing the Gaps in Special Care Dentistry

9 Flossing: Yes or No?

10 TELUS Health and Alberta Blue Cross: Ending Support of Modems for Claims Transmissions

13 Long-Term Care Facilities: Consensus Statement on Oral Health Care Standards

News and Events

14 In the Boxing Ring: Porcelain-Fused-to-Metal Crowns vs. All-Ceramic Crowns

16 What to Tell Your Patients About the Safe Use of Acetaminophen

Issues and People

19 What Do the Next 10 Years Hold for Special Care Dentistry?

22 A Dental Hygienist Describes Her Approach to Treating Children with Autism

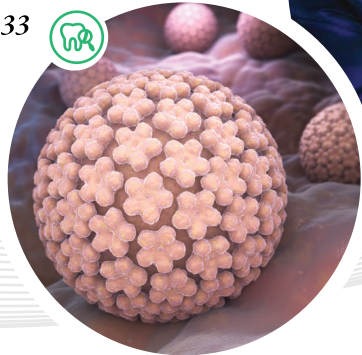
CONTENTS

What Do the Next 10 Years Hold for Special Care Dentistry?

Page 19

The Global Burden of HPV-Associated Cancers

Page 33



ADHD at the Dental Practice

Page 26

26 **ADHD at the Dental Practice: "Why Won't He Sit Still? ...Because He Can't!"**

Supporting Your Practice

30 **Dental Considerations in Managing Pediatric Patients with Leukemia**

33 **The Global Burden of HPV-Associated Cancers**

37 **Does Anyone Have a Polite and Professional Way to Address the HPV Issue with Patients in a Dental Office Setting?**

Classifieds

43 **Offices and Practices, Positions Available, Advertisers' Index**

Obituaries

46 **Remembering Dentistry Leaders**

Dr. Jack Dale

Dr. Robert Grainger

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Closing the Gaps in Special Care Dentistry

I always look forward to seeing one of my patients, a frail senior who is visually impaired, every year on January 16. That day is my birthday and his too, and for the past 30 years he's taken the bus to my clinic on this day to say hello and wish me happy birthday, even if he doesn't have an appointment.

Like my birthday buddy, some of my patients have a physical or developmental disability, or both. In my experience, treating patients who have a disability does not define them as a patient, nor represent a challenge to me or the members of my team. Through exposure to all kinds of people, including those with disabilities, my team has learned the value of tailoring our approach to meet the individual needs of each patient. For example, we've found that patients with an intellectual disability seem to respond to our efforts to help them feel comfortable by recalling a pleasant memory they've shared with us during a previous appointment. If there is an issue with communication, we sometimes take a little extra time to ensure that the patient understands the treatment to the best of their ability—but we try to do that for all patients, whether or not they have a disability.

But for a variety of reasons, some general practitioners believe they are not capable of special care dentistry, which is dentistry adjusted to meet the needs of people with disabilities. According to a recent report titled *Meeting the Needs for Special Care Dentistry*, produced collaboratively by CDA and the Association of Canadian Faculties of Dentistry, some dentists say they feel unprepared to treat a patient with a disability.

One study[1] cited in this report showed that dentists who were most likely to refer children with disabilities to other dentists lacked confidence in managing these patients; other reasons for referring out were insufficient staff training, inadequate facilities and time shortages.

All newly qualified Canadian dentists should be competent in managing "patients of all ages, including those with special needs," according to a National Dental Examining Board of Canada competencies document.[2] Yet, people with disabilities sometimes struggle to find a dentist who will treat them; just one factor contributing to higher levels of oral disease in this patient group compared to that of the general public.

The issue of access to care for people with disabilities is complex. They often face numerous barriers, including affordability, physical access to dental offices, high levels of fear and anxiety related to dental procedures, and, often, the need for an interdisciplinary approach to their dental care. But providing dental care for people with disabilities does not always have to be complex and can be safely provided by a dental team with relevant skills and competencies.

This issue of *CDA Essentials* includes stories from dentists and dental team members who are hoping to change attitudes about special care dentistry by sharing strategies that have worked in their dental practices. It's our professional duty to provide care to all members of society. We can do better for our patients who might need an individualized approach, starting with support, encouragement and training for dentists so they can feel more confident in their capacity to provide care for people with disabilities.

References

1. Sun S., Bush H.M., Harrison R., Poon B., Mathu-Muju K.R. Professional uncertainty in providing dental care for special needs children. Graduate student abstract presented at the Canadian Academy of Pediatric Dentistry 2015 Meeting. 2015.

2. Competencies for a beginning dental practitioner in Canada [Internet]. Ottawa: The National Dental Examining Board of Canada; 2005 [cited 2016 Sept 21]. Available at: https://www.ndeb-bned.ca/en/resources/competencies

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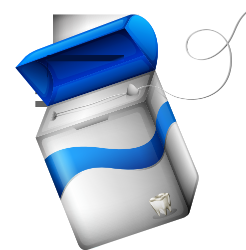
FLOSSING: Yes or No?

What should a dentist or dental hygienist say to a patient who questions the value of flossing?



In August 2016, there was a flood of news items about an Associated Press (AP)-initiated report which found an apparent lack of direct evidence to prove that flossing was effective.

The AP reported on an article[1] that looked at two previous systematic reviews on this topic comparing the use of a toothbrush alone versus a combination of toothbrush and dental floss, the most recent one being the prestigious Cochrane Library report[2] published in 2011.

*The members of the JCDA.ca Editorial Advisory Group are Drs. Amir Azarpazhooh, Elham Emami, Jocelyne Feine, Hugh Kim, Michael Glogauer, Debora Matthews and Robert Schroth.

We asked members of the Editorial Advisory Group of the Journal of the Canadian Dental Association (JCDA.ca) to comment on these findings and to provide advice on how Canadian dentists could talk with their patients about flossing.*

Here are the insights of the experts that we spoke with.

NEWS ITEMS/REPORTS

- The AP presented its article as a dramatic exposé, but it did not actually reveal any new clinical findings since the 2011 Cochrane review.
- The subsequent news items didn't explain how there are multiple risk factors for developing tooth decay and gum diseases and that these diseases can take a long time to develop.
- By presenting faulty or incomplete information, without proper context, to those who might be looking for justification not to floss, these stories could jeopardize the public's oral health.

WHAT WE KNOW

- Dental plaque can begin the processes that cause tooth decay and gum disease if it's allowed to remain on the surfaces of teeth for more than 24 hours.
- The only way plaque can be removed is mechanically, with a manual or electric toothbrush (which gets the cheek and tongue surfaces of teeth) and floss or other cleaning aids (which clean the hidden or hard-to-reach surfaces of teeth).
- Although there is no 100% direct scientific evidence at this time which proves that flossing on its own reduces the chance of tooth decay and gum disease, there is strong indirect evidence that the mechanical removal of dental plaque from hard-to-reach tooth surfaces is effective in preventing these conditions. We also have evidence collected in the Cochrane Library review that people who brush and floss regularly have less gum bleeding compared to toothbrushing alone.

– CDA Statement on Flossing –

The Canadian Dental Association supports flossing as one step of maintaining healthy teeth and gums. Flossing is an effective preventative measure to remove plaque, the main cause of gum disease. The weakness of the evidence supporting the value of floss in the prevention of gum disease is a reflection of the difficulty of conducting the necessary studies, not of the value of flossing for the maintenance of good oral health. Brushing, flossing, eating a healthy diet, and seeing your dentist regularly are all steps in preserving a healthy mouth.

- Not every outcome can be studied using randomized clinical trials (which can show direct evidence), especially chronic diseases (like periodontitis) that take years to develop. This is just one of the reasons there may not be strong direct evidence proving that flossing can prevent dental decay and gum disease.
- It's also important to consider that the harms of flossing are minimal to none and the cost is very low.

References

1. Sälzer S, Slot DE, Van der Weijden FA, Dörfer CE. Efficacy of inter-dental mechanical plaque control in managing gingivitis: a meta-review. *J Clin Periodontol.* 2015 Apr;42 Suppl 16:S92-105.
2. Sambunjak D, Nickerson JW, Poklepovic T, Johnson TM, Imai P, Tugwell P, Worthington HV. Flossing for the management of periodontal diseases and dental caries in adults. *The Cochrane Library.* 2011. DOI: 10.1002/14651858.CD008829.pub2

MESSAGES FOR OUR PATIENTS

Based on the research we do have, flossing is an effective, inexpensive and safe method for cleaning the hidden, hard-to-reach, parts of your teeth.

- **Set realistic goals.** Clean all surfaces of your teeth daily, but don't feel too guilty if you miss once in a while. The goal of a clean mouth is more important than how you reach that goal.
- **Do your best** with your brushing, flossing and other measures to clean all surfaces of your teeth and gums.
- **Seek your dentist's and dental hygienists' advice** and discuss with them any oral health news items that you come across in the media. They will give you the best personalized advice for your oral health.

TELUS Health and Alberta Blue Cross

to end support of modems for claims transmissions

ALBERTA BLUE CROSS

TELUS HEALTH

Important announcement from Alberta Blue Cross and TELUS Health

Support for modem transmission ending September 30, 2017

** If your dental office uses the Internet to transmit CDAnet dental claims, please disregard this notice.**

In 2015, the use of the Internet for sending CDAnet dental benefit claims became more fully entrenched with the introduction of the CDA Digital ID and the Internet communication software, CCD WS (Common Communication Driver Web Services). With the use of these technologies, and the CDA ITRANS Claims Service, dental benefit claims can be transmitted on the Internet to all CDAnet insurance carriers.

With these changes in place, Alberta Blue Cross and TELUS Health will no longer support their respective modem transmission services effective September 30, 2017. Dental offices must move to Internet technology to reach Alberta Blue Cross and insurance carriers using the TELUS network.

If your office is using telephone modem technology, you must make arrangements to transition to using the Internet **well before September 30, 2017**. Contact your software vendor who can advise on the readiness of your version of their software for transitioning to the Internet and the steps involved in making the transition. CDA will provide the CDA Digital IDs needed for security at no extra charge.

Note that only the CCD WS can be used to send claims to Alberta Blue Cross. Either the CCD WS or the CDA ITRANS Claims Service can be used to send claims to insurance carriers on the TELUS network.

For more information, contact the CDAnet Help Desk at 1-866-788-1212, or visit www.cdanet.ca.

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TELUS HEALTH

If your dental practice still uses a modem to transmit dental claims, you will need to transition to the Internet by next year to send dental benefit claims. As of **September 30, 2017**, Alberta Blue Cross and TELUS Health will stop supporting modem transmissions for dental benefit claims.

"To send claims to Alberta Blue Cross and the insurance carriers on the TELUS networks, dental offices should transition to Internet claims transmissions well before this September 2017 deadline," says Geoff Valentine, CDA manager of health informatics services. "Your software vendor can advise you on the steps involved in making this change."

For more information, contact the CDAnet Help Desk at ***1-866-788-1212*** *or visit* ***cdanet.ca***

The CDA ITRANS Claims Service transmits dental benefit claims to all CDAnet insurance carriers except Alberta Blue Cross. The communication software called CCDWS (Common Communication Driver Web Services) also uses the Internet to send claims, but sends only to insurance carriers on the TELUS networks and Alberta Blue Cross. In both cases, the CDA Digital ID ensures that your claims are sent securely on the Internet.

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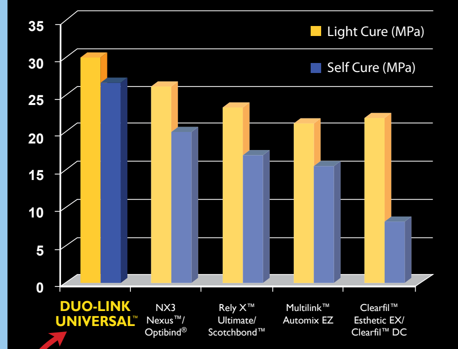

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Long-Term Care Facilities

Consensus Statement on Oral Health Care Standards

Recognizing the need for minimum oral care requirements for all residents of long-term care (LTC) facilities, CDA joined with 22 other organizations to create a consensus statement addressing the issue.

The joint statement is the result of a collaborative effort between relevant stakeholders—oral health care providers, dental faculties, government, special interest groups, and related health professionals—participating in the Canadian Oral Health Roundtable (COHR). The yearly event aims to develop "scientifically supported strategic actions to address challenges and opportunities in oral health promotion and the delivery of oral health care in Canada."

The oral health care needs of those living in LTC facilities was one of the first topics of interest for COHR participants at the inaugural meeting in 2014. "The overall increasing proportion of seniors along with their considerably higher rate of dental diseases and need for dental services, the presence of barriers to dental care access in addition to the increasingly limited government funding, justify the concerns about access and delivery of dental health services for seniors, particularly those in LTC facilities," says the COHR website.

The *Oral Health Care Standards for Residents in Long-Term Care Facilities* consensus statement was approved by the CDA Board of Directors in 2016. It replaces CDA's 2010 *Position on Oral Health Care for Residents in Long-Term Care Facilities.* ◆

CONSENSUS STATEMENT

Oral Health Care Standards for Residents in Long-Term Care in Canada

Given the particular oral health challenges faced by seniors in care facilities and the importance of oral health to overall health, the following should be the minimum oral care requirements for all residents in long-term care in Canada:

- Oral health assessment by an appropriately trained and licensed/registered health professional upon admission and annually thereafter;
- Beginning as soon as possible after admission, a referral process to a dentist for examination, diagnosis and treatment planning;
- A daily mouth care plan that is implemented by appropriately trained staff;
- Suitable infrastructure to support the appropriate delivery of needed care by the oral health team.

Signatories

- Alberta Dental Association and College
- Association of Canadian Faculties of Dentistry
- British Columbia Dental Association
- Canadian Association of Public Health Dentistry
- Canadian Association of Social Workers
- Canadian Dental Assistants Association
- Canadian Dental Association
- Canadian Dental Hygienists Association
- Canadian Dental Specialties Association
- Canadian Pharmacists Association
- Canadian Teachers' Federation
- Canadian Dental Therapists Association
- College of Dental Surgeons of Saskatchewan
- Dental Association of Prince Edward Island
- Health Canada
- Manitoba Dental Association
- New Brunswick Dental Society
- Newfoundland and Labrador Dental Association
- Northwest Territories and Nunavut Dental Association
- Nova Scotia Dental Association
- Ontario Dental Association
- Patients for Patients Safety Canada
- Yukon Dental Association

CADTH Evidence Driven.

IN THE BOXING RING:

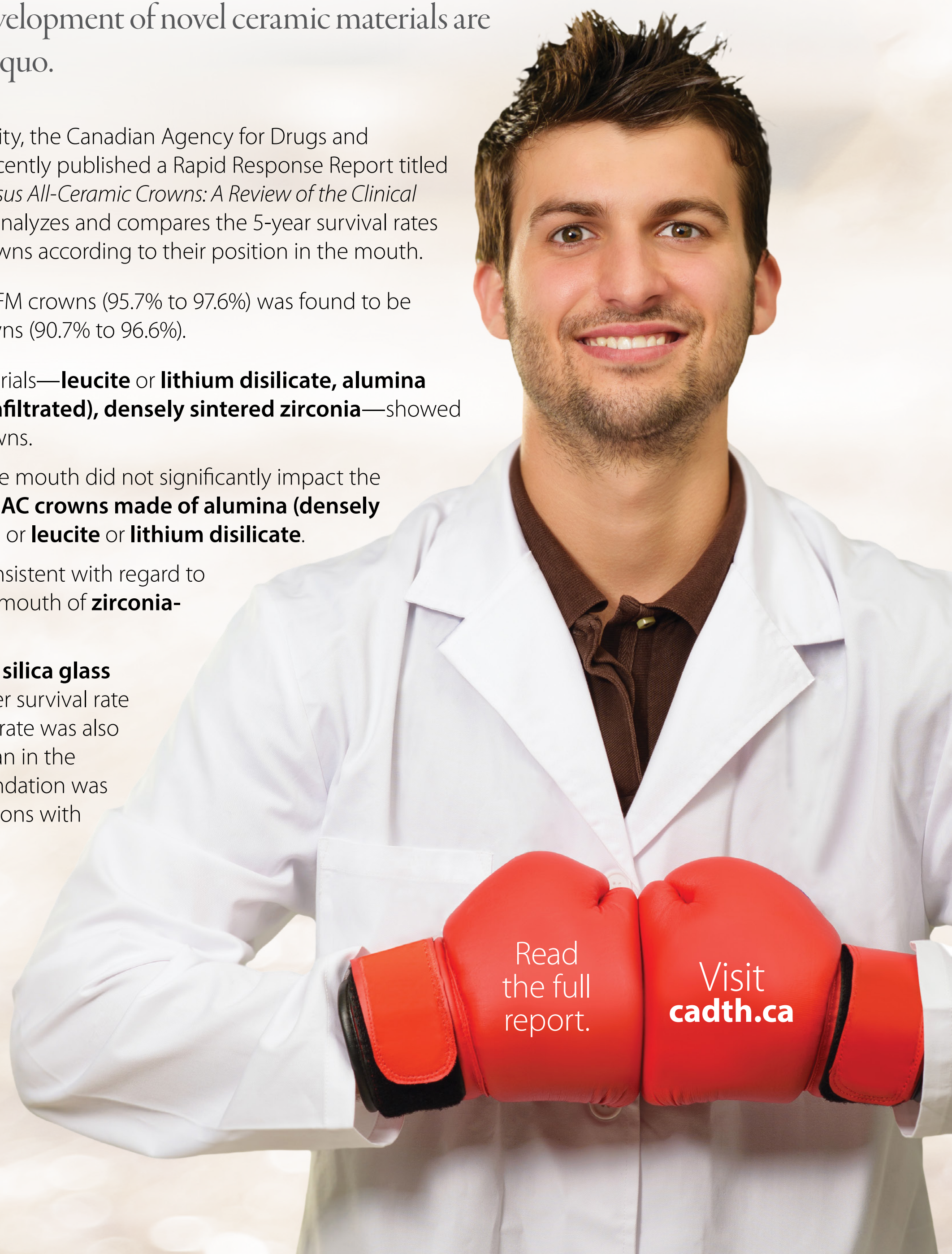
Porcelain-Fused-to-Metal Crowns versus All-Ceramic Crowns

Excellence in mechanical properties, biocompability and low technical complication rates have long been the hallmark of porcelain-fused-to-metal (PFM) crowns, while a superior esthetic has been in all-ceramic (AC) crowns' corner. Yet the rising cost of precious metals and the development of novel ceramic materials are now challenging the status quo.

To better understand that new reality, the Canadian Agency for Drugs and Technologies in Health (CADTH) recently published a Rapid Response Report titled *Porcelain-Fused-to-Metal Crowns versus All-Ceramic Crowns: A Review of the Clinical and Cost-Effectiveness.*[1] The review analyzes and compares the 5-year survival rates of several types of PFM and AC crowns according to their position in the mouth.

The overall 5-year survival rate of PFM crowns (95.7% to 97.6%) was found to be slightly higher than that of AC crowns (90.7% to 96.6%).

- AC crowns made of newer materials—**leucite** or **lithium disilicate, alumina (densely sintered and glass-infiltrated), densely sintered zirconia**—showed survival rates similar to PFM crowns.
- The position of the crowns in the mouth did not significantly impact the survival rates of **PFM crowns** or **AC crowns made of alumina (densely sintered and glass-infiltrated)** or **leucite** or **lithium disilicate**.
- Findings were found to be inconsistent with regard to the effect of the position in the mouth of **zirconia-based crowns**.
- Crowns made of **feldspathic** or **silica glass ceramic** had a significantly lower survival rate than PFM crowns. Their survival rate was also lower in the posterior region than in the anterior one, and the recommendation was to use them only in anterior regions with low functional load.



Reference

1. Porcelain-Fused-to-Metal Crowns versus All-Ceramic Crowns: A Review of the Clinical and Cost-Effectiveness [Internet]. Ottawa: CADTH; 2016 May 12 [accessed 2016 June 7]. Available at: https://www.cadth.ca/sites/default/files/pdf/htis/may-2016/RC0777_Dental%20Crown%20Update%20Final.pdf

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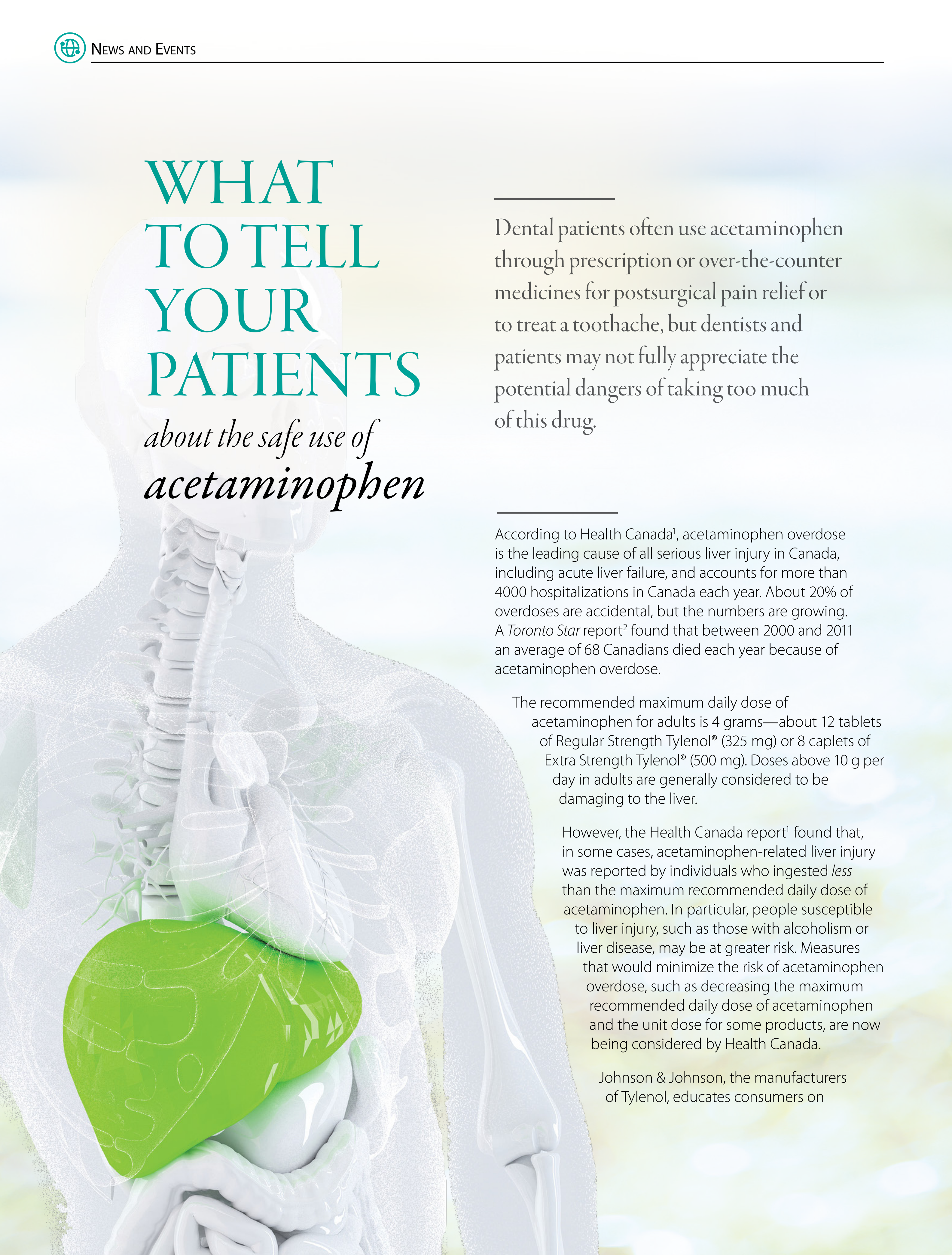


WHAT TO TELL YOUR PATIENTS *about the safe use of acetaminophen*

Dental patients often use acetaminophen through prescription or over-the-counter medicines for postsurgical pain relief or to treat a toothache, but dentists and patients may not fully appreciate the potential dangers of taking too much of this drug.

According to Health Canada[1], acetaminophen overdose is the leading cause of all serious liver injury in Canada, including acute liver failure, and accounts for more than 4000 hospitalizations in Canada each year. About 20% of overdoses are accidental, but the numbers are growing. A *Toronto Star* report[2] found that between 2000 and 2011 an average of 68 Canadians died each year because of acetaminophen overdose.

The recommended maximum daily dose of acetaminophen for adults is 4 grams—about 12 tablets of Regular Strength Tylenol® (325 mg) or 8 caplets of Extra Strength Tylenol® (500 mg). Doses above 10 g per day in adults are generally considered to be damaging to the liver.

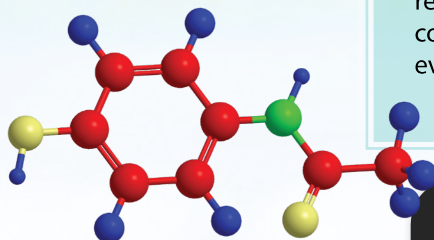
However, the Health Canada report[1] found that, in some cases, acetaminophen-related liver injury was reported by individuals who ingested *less* than the maximum recommended daily dose of acetaminophen. In particular, people susceptible to liver injury, such as those with alcoholism or liver disease, may be at greater risk. Measures that would minimize the risk of acetaminophen overdose, such as decreasing the maximum recommended daily dose of acetaminophen and the unit dose for some products, are now being considered by Health Canada.

Johnson & Johnson, the manufacturers of Tylenol, educates consumers on

A Toronto Star report[2] found that between 2000 and 2011 an average of 68 Canadians died each year because of acetaminophen overdose.

Getreliefresponsibly.ca

This Johnson & Johnson website educates the public on the safe use of acetaminophen. It recommends taking only one acetaminophen-containing medicine at a time and reading every label to avoid accidently combining medicines that contain acetaminophen.



safe dosing of acetaminophen through its website, **getreliefresponsibly.ca**. The website notes, "Many people don't realize that taking more than one medicine with acetaminophen at the same time could harm their liver. That's why it is important to always read and follow the label on the product you are taking and take ONLY 1 medicine at a time that contains acetaminophen."[3] It notes that over 450 over-the-counter and prescription medicines contain acetaminophen, including medicines for coughs, colds, pain relief, or allergies.

Dr. Euan Swan, CDA manager of dental programs, recommends that dentists make sure their patients are aware of the risks of overdosing. "It's important to let your patients know why it's critical to check the active ingredients in all of their medications, including over-the-counter products," he says. "Acetaminophen is the active ingredient in many over-the-counter and prescription medicines so exceeding the maximum daily dose can happen easily if they aren't careful." ✦

References

1. Summary Safety Review – Acetaminophen – Liver Injury [Internet]. Ottawa (ON): Health Canada; 2015 [updated 2015 July 9; cited 2016 Aug 15]. Available from: http://www.hc-sc.gc.ca/dhp-mps/medeff/reviews-examens/acetamino-eng.php

2. Yang J, Cribb R. What you haven't been told about acetaminophen. *Toronto Star* [Internet]. 2015 Sept 17 [cited 2016 Aug 15]. Available from: https://www.thestar.com/life/health_wellness/2015/09/17/up-to-68-canadians-on-average-die-from-acetaminophen-annually.html

3. *Get Relief Responsibly* [Internet]. [place unknown]: Johnson & Johnson; 2014 [cited 2016 Aug 15]. Available from: http://www.getreliefresponsibly.ca

Improved Product Labelling

In September 2016, Health Canada announced updated Labelling Standards for over-the-counter acetaminophen products. The new Labelling Standards include:

1. Clearer instructions on packages that emphasize the importance of using the lowest effective dose; not exceeding the recommended daily maximum (which is 4000 mg or 4 g for adults) in a 24-hour period; using these products for no more than 5 days for pain or 3 days for fever; and not mixing them with alcohol if drinking three or more drinks in a day;
2. Displaying the words "**contains acetaminophen**" in bold, red text in the top right corner of the front of the package to make it easier for consumers to know if a product contains this drug;
3. A new Drug Facts table for packages to provide product instructions, warnings and other safety information in a consistent, quick-reference format; and
4. A recommendation that all children's liquid products include a calibrated dosing device, so parents and caregivers can be sure that they're giving their child the right amount.

The label changes apply immediately to new products that companies are looking to introduce into the Canadian market. Companies with products already on the market are expected to update their product labels within 18 months. The Drug Facts table will be required on all products by 2021.

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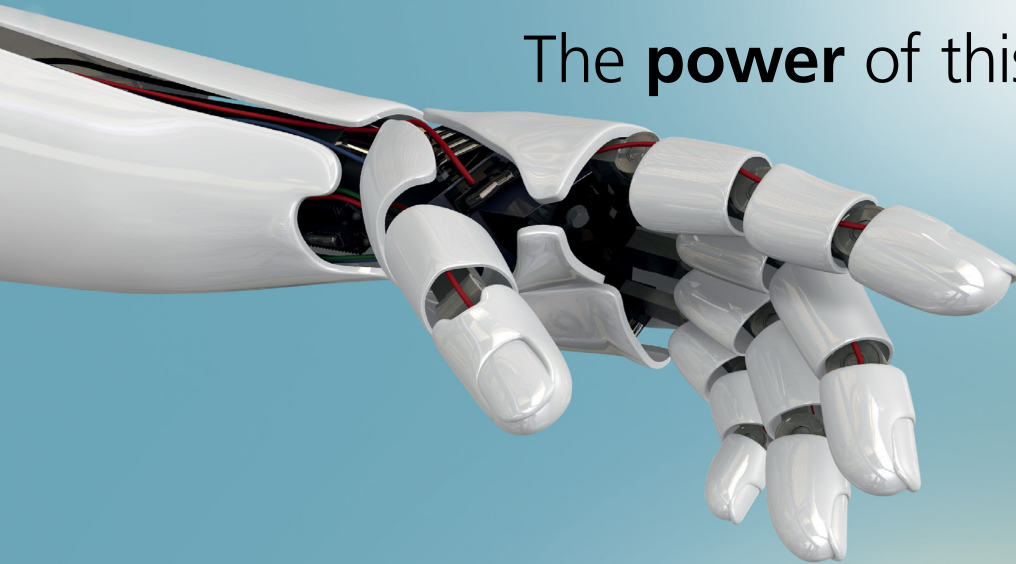

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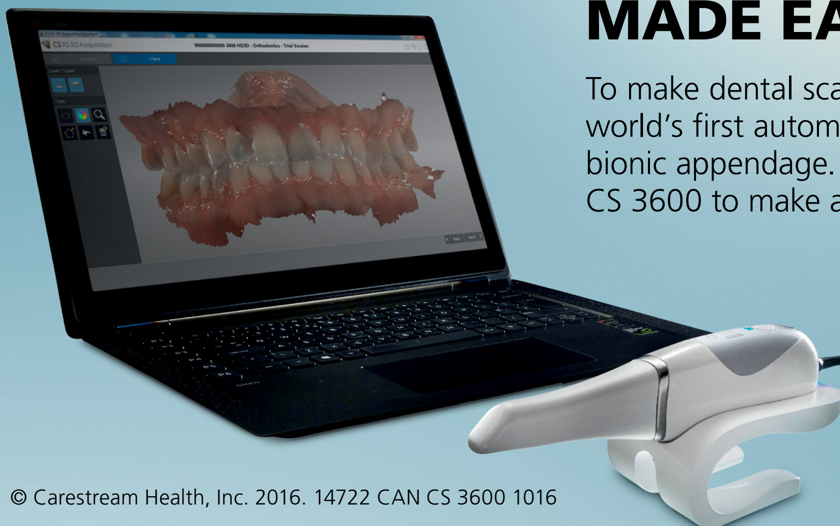

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What do the next 10 years hold for special care dentistry?

As part of our Thought Leaders Series, we posed this question to Dr. Alison Dougall, clinical consultant in special care dentistry at Dublin Dental University Hospital and director of the doctorate programme in special care dentistry at Trinity College Dublin, Ireland. She is also an editor with the International Association for Disability and Oral Health (iADH).

Dr. Alison Dougall

dougala@tcd.ie

What will be the biggest developments in special care dentistry?

I think the biggest development will be that we can equip general dentists with the skills, attitudes and confidence to be able to provide care for most people with disabilities. Special care dentistry shouldn't be particularly special. It's part of a new approach to providing care in dentistry, which is patient-centred, according to individualized risk and needs, and uses the full range of what we are trained for: risk assessment, communication and behavioural facilitation.

Two things that will equip dentists to overcome their reluctance or fear to treat patients with special needs?

(1) People will have better role models because special care dentistry will be better integrated within society. We'll just get used to diversity being far more visible in our society and our professional skills with go alongside that. (2) Legislation will mean that providing care to people with disabilities will be part of meeting our professional requirements. This isn't about charity. This is equity. This is professionalism. And this is part of our professional duty.

Priorities in special care dentistry?

Preventive care. Sometimes people with disabilities have difficulty maintaining their dentition and this puts them at a greater risk for oral disease. So evidence-based preventive measures might need to be applied in alternative ways, such as working with people with autism to help them acclimatise to the dental environment and to eliminate predictable triggers that can make a dental visit more challenging for them.

There is still a fear factor when it comes to treating people with disabilities and that perhaps is the biggest challenge to overcome.

Visit Oasis Discussions to watch Dr. Dougall's full interview.

oasisdiscussions.ca/2016/05/13/15688

How are technologies making a difference?

New technologies are making it easier to communicate; we can even do teleconsults with people at a distance. New technologies are also making it less complex to deliver care to someone in a wheelchair—we can now tilt people in their wheelchairs or use specific aids to help seat them in a chair.

Any game changers?

The game changer is the attitude. It's an attitude that says I can problem solve and I don't expect everyone to fit into my one way of doing dentistry. There is still a fear factor when it comes to treating people with disabilities and that perhaps is the biggest challenge to overcome.

Are attitudes evolving?

The iADH has developed very useful curricula guidance for both undergraduate and postgraduate levels. I think it's important to make sure that dentists and dental students have access to diverse populations and people with disabilities. Because lots of people go through their lives without touching someone with a disability so they are quite reasonably scared. But evidence has shown that when people work with patients with special needs, are mentored and gain confidence, it's the same as everything else—it's not that complex. ◆

This interview has been edited and condensed.

The views expressed are those of the author and do not necessarily reflect the opinions or official policies of the Canadian Dental Association.

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A dental hygienist describes her approach to

TREATING CHILDREN WITH AUTISM

Heather Coulter Jackson is a registered dental hygienist who specializes in treating children with autism and other special needs—kids who usually won't tolerate treatment in other clinics. She's acquired her skills through considerable training, 25 years of experience and, to some extent, intuition. She spoke with CDA about what she does to successfully treat children with autism, whose impaired communication and social, behavioural and intellectual functioning can make it difficult to provide dental care. Ms. Coulter Jackson works in the pediatric dental clinic of Dr. Clive Friedman in London, Ontario.

Heather Coulter Jackson

The Goal

In our practice we've developed a program called the Patient Guided Sensory Integration Program. It's a framework that we alter depending on the patient's needs and what the child is most comfortable with. Our goal is to create an environment where a child can tolerate care—just simple brushing and an examination. It doesn't necessarily mean we can perform treatment, but we have to be able to perform a comprehensive exam to determine their needs. Some of the children I see will still end up having sedation or general anesthetic for treatment but many are able to learn to tolerate other procedures. Even children who do require alternative care can get most or all of their routine care done in the clinic.

Calming environment

The first thing is to have a good location in your office: a quiet area without a lot of distractions. We have a room where the child is allowed to settle for 2–5 minutes when they first come to the clinic. It has a couple of books, a bench, a mobile on the ceiling and minimal decorations on the walls. It's fairly isolated and quiet.

Pretreatment assessment

The second thing we do is learn more about the child from the parent. We ask a parent to fill out a detailed questionnaire and ask, "What's worked with your child? What hasn't worked? How do you motivate your child? Do you use rewards or reinforcers?" We use that information to determine how we're going to work with their child. The child is often nonverbal so it's the parent who speaks for their child.

Count and sing!

I use techniques like counting to five and singing. It helps in setting up boundaries from the first visit. Most of the time, whenever my hands are on the child, I start with counting or singing to five and my hands come off by the time I get to five. We create a sense of trust, and there's a huge element of trust with all children. It sets up a start and a finish. Most of us can tolerate something for five seconds—even if I do it fifty times, they know I'll be stopping.

Photo (opposite page): Heather Coulter Jackson uses deep pressure on a young patient's ears while counting to five in a singsong voice.

Watch the eyes

The way I determine whether or not I'm going to continue what I'm doing is by looking at the patient's eyes. So if the child is smiling and attentive I keep going. Some kids will make eye contact and others won't. Children with autism often have difficulty making eye contact so I wait until a child tries to make eye contact—that's one way I can tell whether what I'm doing makes them comfortable or not.

Learn from experts

Our biggest problem in pediatric dentistry is that when our patients grow up, they don't have a practice to move to. If dentists in general practice could learn some of the methods we use with our patients, then these children could make the transition right into another practice as adults.

This interview has been edited and condensed.

The views expressed are those of the author and do not necessarily reflect the opinions or official policies of the Canadian Dental Association.

*Visit **oasisdiscussions.ca/2016/06/23/cas** for the full interview and to see how Heather works with children in the clinic. In one video, she uses deep pressure, orofacial massage, counting, singing and continual positive reinforcement with a young boy with autism. Another video shows Heather working successfully with a 12-year-old girl with Down Syndrome and autism who first visited the clinic at age two, when she was unable to tolerate even entering the clinic.*

Strategies

for care of children with autism

Ms. Coulter Jackson describes various approaches that they use at their practice. "We've taken pieces from all of these programs and combined them to create our own program. We choose from any of these strategies based on a child's tolerance to it."

D-Termined Program: This program helps a child with autism become familiar with the dental practice setting and learn cooperation skills by using repetitive tasking over a short interval. For example, I sit the child back in the chair, repeat "Legs out straight, hands on your tummy," and see the child in short appointments over the course of a number of days.

Orofacial therapy: This method of desensitization was taught by Argentinian physician Dr. Castillo-Morales.
It uses different approaches including stabilization of the jaw and deep pressure and vibration on the joints. It can help the child begin to accept touch and set up the duration of each procedure (i.e., counting to 5 while applying pressure).

Errorless learning: This technique reinforces good behaviours; it's something we were doing innately, although we didn't know there was a technical name for it. It's continual positive reinforcement. Instead of saying "Put your hands back down," we take their hands, put them back in their lap and then say "Good job, nice listening."

Music therapy and counting: Martine Hennequin, a psychologist from France, lectures on her work with adults with Down Syndrome and use of music therapy. She attended our clinic in London, Ontario, where she helped us to learn about using music as a distraction tool. Some children tolerate scaling and polishing as long as I sing for them. Parents and support staff often join in too!

Social stories: Most children with autism have used some form of a social story, which involves using photographs in a story—it helps to teach a child about what to expect for their visit to the clinic. It would include a picture of me, Dr. Friedman, and the clinic.

Pivotal response therapy (PRT): Rather than target individual behaviours one at a time, PRT targets pivotal areas of a child's development such as motivation, responsiveness to multiple cues, self-management, and social initiations. Part of the overall goal of each visit is to find a method of tolerance for overall care—not just for one particular procedure—and PRT helps with this.

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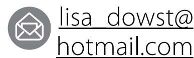
ADHD at the Dental Practice

"WHY WON'T HE SIT STILL? ...because he can't!"

Many oral care professionals may be caught off guard when treating patients with attention deficit hyperactivity disorder (ADHD), not knowing how to appropriately care for these patients, or how to support them in establishing and maintaining an optimal at-home oral health care routine.

Lisa Mayo, director of the dental hygiene program at Concorde Career College in San Antonio, Texas, discusses managing dental patients with ADHD in a webinar available on the Colgate Oral Health Network website. The course, titled Why Won't He Sit Still? ...Because He Can't! *offers different strategies and tools to better accommodate these patients in dental settings and make appointments enjoyable to patients and dental team members alike. We asked Lisa to share some insights with us.*

Lisa Mayo


lisa_dowst@hotmail.com

How would you define ADHD?

One of the best definitions I've heard came from a neurologist. He referred to it as the "diabetes of the psychology world." I think it's a really interesting analogy because like diabetes, it's a condition that requires long-term management.

ADHD is rooted in neurological differences that hinder one's ability to understand and foresee the consequences of behaviours or actions before they are performed. In other words, they have a hard time looking toward the future before the impulse of the act.

Why do you think ADHD has seemingly become increasingly diagnosed?

It's probably because we're better now at identifying it. Diagnoses of ADHD have increased dramatically since the 1980s. In the 1990s and the early 2000s, we saw a lot of changes with regard to diagnosis and recommendations for diagnosis. Treatment modalities have also changed; pharmacological medications have become more specific and better at managing the disorder. Alongside of that, those working with ADHD patients, mainly psychiatrists and psychologists, have been recommending a multi-modal approach that incorporates behavioural therapy and often family therapy as well.

What are some of the challenges faced by people with ADHD?

We're trying to make people with ADHD fit into a world that isn't designed for them. It is particularly noticeable in the school environment. When it comes to dental offices, certain accommodations can happen to make their appointments more enjoyable from both a patient and a health care provider perspective. This applies to managing both your adult and pediatric patients in the dental office. The webinar offers quick and easy tips that are going to help you manage and work with these patients better so that the entire experience is more enjoyable.

What is your webinar's take-home message?

To appreciate that patients coming to your practice are people who just so happen to have ADHD. Their disorder is not what defines them; it's only one aspect of their personality. Be understanding, patient and empathetic, and follow the dos and don'ts for working with

This interview has been edited and condensed.

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these patients. You'll have a truly enjoyable experience and you'll be able to build lasting, trusting relationships with these patients.

Patients with ADHD: What You Need to Know

› **ADHD medication.** Two types of drugs can be prescribed to people with ADHD: stimulants and non-stimulants. Stimulants increase the availability of dopamine and norepinephrine in the brain, which improves one's alertness and attention span, and reduces hyperactivity. Non-stimulants also have an effect on norepinephrine, but have no impact on dopamine levels.

› **Appointment scheduling.** Mayo recommends scheduling short morning appointments. Patients may experience increased fatigue later in the day and their medication might be wearing off by that time, making it harder for them to sit through the appointment and listen to instructions.

› **Oral side effects of ADHD medication.** "A side effect of many stimulants is xerostomia," Mayo explains. Other oral side effects may include bruxism, stomatitis, tongue edema, discoloured tongue, gingivitis and glossitis.

› **Drug interactions.** ADHD medications can increase heart rate and blood pressure. When performing local anesthesia, carefully evaluate the use of vasoconstrictors and only administer low doses. Monitor the patient's blood pressure and heart rate closely throughout the procedure. It is also important to achieve profound anesthesia to avoid endogenous epinephrine reacting with the patient's medication. Ensure adequate aspiration and avoid intravascular injections to prevent the possibility of increasing the stimulant effect of the ADHD medication.

Avoid local anesthetics containing levonordefrin for patients on atomoxetine (Strattera®) as the combination can increase blood pressure and cause cardiac dysrhythmias (irregular heartbeats).

All narcotic-containing analgesics should be avoided both perioperatively and postoperatively in patients taking amphetamine and dextroamphetamine (Adderall®, Dexedrine®), especially meperidine (Demerol®), as they can increase the risk for hypotension, respiratory collapse, and serotonin syndrome. *Symptoms may occur hours to days after concomitant use, particularly after dose increases.*

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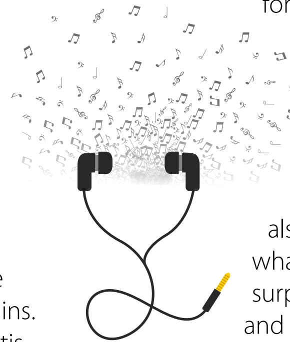
Oral sedation can be challenging to achieve as ADHD medications affect the central nervous system. Inhalational sedation with nitrous oxide-oxygen may be the safest modality, but it is strongly suggested to seek medical advice beforehand.

› **Limited distractions and surprises**. Sitting through a dental procedure can be an overwhelming experience for children with ADHD because of the many sensatory stimuli in the room. When treating children with ADHD, Mayo suggests limiting distractions by using music and earbuds or by turning on the television. This will help them isolate themselves from the office brouhaha. It is also important to discuss with them exactly what the appointment will entail. "Avoid surprises and let them know what will happen and when. Most of them want to know the 'why' behind things," she says. "They do not like things that are just put on them with no explanation. But get to the point and do that quickly!"



› **Tone of voice.** Keep a neutral, monotone voice, especially when giving oral care instructions. "Fluctuations in tone and volume may distract patients with ADHD, making it harder for them to pay attention to what you're saying," Mayo says. "Additionally, they might interpret the different tones as having different meanings." When it comes to children with ADHD, Mayo mentions that they can be particularly sensitive to voice tones. "They're used to getting in trouble! You don't want them to interpret your tone as being upset with them."

› **Eye contact.** To keep your patient's attention, maintain eye contact with them when performing a procedure or giving them instructions.

› **Time to think.** When treating patients with ADHD, Mayo stresses the importance of giving them only one command at a time, and of giving them a few seconds to process the information. "Wait about 5 seconds for them to process what you've asked instead of repeating yourself immediately."

› **Positive reinforcement.** Children with ADHD respond very well to positive reinforcement. Give them praise for following your instructions and for their at-home oral health care routine. "Make sure you smile at them; give them high-fives or pats on the back," Mayo says. "These children are usually very social and like it when adults interact them."

You can also tell them that if they follow your instructions, they will receive a reward at the end of the appointment

(sticker, toy, etc.). By working collaboratively with the parents, a similar system of rewards can also be put in place at home. In her webinar, Mayo discusses what child psychologists refer to as "free-response tokens." Prior to an appointment, parents can give their children five tokens and explain how they want them to behave during the dental visit and what they do not want them to do. "Every time the child has a behaviour that is not appropriate, the parent takes away a token. If the child is left with a token at the end of the appointment, they earn something—game time on a video console works very well in my house!" says Mayo.

› **At-home care.** It can be challenging for patients with ADHD to follow your instructions regarding their daily oral hygiene routine. Impulsivity and inattention can easily derail their best intentions. And just like many other patients, they may not fully understand just how long 2 minutes of tooth brushing actually is—or they may get distracted in the process. That is why Mayo suggests the use of an electric toothbrush with a timer.

Mayo explains in her webinar that because people with ADHD exhibit a personality trait known as "novelty seeking behaviour," they quickly lose interest in any task or initiative, even if they initially responded favourably to it. "What you suggest during an appointment, they're likely to be bored with when you see them six months later. It will probably work for 3–4 months, but then they'll want the next new thing." To parents of children with ADHD, she recommends using checklists, reward systems, non-verbal cues such as pictures and images, and over-the-counter disclosing solutions to help them establish and maintain a good oral health routine for their little ones. ◆

Watch the interview with Lisa Mayo at **oasisdiscussions.ca/2016/04/19/adhd**

Want to know more?

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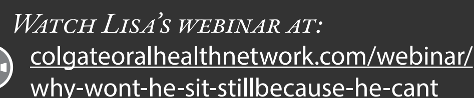

colgateoralhealthnetwork.com/webinar/why-wont-he-sit-stillbecause-he-cant

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lisamayordh.com

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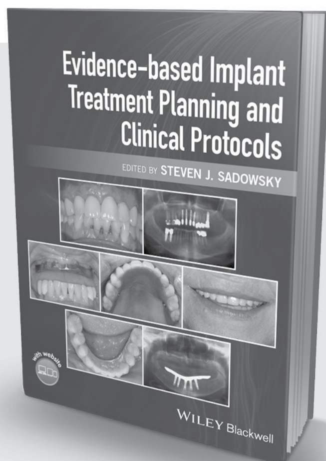

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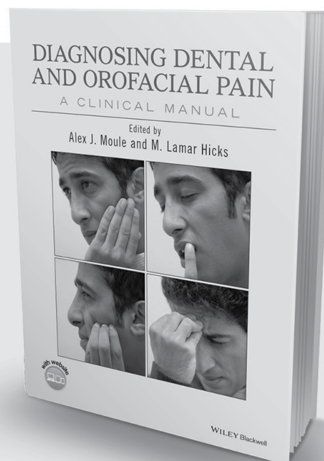

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DENTAL CONSIDERATIONS
in Managing Pediatric Patients with Leukemia

Michael Casas

DDS, DPaed, MSc, FRCD(C)

Dr. Casas is director of clinics, department of dentistry, at the Hospital for Sick Children and associate professor at the University of Toronto faculty of dentistry

This interview has been edited and condensed.

The views expressed are those of the author and do not necessarily reflect the opinions or official policies of the Canadian Dental Association.

For children with leukemia, the oral cavity can be a source of bleeding and infection as a consequence of the disease itself or the chemotherapy prescribed to treat it. Good oral health can help mitigate that risk as well as improve oral comfort during therapy.

In an article published in the journal *Materia Socio Medica*, Kholoud et al. recommend treating all teeth likely to produce complications 10–14 days prior to chemotherapy.[1] Oncology teams are unlikely to wait to start chemotherapy until after the mouth is optimized. Improved outcomes have been demonstrated for patients receiving expedited chemotherapy to treat leukemia. It is more likely that oral care would be coordinated to occur between cycles of chemotherapy so that the dentist can provide comprehensive and definitive care at a time while minimizing risk to the child. Dental interventions are commonly timed to coincide with the completion or initiation of a chemotherapy cycle, when the child's platelet and white blood cell counts are most favourable to reduce the risk of sepsis and uncontrolled bleeding.

Oral mucositis is the most significant source of oral morbidity during leukemia therapy and is exacerbated by poor oral hygiene. Due to the neutropenia and thrombocytopenia experienced by some children undergoing chemotherapy, regular brushing and flossing may not be consistently achievable. Moreover, the alcohol in chlorhexidine rinse may worsen the pain of mucositis. Hygiene may instead be managed with sodium bicarbonate-based mouth rinses. Mouth rinses containing topical anesthetics can also help reduce pain, and cryotherapy (sucking on ice chips) may reduce the incidence of mucositis as well as provide some pain relief. There is weak evidence for the efficacy of palifermin (recombinant keratinocyte growth factor) and low-level laser therapy for reduction of mucositis in adults, but efficacy has yet to be demonstrated in children.

The general considerations put forward by Kholoud et al. for providing care to children with leukemia are sound: **healthy mouths reduce the risks of leukemia**. Contemporary practice, however, may diverge from some of the specific recommendations provided in the article.

CDA thanks *Materia Socio Medica* for allowing us to republish a synopsis of its article, on the following page.

> *Oral mucositis is the most significant source of oral morbidity during leukemia therapy and is exacerbated by poor oral hygiene.*

Leukemia is a malignant disease affecting the bone marrow that causes the production of large numbers of immature blood cells. The classification of leukemia is based upon the duration (acute or chronic) and cell type that it affects (lymphocyte, monocyte or myelocyte). While the etiology of the disease is unknown, factors such as genetic mutations, inherited susceptibility, tobacco and alcohol consumption by the parents, infections, as well as exposure to chemicals, radiation and non-ionizing electromagnetic and electric fields may play a role in its development.

A diagnosis is usually made after careful physical examination, complete blood cell count and bone marrow biopsy. If confirmed, treatment normally consists of chemotherapy, radiation and bone marrow transplant.

Oral Findings

Patients with leukemia often present with generalized gingival bleeding and hyperplasia. They are more susceptible to opportunistic infections and may present with bone alterations. One of the most consistent findings is gingival swelling due to leukemic infiltration.

Cancer treatments also lead to further complications such as oral mucositis that typically follows chemotherapy and radiation. The developing dentition as well as orofacial growth can also be affected. During the induction phase of treatment, it has been noted that the oral health status of the child can deteriorate as a result of the change in quality and quantity of saliva produced. Other studies have shown that patients treated for acute lymphoblastic leukemia have greater incidences of agenesis, microdontia, tapering roots as well as short roots.

For children treated with bone marrow transplantation, complications such as graft-versus-host disease may occur. Other oral manifestations may include erythema, xerostomia, mucosal ulcerations, erosion and lichenoid changes. Rare issues such as leukemic infiltration in the mandible, trismus, oral aspergillosis and mucormycosis have also been reported.

Dental Management

Prior to cancer treatment

A thorough dental examination must be performed.

- Any teeth with a questionable prognosis should be extracted 10–14 days prior to chemotherapy.
- Scaling and other preventive measures including fluoride or pit-and-fissure applications should be completed.
- Teeth with caries should be temporized and final restorations should be placed once the patient is in remission.
- Patients and parents should be instructed and educated in proper oral hygiene care (brushing, flossing, gentle gum massage).

During cancer treatment

Complications such as mucositis, xerostomia and infections may develop.

- In situations where the child complains that brushing their teeth is painful, a chlorhexidine (CHX) rinse can help to prevent oral mucositis.
  - 0.12% CHX rinse for 1 minute, twice a day
- Fungal infections can be treated with nystatin.
  - Nystatin suspension 100,000 units, 4 times a day

  (Nystatin and chlorhexidine **should not be used together** *as they inhibit the action of the other. There should be a sufficient time gap between the two medications.)*
- Cold sores caused by the herpes simplex virus are also common and can be treated topically with acyclovir.
- Xerostomia can be treated with the use of saliva substitutes and sugar-free chewing gum.

After cancer treatment

Once in remission, children can be treated like any other healthy patient, unless invasive treatment is required. In this latter situation, bloodwork may be considered.

- Patients should continue brushing with fluoridated toothpaste rather than using a CHX rinse.
- For any patients with dental anomalies, enamel hypoplasia, disturbances in tooth development or maturity, other treatments (including esthetic restorations, orthodontic appliances or endodontic treatments) may be necessary.

Some studies have shown that children treated for leukemia may be at a higher risk for developing mucoepidermoid carcinoma and squamous cell carcinoma secondary to an allogenic bone marrow transplant. As such, dental professionals may play a role in the long-term observation of these patients.

Reference

1. Kholoud A, Alaizari AA, Tarakji B, Petro W, Hussain KA, Altamimi MAA. Dental Considerations for Leukemic Pediatric Patients: An Updated Review for General Dental Practitioner. *Mater Sociomed.* 2015 Oct; 27(5): 359-62.

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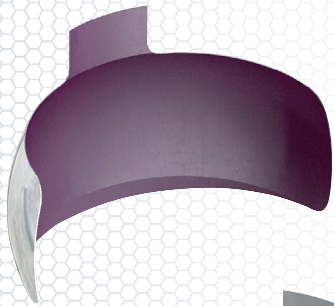

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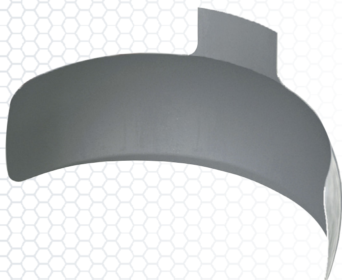

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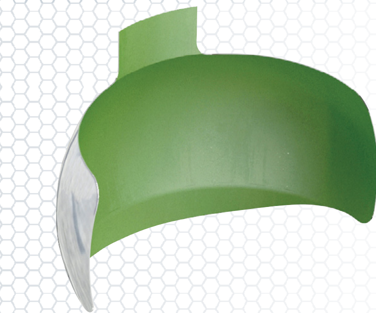

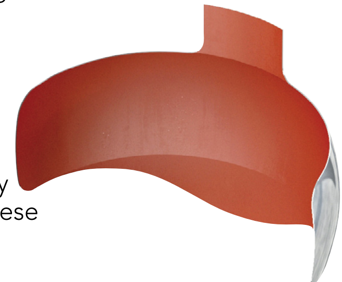

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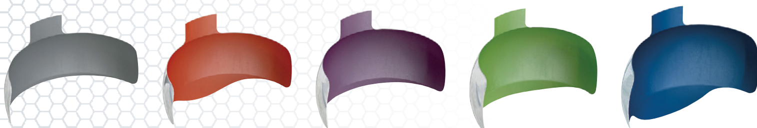

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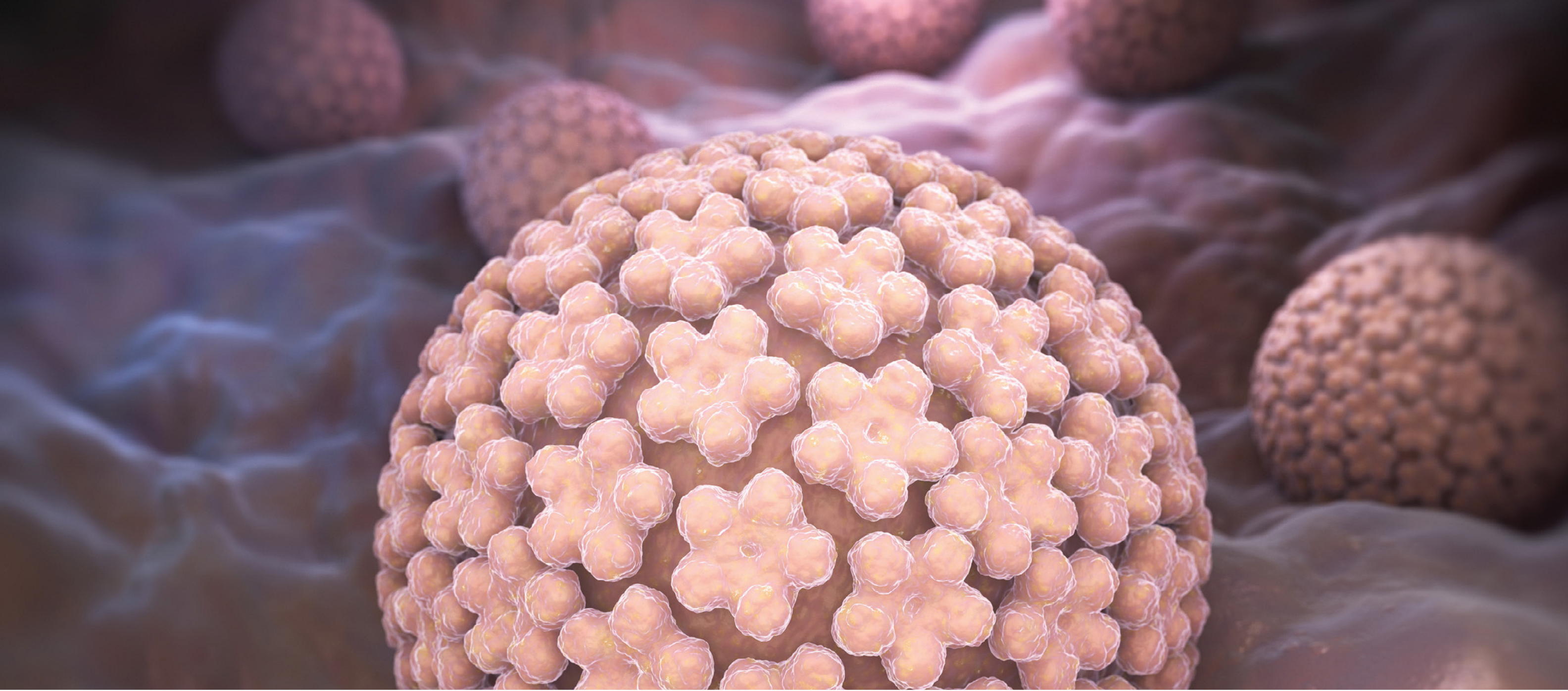

The global burden of HPV-ASSOCIATED CANCERS

Dr. Eduardo Franco is a James McGill Professor in the departments of oncology and of epidemiology and biostatistics, director of the division of cancer epidemiology, and chair of the department of oncology at McGill University's faculty of medicine. In 2016, he was appointed an Officer of the Order of Canada for "his ground breaking contributions to the prevention of cervical cancer in Canada and around the world."

As the opening speaker at an international consultation meeting on human papillomavirus (HPV)-associated oropharyngeal cancer held in Washington, D.C., in 2015, Dr. Franco gave a presentation on the global burden of HPV-associated cancers and the role of HPV vaccination in cancer prevention. Here, he shares some of the key points from his presentation.

Dr. Eduardo Franco

To listen to Dr. Franco's full interview visit **oasisdiscussions.ca/ 2016/03/01/hpv-5**

Many people, even health professionals, do not realize that infectious agents can be causes of cancer.

It's an important consideration because if we're going to talk about prevention, there needs to be an understanding that cancer is not only associated with characteristics of lifestyle and chemical or physical environments, but with biological environments as well.

Worldwide, 2 million cases of cancer in 2008 were related to infections or caused by infections. This represents about 16% of all cancers worldwide. Although this estimate is from 2008, the numbers haven't changed much. The particular infectious agents are viral, bacterial, and parasitic, as is the case with helminth infections.

There has been a shift in risk factors for oral and oropharyngeal cancers that dental professionals appreciate, but the public does not.

Up until a couple of decades ago, it was unthinkable to talk about a virus that would cause oral cancer or oropharyngeal cancer. But now, we better understand the natural history of HPV in oral and genital mucosa. The epidemiology of oral cancer is gradually switching, from

Table 1 Global burden of HPV-associated cancers

Cancer	New cases	Attributable to HPV	% Attributable to HPV
Uterine cervix	530 000	530 000	100%
Penis	22 000	11 000	50%
Anus	27 000	24 000	88%
Vulva	27 000	12 000	43%
Vagina	13 000	9 000	70%
Oropharynx	85 000	22 000	25.6% (range: 13-56%, region dependent)
Total HPV-associated cancers	700 000	610 000*	86.30%

*4.8% of 12.7 million new cancers in 2008

Source: Forman D, de Martel C, Lacey CJ, Soerjomataram I, Lortet-Tieulent J, Bruni L et al. Global burden of human papillomavirus and related diseases. *Vaccine* 2012; 30 Suppl 5:F12-23.

one associated with tobacco and alcohol consumption to the second etiological component: HPV infection.

The reality is that we're seeing two sets of oral cancers: those caused by HPV and those that can be attributed to other risk factors. Today, this knowledge is no longer questioned: HPV is acquired by sexual transmission, it's one of the most commonly sexually transmitted infections (STI) and it's the most common viral STI. Dental professionals, by being key opinion leaders among their peers, their patients and their communities, are able to spread word of the advantages of HPV vaccination in terms of long-term prevention of oral cancers.

HPV-associated cancers include cancers of the cervix, penis, anus, vulva, vagina and oropharynx.

The cancers are all managed differently by different health professionals and are discovered differently as well. The important thing to note is that of the 12.7 million new cancers in 2008, about 5% were caused by HPV (see **Table 1**). Cervical cancer is of tremendous importance, with nearly half a million cases worldwide. And 100% of new cases of cervical cancer are attributable to HPV because, for this particular cancer, HPV is the necessary cause. HPV is also the major cause of anal cancer, a significant cause of other genital cancers, and is gradually—by the minute—becoming a major cause of oropharyngeal cancer. In 2008, the proportion of oropharyngeal cancer cases worldwide related to HPV varied from 13–56%, because in some regions smoking and alcohol are the more important risk factors and in other regions HPV is more important.

According to one estimate, HPV causes 72% of oropharyngeal cancers in the U.S.

This estimate is from the Centers for Disease Control and Prevention in 2013. It's a much higher estimate than previous ones, but we now have better science coming down the pipeline about oropharyngeal cancer, and it's become part of regular practice for dental professionals and head and neck surgeons to test for HPV-16 in oral cancer. Another estimate in the U.S. calculates that 89% of HPV-associated oral and oropharyngeal cancer are preventable by vaccination. Of course, we haven't yet gotten to that point because girls and boys are getting vaccinated and they haven't reached the age of being at risk for oral cavity and oropharyngeal cancer.

HPV-16 is by far the most common HPV type.

Among the 25 alpha HPV types—the ones that infect the mucosal sites—HPV-16 is by far the most carcinogenic and the most important for oropharyngeal cancer. Luckily the vaccines that are available now target HPV-16 quite efficiently. Hopefully the means to control or prevent all HPV-associated cancers will be a single one: HPV vaccination.

The epidemiology of oral cancer is gradually switching, from one associated with tobacco and alcohol consumption to the second etiological component: HPV infection.

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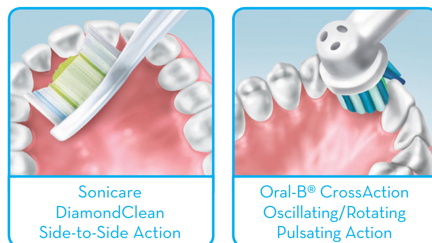

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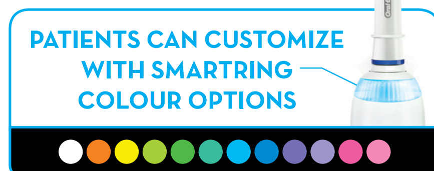

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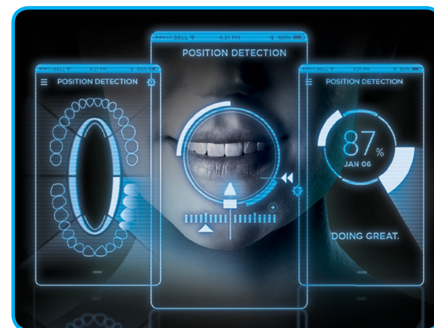

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References:
1. Harnacke D *et al. J Periodontol* 2015:86(1):101-107. Available at: DOI 10.1902/jop.2014.140152 2. Data on file at P&G Canada. 3. Power Tech Manual. The history of power Brush evolution; 2011. P&G Oral. Available at: http://www.dentalcare.com/media/en-US/research_db/pdf/power/20151216_PowerTechManual_R1.pdf 4. Yaacob M, *et al.* Powered versus manual toothbrushing for oral health. Cochrane Database of Systematic Reviews 2014, Issue 6. Art. No.: CD002281. DOI: 10.1002/14651858.CD002281.pub3

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Ask Your Colleagues

Do you have any burning clinical questions related to your everyday practice? Are you facing a challenging clinical case and need advice? Send your queries to Oasis Discussions for expert guidance. The following question was submitted to Oasis Discussions by a general dentist. Drs. Nita Mazurat and Suham Alexander provided a response.

Question

Does anyone have a polite and professional way to address the HPV issue with patients in a dental office setting?

Response

The role of dentists in the prevention of human papillomavirus (HPV)-associated oral cancers

- Provide a head and neck examination.
- Encourage patients to perform regular self-examinations.
- Encourage adult patients and parents of appropriately aged children to get the HPV vaccine.
- Refer patients with suspicious lesions or persistent symptoms.

Evaluate the patient's health history—particularly any verbal or written indication of suggestive symptoms, such as sore throat, dysphagia, hoarseness, ear pain, enlarged lymph nodes or weight loss—as part of the full clinical assessment and head and neck examination.[1,2]

Educate and explain

☑ **Open the conversation** with a discussion about risk: all men and women are at risk of developing oral cancer even in the absence of other risk factors, such as alcohol, smoking or smokeless tobacco use.

☑ **Explain that the dental examination includes extraoral and intraoral soft tissue** and that you perform a head and neck examination for all new patients and at every recare/recall appointment. Practitioners should keep in mind that oropharyngeal cancers are difficult to detect manually and visually because of their position in the ororfacial complex and because the symptoms mimic more common benign conditions.[2]

☑ **During the examination, explain that oral cancer screening includes an assessment** of the lymph nodes of the neck, intraoral mucosal tissues, tongue, base of the tongue, and throat. Encourage patients to perform a self-examination at least once a month.

☑ **Segue into a discussion about the relationship between HPV and oral cancers.** The Centers for Disease Control and Prevention (CDC) website (**cdc.gov/std/hpv/stdfact-hpv.htm**) has a good fact sheet that includes these key points: HPV is the most common sexually transmitted infection and can be transmitted through vaginal, anal, or oral sex with someone who has the virus. Anyone who is sexually active can get HPV, even if you have had sex with only one person. It is so common that nearly all sexually active men and women get it at some point

Key information about HPV from the Canadian Immunization Guide[3]

What

- HPV infections are the most common sexually transmitted infections. Most HPV infections occur without symptoms and resolve without treatment.
- If not immunized, most sexually active Canadians will have an asymptomatic HPV infection at some time.
- High-risk HPV types 16 and 18 and others can lead to cervical and anogenital cancers, as well as certain cancers of the head and neck.
- Low-risk HPV types 6 and 11 can cause genital warts.
- HPV2 and HPV4 vaccines protect against cervical cancer. HPV4 vaccine also protects against genital warts.

Who

- HPV2 or HPV4 vaccine is recommended for prevention of cervical cancer in girls and women 9 to 26 years of age, including those who have had previous Pap test abnormalities, cervical cancer or genital warts.
- HPV4 vaccine is recommended for the prevention of vulvar, vaginal, anal cancers and their precursors and anogenital warts in girls and women, 9-26 years of age.
- HPV2 or HPV4 vaccine may be administered to women 27 years of age and older at ongoing risk of exposure.
- HPV4 vaccine is recommended for prevention of anogenital cancer and genital warts in boys and men 9 to 26 years of age.
- HPV4 vaccine may be administered to men 27 years of age and older at ongoing risk of exposure. HPV2 vaccine is not approved for use in boys and men.

in their lives. Generally, HPV resolves on its own but if it does not resolve it can cause health problems, including cancer. The dental team should encourage adult patients to discuss the HPV vaccine with their physician as a preventive health measure for themselves and their children.

In Canada[4], it is estimated that HPV is associated with 80–90% of anal cancers, 40–50% of penile cancers, 40% of vaginal and vulvar cancers, 25–35% of oral cavity and oropharyngeal cancers. Most of these cancers are attributed to high-risk HPV types 16 and 18.

The Authors

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Dr. Mazurat is an associate professor in the department of restorative dentistry and the director of infection prevention and control for the college of dentistry at the University of Manitoba. She is also the primary author of the Manitoba Dental Association infection prevention and control guidelines.

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Dr. Suham Alexander

Dr. Alexander is in private practice in the Ottawa area and is clinical editor of Oasis Discussions at CDA.

To read the full Oasis Discussions post, please visit: **oasisdiscussions.ca/2014/10/17/hpv-2**

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References

1. American Dental Association. *Statement on Human Papillomavirus and Squamous Cell Cancers of the Oropharynx.* Chicago (IL): ADA. Available: ada.org/en/about-the-ada/ada-positions-policies-and-statements/statement-on-human-papillomavirus-and-squamous-cel (accessed 2015 Sept 25).
2. Cleveland JL, Junger ML, Saraiya M, Markowitz LE, Dunne EF, Epstein JB. The connection between human papillomavirus and oropharyngeal squamous cell carcinomas in the United States: Implications for dentistry. *J Am Dent Assoc.* 2011;142;915-924.
3. Public Health Agency of Canada. *Canadian Immunization Guide, Part 4 – Active Vaccines, Human Papillomavirus Vaccine.* Ottawa (ON): PHAC. Available: phac-aspc.gc.ca/publicat/cig-gci/p04-hpv-vph-eng.php (accessed 2015 Sept 25).
4. Centers for Disease Control and Prevention. *Human Papillomavirus (HPV), Gentital HPV Infection – Fact Sheet.* Atlanta (GA): CDC. Available:www.cancer.ca/en/cancer-information/cancer-101/what-is-a-risk-factor/viruses-bacteria-and-other-infectious-agents/hpv/?region=on#HPV_and_cancer (accessed 2016 July 25).

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Corporate Bond Fund Corporate Class (CI)	1.25%	5.6%	5.7%	6.4%	N/A	★★★★
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Aggressive Growth Portfolio (CI)	1.65%	4.4%	10.2%	10.7%	5.2%	★★★
Balanced Portfolio (CI)	1.65%	4.5%	8.5%	8.6%	5.4%	★★★★
Conservative Growth Portfolio (CI)	1.65%	4.7%	8.9%	9.1%	5.4%	★★★★
Income Portfolio (CI)	1.65%	5.4%	7.2%	6.8%	5.8%	★★★★
Income Plus Portfolio (CI)	1.65%	4.4%	7.6%	7.2%	5.3%	★★★★
Moderate Growth Portfolio (CI)	1.65%	4.4%	9.3%	9.7%	5.3%	★★★★

Listed are annual compound rates of return with all fees deducted for one-to-ten-year performance for the period ending August 31, 2016. The figures are historic results based on past performance and are not necessarily indicative of future performance. Returns are after the deduction of management fees, and so may differ from those published by the respective fund management companies. MERs are subject to applicable taxes. BlackRock is a registered trade-mark of BlackRock, Inc.

* Morningstar ratings are based on analysis by Morningstar, Inc. of CDSPI funds with performance records of one year or more. For more details on the calculation of Morningstar ratings, please see www.morningstar.ca.

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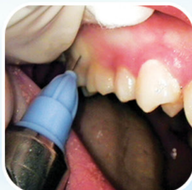
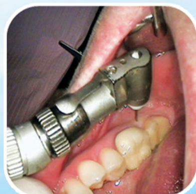
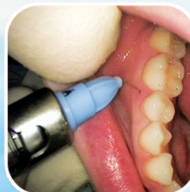


Step1. Anesthetizing the attached gingiva using the Injection - needle



Step2. Perforating the cortical plate using the Perforator



Step3. Inserting the Injection-needle in the perforation

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Positions Available

ALBERTA: We are a busy and thriving group of dental practices looking for an energetic, intrinsically driven and team-oriented dentist. We are looking for a true leader who will be a positive role model for the office. Excellent people and communication skills are a must. We are looking for someone who is hungry to learn about all aspects of dentistry. With several experienced dentists at our offices, mentorship is a big part of what we have always offered to our associates. Key focuses in our practice are comprehensive dentistry, maintaining a positive and fun work environment, and creation of a fantastic patient experience. We are looking for someone who can get onboard with these values and be a part of what we think is a phenomenal team! Partnership/ownership is an option for the right candidate. If you are interested in speaking with us further, please email your CV/resume to: albertadentalclinic@gmail.com. D11173

ALBERTA - Calgary: We are a busy and thriving dental practice located 30 minutes outside of Calgary. We are looking for an energetic, intrinsically-driven and team-oriented dentist. Excellent people and communication skills are a must. Key focuses in our practice are comprehensive dentistry, maintaining a positive and fun work environment, and creation of a fantastic patient experience. We are looking for someone who can get on board with these values. We have the option of FT or PT. If you are interested in speaking with us further, please email your CV/resume to: ourdentist1@gmail.com. D11652

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ONTARIO - Kingston: Live and work in the beautiful city of Kingston that offers you a different lifestyle. Waterfront living with beautiful parks in a historic city vibrant with arts, entertainment and culture. We are now hiring a full-time Associate Dentist for our very busy, successful practice with an established patient base in Kingston supported by a talented team of professionals. Apply: www.altima.ca and click on 'Join our Team' or via email at hr@altima.ca. D11873

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SASKATCHEWAN - Saskatoon: Campus Dentist University of Saskatchewan in Saskatoon is currently looking for an energetic, friendly, outgoing, enthusiastic individual for a very unique opportunity in a modern university setting. If you are highly motivated with strong interpersonal skills and would like to join Campus Dentist's dynamic team, please email us: marzena@campusdentist.com. D11904

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Advertisers' Index

3M ESPE 6
A-dec 11
Bisco 12
Carestream 18
CDSPI 15, 21
CDSPI Funds 41
Fairfax Dental Ltd 42
Garrison Dental Solutions 32
Kuraray America Inc. 47
Medicom 36
Ontario Dental Association ASM150 20
Pacific Dental Conference 40
Philips 25, 39
Procter & Gamble 2, 35
SciCan 8
VOCO 48
Wiley-Blackwell 29

REMEMBERING DENTISTRY LEADERS

DR. JACK DALE

Dr. Jack Gilbert Dale of Toronto passed away on February 3, 2016 at the age of 85.

A 1958 graduate from the University of Toronto (U of T), Dr. Dale specialized in orthodontics at Harvard University. He quickly became an international leader in his field, travelling the world to give lectures at universities, hospitals, associations and societies in more than 30 countries. While teaching full-time at U of T and maintaining a private practice, Dr. Dale also contributed to many publications on topics such as orthodontics, education, standards of care, research, oral anatomy, and patient motivation.

Dr. Dale was highly involved in organized dentistry and served as president of several organizations, including the Canadian Association of Orthodontists, the American Board of Orthodontics, the Charles H. Tweed International Foundation for Orthodontic Research and Education, the International Association of Dental Research (Ontario section), and American College of Dentists (Ontario section). He was also a co-founder of both the Canadian Foundation for the Advancement of Orthodontics and the Harvard Society for the Advancement of Orthodontics. He received the highest awards given by national and international dental organizations, and was the first recipient of the Excellence in Orthodontics Award given at the inaugural World Symposium on Orthodontics in 2003.

Dr. Dale was also an accomplished artist. Along with his wife, fellow U of T alumna Dr. Anne Carlyle Dale, he provided hand-drawn diagrams and illustrations for *Oral Histology: Development, Structure and Function*, a textbook considered a standard in its field. The couple also shared a passion for history, particularly dental history.

He is survived by his wife and their two daughters, Anne and Hali.

DR. ROBERT GRAINGER

Dr. Robert Moore Grainger of London, Ontario, passed away on April 5, 2016. He was 97 years old.

A 1943 graduate from the University of Toronto (U of T), Dr. Grainger later obtained a diploma in dental public health and a Master of Science in dentistry, majoring in statistics and epidemiology.

Dr. Grainger became a leading authority in his field. He was a dental statistician with the Ontario Department of Health before returning to U of T as professor of epidemiology and statistics. He also chaired the university's division of dental research, and was part-time director of the orthodontic research centre. His unparalleled expertise allowed him to craft the analytical strategies for U of T's Burlington Growth Study, one of the most important databases for craniofacial growth in the world. In collaboration with CDA, he published a manual for the evaluation of oral health in 1959, making Canada one of the first countries with national standards for epidemiological surveys.

After serving as professor of epidemiology and director of clinics at the University of British Columbia, Dr. Grainger moved back to Ontario to take on the role of research director for the Association of Canadian Medical Colleges, and then as director for CDA's bureau of economics. He also served as editor of the *Journal of the Canadian Dental Association (JCDA)* from 1973 to 1975.

Not only was Dr. Grainger a national leader in dental statistics and epidemiology, his services were also sought after internationally. He was instrumental in establishing the World Health Organization's dental survey criteria, and he acted as associate director with the National Institute of Dental Research at National Institutes of Health in the United States.

Dr. Grainger is survived by his wife Norma and their two daughters, Patricia and Jennifer.

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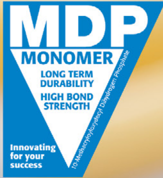

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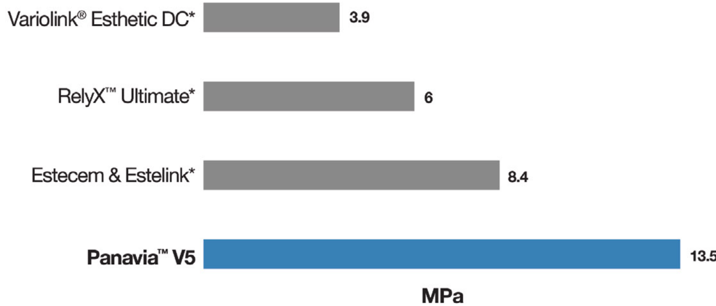

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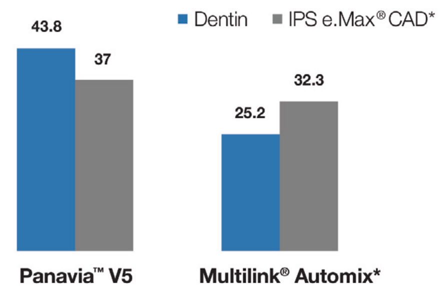

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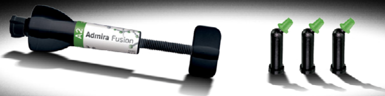

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