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Winter 2019

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Editor Julia Kuipers

Graphic Designer and Illustrator Ananya Bhattasali

Assistant Editor Jennifer D. Foster

Creative and Graphic Design Specialist Natalia Ivashchenko

Professional Affairs Advisor Roberta MacLean

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from Dr. Deborah Saunders, Editor-in-Chief

Welcome to our Spring/Summer issue of *YourOralHealth.ca Magazine (YOH.ca)*. It was an especially challenging winter, and so for many who were hibernating, so to speak, this spring marks a new beginning, perhaps motivating some of us to begin healthy lifestyle changes. For this issue, we feature some interesting and practical information on a variety of topics you have asked your dentist, and one of the most frequently asked questions focuses on at-home cosmetic whitening. Patients want to know if it's safe and effective. Our dentists answer these questions and more in "Getting the Pearly Whites You Want" on page 12. The team dentists for the Toronto Maple Leafs discuss the necessity of wearing mouthguards for any sports (page 22), and we examine the causes, symptoms and treatments for dry mouth and sensitive teeth (page 5). We also offer an in-depth article on the nutritional and oral health-care needs of babies during their first year (page 8).

I would like to take this opportunity to introduce and welcome an addition to our *YOH.ca* team — Dr. Allan Katchky. As our new Consulting Editor, Dr. Katchky will provide his expertise and knowledge as a general practising dentist who has lived and worked in east Toronto for many years. He also offers his time at the University of Toronto's Faculty of Dentistry as an instructor. Dr. Katchky is a frequent contributor to community newspapers in Toronto, and he has authored our new Q&A column in this issue about the mystique of oil-pulling. I am excited to have him on our team!

We asked Dr. Katchky why he is interested in working on *YOH.ca*, and this is what he told us: "*YOH.ca* is easy to read and filled with the latest information to help the public make wise choices concerning their health and their family's health. It also helps readers navigate the often-confusing array of information available online. *YOH.ca* is an invaluable patient-education tool in my own reception area. I hope patients enjoy reading it."

The success of *YOH.ca* has been a reflection of the number of dental offices that feature it, the positive response from our readers and the thanks from our member dentists on the valuable complementary information we give their patients. We hope you enjoy this issue, and please remember that we are always looking for new ideas and topics for articles. If you have anything you would like to see or just want to offer us your input, I would love to hear from you at yoh@oda.ca.

TEBBIE Su-NERS



Dr. Deborah Saunders



Dr. Allan Katchky

Everything You Need to Know About Dry Mouth and Sensitive Teeth

By Michelle Outar

We asked the experts to explain the symptoms, causes and remedies that can help with dry mouth and tooth sensitivity



Symptoms of dry mouth

Have you ever experienced a dryness or stickiness in your mouth? What about bad breath, difficulty chewing or swallowing, or even a change in taste? All these signs could be symptoms of a condition called dry mouth. 1 Dry mouth, known as xerostomia, is a disorder where the salivary glands in your mouth don't produce enough saliva to keep your mouth wet.²

Causes of dry mouth

According to Dr. Leslie Laing, a prosthodontist and immunologist in Toronto, and President and member of the Board of Directors and the Medical Advisory Board of Sjögren's Society of Canada, there are four main conditions associated with patients who experience dry mouth. The first is Sjögren's syndrome, a chronic autoimmune disorder that attacks and damages the salivary, tear and mucous-secreting glands, which can lead to dry eye, dry mouth and swollen salivary

glands.³ Sjögren's affects approximately 430,000 Canadian and mostly women.⁴ Dr. Laing says the female to male ratio is 9:1. Common Sjögren's symptoms related to the mouth are a dry or burning sensation, the consistent

use of liquids to swallow dry foods, increased dental decay, an altered sense of taste, mouth sores and swollen salivary glands.⁵

The second condition that causes dry mouth is radiation therapy (RT) for head-and-neck cancer.⁶ Gland tissue like the saliva glands are very sensitive to radiation damage. The doses of radiation needed to kill cancer cells far exceeds safe doses to the saliva glands in the areas where the cancer is being treated. According to Dr. Laing, this type of RT "can damage one or more of the salivary glands on a temporary or permanent basis."

Other types of cancer treatments that can cause dry mouth are certain chemotherapy agents. This leads to the third main cause of dry mouth: prescriptions and non-prescription medications used to treat depression, anxiety, pain, allergies, colds, acne, epilepsy, Parkinson's disease and asthma, among many others. Essentially, almost all drugs with the exception of antibiotics can cause some level of dryness in the mouth.

The last condition associated with dry mouth is the use of marijuana. The active ingredient in marijuana, tetrahydrocannabinol (THC), binds to the receptors in the salivary glands and makes them less active, or in other words, THC blocks the glands that produce saliva. People who use recreational drugs such as opiates, cannabis and tobacco should be aware of the drying effects these have on the mouth and the increased risk of decay and infection.

Treatments

Dr. Laing says "mouth sprays, gels and rinses can provide instantaneous relief, but they are not long-lasting" or long-term solutions for the symptoms of dry mouth. She suggests treatments such as massaging the salivary glands with one's fingertips or tongue,



chewing gum and using lozenges with xylitol (make sure they are aspartame-free) in patients with Sjögren's syndrome. All patients with dry mouth should be aware of the importance of looking after their oral soft tissues (cheeks, tongue, gums) and hard tissues (teeth), as both require different care.

Additional lifestyle and home remedies to consider include:

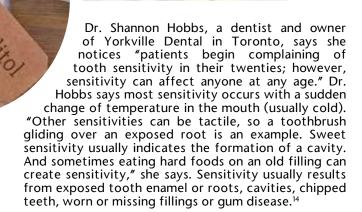
- sipping water regularly
- using a fluoride rinse or toothpaste, as well as a remineralizing toothpaste
- rinsing frequently with a baking soda and saline mixture
- using a humidifier to add moisture in the air at
- avoiding carbonated soft drinks and acidic foods
- limiting caffeine and alcohol
- avoiding all tobacco
- avoiding use of some over-the-counter antihistamines and decongestants.

Symptoms of tooth sensitivity

Almost half of the Canadian population is affected by tooth sensitivity. Sensitive teeth can make activities such as eating, drinking or even brushing your teeth painful.¹² The main symptom of having sensitive teeth is sudden, sharp tooth pain that shoots deep into the nerve after drinking or eating something hot or cold, sweet or sour.13

Causes of tooth sensitivity

According to Dr. Natalie Dugas, an endodontist with a practice in Sudbury, "most commonly, tooth sensitivity develops when the gums starts to recede, thereby exposing the root of the tooth." And, Dr. Dugas explains, "the root only has a thin protective layer that can easily become damaged with aggressive toothbrushing or a high sugar/acid diet." Once this protective layer is damaged, the root dentin becomes exposed. Dentin is the inner layer of the tooth, and it has many small channels that communicate with the pulp (nerves and blood vessels) of the tooth. Once the root becomes exposed, the tooth may become sensitive, she explains.



Oral rinse

Take one teaspoon each salt and baking soda; mix with one litre water. Prepare the solution daily and use it multiple times as needed to relieve dry mouth.

Treatments

Treatment for tooth sensitivity varies and must be assessed by your dentist. "If the sensitivity is from gum recession and exposed root dentin, your dentist might recommend switching your regular fluoridated toothpaste to a toothpaste made specifically for sensitive teeth. These toothpastes build a protective barrier over the exposed dentin, forming a

> in the sensitive areas of your teeth," says Dr. Dugas. If this is ineffective, she says desensitizing solutions can be professionally applied by your dentist to the exposed channels to provide a protective shield, reducing sensitivity. In some cases, small bonded restorations can be placed over the root surface to provide a more permanent shield, says Dr. Dugas. If the sensitivity is due to decay or a fractured tooth/ filling, then it is likely that a new restoration will be required. If grinding your teeth is at the hub of your sensitivity issues, your

dentist can fit you for a mouthguard to wear at night to help alleviate any pain.¹⁵ Other tips to consider include brushing your teeth by using gentle strokes and using a soft-bristled toothbrush and non-abrasive toothpaste.¹⁶ Dr. Hobbs suggests avoiding acidic foods and being conscious of clenching and grinding your teeth. She also says maintaining good oral health is a really



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Feeding Your Baby in the First Year: Their Nutritional and Oral Health-Care Needs

By Julia Stanislavskaia, MSc, RD



Wondering how to start off your precious little one with solid foods? It's a fun but sometimes nerve-wrecking process — even for me, a registered dietitian who specializes in children's nutrition. I have practised in infant feeding and feeding disorders for 10 years, but I had my first child, Aiden, just over a year ago. It's been an interesting experience of finally practising what I preach and I have included some of my own experiences with Aiden in this article.

Infant feeding through the first year is a fast-paced process — just like your little one's growth — and many families may face some common issues. Dr. Sean Murray, a Sudbury-based pediatrician, says "failure to thrive and feeding aversion are the most common nutrition-related issues" he sees in his office. Dr. Murray says a lack of education on this topic is the biggest challenge for parents.

When to feed solids: the first four to six months

The current guidelines by Health Canada and the Canadian Paediatric Society recommend getting baby started with foods at six months of age. 1.2 However, your baby's doctor or pediatrician may actually suggest a slightly earlier time to introduce food: between four and six months of age, because there is evidence to show that starting solids a bit earlier can actually provide protection against certain allergies and celiac disease. 3,4,5,6 The amount of solids most children are consuming at this time are tiny and don't take away from the benefits of breast milk and/or formula. 3 But given that every baby is unique, how do you know when your child is ready for solid food?

Look for these signs:

- ability to hold up their head (good head and neck control)
- ability to sit with minimal support
- demonstrated interest in food: opening their mouth wide when food is offered or turning their face away if not hungry
- not pushing foods or the spoon back out with the tongue.

Once you have decided your baby is ready, get a high chair, a bib, a baby spoon and the first puréed food. Baby-led weaning, which involves infants feeding themselves handheld foods (instead of being spoon-fed by a parent) and being offered breast milk or formula on demand until they self-wean, may also be an option. Be sure, however, to consult with your child's doctor first.⁷



The common recommended first food is iron-fortified baby cereal, since breast milk has no iron, and your baby will run out of their supplies by six months of age.¹ Iron is essential for growth, brain development and much more. It also plays a role in dental health, as it may lower the risk of cavities, while iron deficiency anemia has been associated with cavities in children.^{8,9} While homemade foods are encouraged, incorporating iron-fortified cereal is important for this reason.

Parents have a choice of using prepared puréed baby foods, making their own or both. Dr. Edina Heder, a Torontobased pediatric dentist, says she finds people start using processed foods early. "At my practice, we stress the importance of homecooking and preparing the baby foods yourself, so you know the ingredients." She says the concern is that many processed foods have a lot of hidden sugars or simple carbs that turn into sugar quickly, serving as fuel for bacteria in baby's mouth. I echo Dr. Heder's words in my practice and encourage parents to use homemade purées or a combination. If you decide to use homemade baby food, make sure to offer them before the commercial versions, so your child doesn't get used to that perfect texture right away.

Other first foods to introduce to baby

Aside from iron-fortified cereals, fruits and vegetables are the other typical first foods. But, don't be afraid to introduce protein-rich foods. One of the most common reasons for a low weight in the infants I see is they've been given mostly grains, fruits and vegetables, which aren't the best for infant growth. Remember: proteins are made up of amino acids, and these amino acids make up everything in our bodies: genetic material, hormones, muscles and teeth. So protein equals growth. Don't shy



away from good sources of protein such as puréed dark chicken meat, eggs, fish, lentils and other beans, along with fats such as avocado, almond butter and olive oil. Protein- and fat-rich foods are the ones to aid in weight gain, not carbohydrates such as crackers, cereal and toast.

Also, protein-rich foods such as turkey, beef, peanut butter and chickpeas contain the trace mineral zinc, which is one of the most important and versatile micronutrients. High amounts of zinc are present

for children's growth and development.¹⁰
Magnesium also plays a role in dental health, as it helps absorb calcium, build strong enamel and prevent dental caries by holding calcium in the tooth enamel.¹¹ Good sources of magnesium include pinto beans, tuna, navy beans, pumpkin seeds, cashews and cooked dark leafy greens such as spinach.

in bones and teeth, and so it is also essential

Another key nutrient for dental health is calcium: it makes up most of our teeth, jaw and bones. I am not typically as concerned with calcium early in a baby's life because breast

milk is a good source of it, and fullfat yogurt and cheese can also be added to your baby's diet when they're six to seven months old. Caution: cow or goat's milk is to be avoided until nine months of age, and other milks (soy, almond, etc.) are not appropriate for babies. Too much dairy can lower iron absorption,

so it is all about balance.

Don't forget about calcium's partner, vitamin D, which mineralizes and strengthens the teeth and is needed for calcium absorption. It is present in very few foods, and breast milk is also not a source. If you are breastfeeding partially or exclusively, ensure that your baby gets vitamin D drops daily.



Last, but not least, is the mineral fluoride. The Canadian Dental Association recommends that children from birth to three years of age should have their teeth and gums brushed by an adult. The use of fluoridated toothpaste in this age group is determined by the level of risk. Parents should consult a health professional to determine whether a child up to three years of age is at risk of developing tooth decay. If such a risk exists, the child's teeth should be brushed by an adult using a portion the size of a grain of rice of fluoridated toothpaste. If the child is not considered to be at risk, the teeth should be brushed by an adult using a toothbrush moistened only with water.

Water is also fluoridated in some Ontario communities and can be offered to infants in small amounts starting at six months of age (so it does not displace milk or formula). However, if the water in your community is not fluoridated, the risk of tooth decay may be higher, so the use fluoridated toothpaste early on may be essential.

By the time your baby is seven months old, you should be offering solids more frequently, about two to three times per day, and each meal should contain two or three choices. Give your baby as much or as little food as they want. Remember: we have no portion sizes set for children under two years of age. Unless there is a medical issue, your

child has a well-built-in hunger and fullness gauge, so trust them to decide how much they need. There is a wonderful concept called "division of responsibilities,"12 where a child decides what and how much to eat, while parents decide on the when, where and how, providing a balanced meal at appropriate times in a positive environment free of distractions.

Words of caution

Remember: you no longer need to avoid allergenic foods like peanut butter and eggs in the first year of your baby's life even if you (as the parent) or your baby's siblings have an allergy. In fact, delaying introduction may increase the risk of allergy. You do have to avoid



Sample first meals

Here are some examples of what I have done for some of my son's first meals:

I started with oatmeal and blueberries blended together, and each day I would add a new food to the mix such as hemp hearts, olive oil and pumpkin seed butter or peanut butter. Then I tried puréed zucchini, adding dark chicken meat or salmon or boiled eggs with a bit of olive oil to make up the second meal. You will need to add breast milk or formula (or water if your baby is older than six months) to get the right texture. Freeze these as little cubes and have a couple of options on hand. Alternatively, you can use the store-bought purées with no added salt, sugar or juices. However, one challenge I had was finding protein-rich purées in the store, so you can always combine them with your own protein source such as black beans or turkey.

honey until 12 months of age and dairy milk until your baby is nine to 12 months old. Lastly, Dr. Heder and I strongly agree on a common myth. As she points out: "One of the biggest nutrition myths we encounter is that consumption of juice is healthy. Parents believe they are giving their children something nutritious. A lot of them even make juice themselves, and when I tell them it is pretty much sugar water, even if freshly squeezed, it is hard for them to believe," she says. "In May 2017, the American Academy of Pediatrics confirmed that 100 per cent fruit juice and juice drinks have no essential role in children's diets. Children under one year should get no juice at all, and beyond that, not more than once a day, preferably with a meal," says Dr. Heder. In addition to a significant negative impact on oral health, juice

also takes up a lot of room in the tiny belly, decreasing the appetite and taking away space from nutritious foods. The other big myth is that if it's organic, it's healthy, she says. "A lot of organic food is processed food, and just like any other, it contains



high amounts of sugar and sodium. So we tell parents to read the label and list of ingredients. This is probably the most important part of our dietary instruction we give."

Once your baby is eight or nine months old, some major changes will occur: food will start taking priority over breast milk and formula, finger foods will begin replacing purées and your child may want to start self-feeding, all while more teeth are likely to be showing.

Find out what's next for baby's nutritional and oral health care needs in a future issue of *YourOralHealth.ca.*



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Getting the Pearly Whites You Want

By Heather White

Thinking of whitening your teeth? Here's what you need to know, from at-home kits to chairside treatments



As I walked out of the dressing room of a retro shop wearing '70s bell-bottoms for a theme party, I heard someone say, "Who can turn the world on with her smile?" I'm sure I blushed before realizing that was a line from a theme song for a '70s hit TV show.

I was somehow disappointed. When wearing a favourite white shirt recently, I realized my teeth seemed, well, yellowish in comparison. What about my smile? I was feeling a little smile shy.

Of course, there are many products and methods available to whiten your teeth and brighten your smile. "[Bleaching] is a nice little cosmetic upgrade that can be done either at home or in the chair at the dentist's office," says Dr. Shannon Hobbs, dentist and owner of Yorkville Dental in Toronto. She clarifies that it doesn't make the tooth weaker or damage its integrity. There may, however, be sensitivity, "depending on whether the enamel is completely intact or how the tooth is presented physiologically, but that sensitivity is temporary," adds Dr. Hobbs.

Over-the-counter products

We've all seen the toothpaste aisles in drugstores with an overwhelming array of teeth-whitening products:

strips, toothpaste, pens, tray kits, and there's even more variety available online. Costs typically range from \$5 to \$60. Do these products work? "To a certain extent, yes," says Dr. David Stevenson, who has a practice in Carleton Place and is President of the Ontario Dental Association. "The concentrations of carbamide peroxide and hydrogen peroxide are lower than what's found in products you would get from your dentist, so the results are not as quick," he says. "But really, you're looking for a way to deliver carbamide peroxide or hydrogen peroxide to your teeth in a fairly consistent or uniform way."

Perhaps the least effective over-the-counter (OTC) product is whitening toothpaste. "It may have an ingredient to whiten teeth, but not in a concentration to be effective unless it's one element of a system." For example, he says, "after you brush with regular toothpaste, you brush with the whitening toothpaste, then use the whitening strips or gels in a tray."

As with all products, check best-before dates: whitening solutions will be less effective beyond their shelf date. Be wary of claims that bonding or areas where teeth have been restored can be lightened. "There are so many different bonding agents and bonded surfaces out there,"

says Dr. Stevenson, adding that he doesn't understand how OTC products can claim to do that generally in a

reliable, predictable manner.



Also be cautious of products that have abrasives or corrosives such as baking soda or charcoal; you do not want to wear down the tooth enamel.

Still, new products are coming on the market

all the time. "Watch for a new whitening charcoal toothpaste that has the benefits of the active charcoal without the abrasive nature of the powder," says Dr. Hobbs. "Talk to your dentist about what's available."

A dentist's methods

You can have treatments in the chair or take-home kits provided by your dentist, with costs starting at \$300 to \$400. The latter typically involves having moulds made of your teeth, called trays, to which you then apply a gel whitener and wear for a couple of hours during the day or overnight.

In-chair methods may include employing a light system that provides a faster result.

Dr. Hobbs says she prefers chairside systems. "I see that patients are not consistent with OTC products or dentist-provided take-home kits," she says. "They can be time-consuming and slow, and most people prefer efficiency."

She also notes that when you have your teeth whitening managed by a dentist as opposed to using a DIY OTC kit, the changes in shades are tracked by the dentist.

"Combine whitening with a hygiene appointment, so in 45 minutes you can lighten and brighten, and not have to worry about touching up for a year or maybe every two years," says Dr. Hobbs.

Sensitivity

As a general rule, the lower the concentration of hydrogen peroxide, the less likely the solution will bother sensitive teeth (and the whitening will take longer).

However, there are exceptions. The solution used in the overnight kit method would have less hydrogen peroxide than the kit you use for a fraction of the time during the day, but here you have to factor in saliva production, says Dr. Stevenson. "If your mouth tends to dry out at night, even the lower concentration can cause sensitivity."

As well, Dr. Hobbs notes that some products with higher concentrations of hydrogen peroxide include potassium nitrate or other agents to offset sensitivity.

Post-whitening tips

"When you affect the tooth with a chemical, you will get a little more porosity in the short-term, so I tell people to avoid anything that would stain a white T-shirt or tablecloth, say, two to three days after doing their whitening," says Dr. Hobbs.

> Or, she says, have your curry, but brush immediately after, so stains are less likely to set in.

Have realistic expectations

"I have a patient who is a wine-taster," says Dr. Hobbs. "Doing chairside whitening isn't necessarily going to last her, so I told her, 'You can do that, then use a take-home kit once a month," she says.

Dr. Hobbs also suggests that individuals with busy or unpredictable schedules, such as parents of young children and business travellers, may not be able to reliably maintain a home-whitening routine. For those people, whitening in the dental office may be the better option.

Says Dr. Stevenson: "It's a good idea that dentists have photographs, slides and books in the waiting

room to let patients know what's possible, but it's important for all patients to know that not everything may be possible for them."

> Have the conversation with your dentist. It's important to establish realistic expectations. Von

What's your motivation?

"If someone is planning to quit smoking, and the topic of whitening their teeth comes up, I say, 'You'll be so happy with the whitening results that you won't want to pick up another cigarette.' That's been helpful for some of my patients. People maintain a smile that they are confident with." - Dr. Shannon Hobbs

Vaping and Teens: What is the Problem?

By Heather White



Teenagers may start using vaping products, or e-cigarettes, on a dare. "It's a shiny new thing for them, and it's increasing," says Dr. David Hammond, a professor at the University of Waterloo, in Waterloo, who researches tobacco use.

In the past few months, Health Canada has launched a multi-phase campaign to tackle what it sees as an increasing problem among youth. "We are aware of both anecdotal information and unpublished research showing increases in the rate at which Canadian youth are using vaping products," announced Health Canada spokesperson Maryse Durette recently. "With the regular introduction of new products into Canada the vaping market is evolving rapidly."

Why are vaping products harmful?

Vaping products are hand-held devices that heat a liquid solution into an inhalable vapour, which looks like smoke. Also known as "vapes," they are easy to access, smooth to inhale, have no lingering smell and come in appealing designs, says Dr. Sanjukta Mohanta, a dentist who works at a community health centre in Brampton. However, she says, there's been little research on their

long-term health effects, particularly in young people. Heating up the liquid in vaping products may release formaldehyde and contaminants. "There are harmful toxins involved that can cause irritation to the mouth and throat, cell damage and inflammation," she says.

While the federal *Tobacco and Vaping Products Act* allows the sale of nicotine vaping products, it prohibits retailers — in stores or online — from selling any kind of vaping products to youth under the age of 18 years. Dr. Deborah Saunders, Medical Director of the



Dental Oncology Program at Northeast Cancer Centre in Sudbury and a dental faculty member for Toronto's Centre for Addiction and Mental Health TEACH project, notes that teenagers can't be sure what they're getting when they buy vaping products on the street and from their friends.

"Teenagers think it's safe. It's cool, the flavours they're able to use. Just the advertising, the way it looks, is fun and experimental," she says.

But are they getting nicotine in their cartridges?

"We know that anything can be vaped, including cannabis. In some cases,

the toxic [nicotine] doses they are inhaling may surpass what an average cigarette has, so there's a concern that they're getting addicted to nicotine much quicker than if they were smoking a conventional cigarette," says Dr. Saundérs.

> "With respect to oral side-effects, nicotine is a vasoconstrictor, which can cause dryness in the mouth. It is well-established that dry mouth, despite its cause, can lead to an increased rate of decay. Teenagers already have an increased risk of decay just due to their diet of soft drink and sports drink consumption," says Dr. Saunders. "With teenagers, we see an increased rate of decay similar to what we'd see in the pediatric population, and it's because

the foods they like (the pop and the chips), in conjunction

with the dry mouth, that puts them at a higher risk of getting a more aggressive form of decay."

Even vaping products that don't contain nicotine can cause harm, says Dr. Mohanta. "The mouth is the first point of contact receiving the highest concentration

of chemicals and at the highest temperature," she says. "[Vaping products] can cause cell damage and inflammation; they may cause mouth and throat irritation, staining and tooth discolouration; and they increase the risk of oral cancer and gum disease."

Gateway to smoking?

What was meant to be a smoking cessation product for adults — and to date is not clinically proven to be an effective smoking cessation product — has potentially become a

gateway to smoking for youth.

Dr. Hammond says there's considerable debate surrounding the role that vaping products may play in the pathway toward smoking. "The attributes that make them an appealing mode of guitting for [adult] smokers also increase their appeal among youth.

But, he adds, the kids who use vaping products may tend to be risk-seeking or adventurous, and they may have tried cigarettes, anyway; you can't make the case that using vaping products necessarily causes smoking.

To be clear, he says, smoking is not cool among teens, whereas using vaping products is - not least of all with the fancy flavours, varying tech-like gadgets and social media influencer campaigns. poi



In February, Canada's health minister announced new measures to address the emerging evidence suggesting an increased use of vaping products by youth. "These measures include a proposal for additional advertising restrictions on vaping [to youth] and a public education campaign targeted at young people," reads the statement. The education program, which continues throughout 2019, aims to equip parents and other trusted adults with tools and resources to support discussions about the health risks of vaping products, inviting youth to consider the consequences of using vaping products. "Health Canada continues to support the need to discourage youth and non-smokers from vaping, while urging smokers to quit."

Saving a Tooth

By Donna Paris

Your dentist says you need a root canal. You've heard a lot about this procedure lately and you're a little worried. Is it safe — or not? Here's how the experts debunked the myths



Your tooth is causing extreme pain when you apply any pressure or chew on it. You make an emergency call to your dentist, who suggests a root canal to save the tooth. But you've heard that root canals are unnecessary and very painful. What to

do? We asked the experts, who had a lot to say about the misinformation around root canals, especially on the Internet.

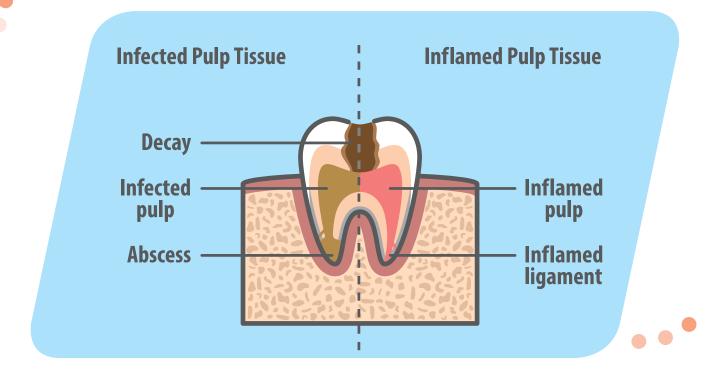
Myth 1: Root canals are really unnecessary

"By far, the most common disease affecting the teeth is dental decay, which can be effectively treated at the early stages by removing the decayed portion of a tooth and restoring the tooth to full size with a filling," says Dr. Allan Katchky, who maintains a practice in Scarborough. But if the decay is too deep and the tooth can't be restored with a filling, then the tooth may require root canal treatment. "It becomes necessary to have root canal treatment

when the pulp of your tooth (inner nerves and blood vessels) becomes inflamed or dies off and becomes infected," says Dr. Natalie Dugas, an endodontist with a practice in Sudbury. "This can occur as a result of deep decay, deep restorations (fillings), faulty crowns (caps), a fracture in the tooth or, at times,

trauma."

This infection can pass through the root canals and through the tips of the roots into surrounding tissues, bone and supporting structures around the tooth, which can result in a painful jaw abscess, explains Dr. Dugas. And even with antibiotics, the infection will not go away. Why? "Antibiotics are carried through the bloodstream to sites of infection, but since a 'dead' tooth no longer has blood entering into it, antibiotics cannot cure the infection," she says. "Therefore, the best option is to treat the pulp inflammation or infection by removing the damaged pulp," says Dr. Dugas.



"Root canals are very safe with a long history of success as a way of saving a tooth," says ODA President Dr. David Stevenson, who maintains a practice in Carleton Place. "If a tooth can be saved, it is best to do so; a natural tooth is still the best tooth."

In fact, before the development of the treatment known as root canal therapy, the only treatment available was to remove the tooth. And that is something you want to avoid, says Dr. Lesli Hapak, ODA Vice-President, who maintains a periodontal practice in Windsor. "Retaining a natural tooth, if possible, should always be the first choice of treatment." And, she says, "sometimes a root canal is the only viable way to save a tooth."

Myth 2: It is best to simply get the tooth

Current techniques in root canal therapy allow your dentist to remove only the affected pulp of the tooth and do so comfortably and painlessly. "Today's local anesthetics" ('freezing') allow for painless root canal treatments done [while you're] awake in the dental office," says Dr. Katchky. "Sedatives are also available for patients who are apprehensive about treatment."

"With advancements in medicine, dentistry and technology, root canal treatments are much more predictable and successful than in the past," says Dr. Dugas. "When properly cared for, root canal-treated teeth can last a lifetime."

If a tooth is lost and not replaced, a person may have problems with eating, speaking and esthetics due to other teeth drifting, according to Dr. Hapak. "Replacing a missing tooth, or teeth, with something artificial, such as a removable denture, fixed bridge or dental implant, can be costly and may not be an option for some people."

Myth 3: Root canals cause cancer — and other diseases

To begin with, it's important to first understand that untreated infection anywhere in the body can cause wideranging health problems. "Anything from an infected appendix to an infected ingrown toenail can become serious if not treated promptly," says Dr. Katchky. "The same goes for infected teeth - root canal therapy is often the first choice of treatment for dental infections. It is a reliable way to eliminate infection from a tooth and alleviate pain."

There have been many evidence-based, scientific peerreviewed studies that have looked at the connection between root canal treatment and diseases, such

as cancer, Alzheimer's and multiple sclerosis. To date, "there are no valid scientific studies showing the dangers of root canal treatment," says Dr. Dugas.

> Dr. Hapak's suggestion is to get your information from reliable sources. Dental associations across North America, including the Ontario Dental Association (https://oda.ca), have easily accessible patient information about root canal safety, all of which is supported by decades of credible scientific studies.

Myth 4: But even "medical experts" have concerns!

"In our modern digital world, unfortunately, misinformation and myths can live on forever, just as the truth can," says Dr. Hapak. "The danger is that the public may be led to believe these false claims about root canals, which were based on research conducted in the 1920s (almost 100 years ago)." This primitive research has since been disproved by decades of peer-reviewed, scientific evidence-based research, she adds.

"Retaining a natural tooth, if possible, should always be the first choice of treatment."

Dr. Katchky urges people to look at the credentials of so-called "medical experts." Some articles and Internet blogs also speak to individuals who have not had success with conventional medical therapies for chronic illnesses, and they are searching for alternative therapies. "These individuals are vulnerable and often desperate for a cure, and they are very susceptible to false claims," he adds.

Myth 5: There are many studies that show the dangers of root canals

"There is plenty of misinformation and false claims on the Internet," states Dr. Katchky. He points out that recent claims circulating online about a cause-and-effect relationship between root canal-treated teeth and breast cancer are in fact not new at all, and they have periodically surfaced over many years now. Dr. Katchky cites a published paper from 2013 in the Journal of the American Medical Association (IAMA Otolaryngology—Head & Neck Surgery), in which a group of ear, nose and throat, and head and neck surgeons undertook a comprehensive study to test these claims. The research team concluded that a patient's risk of cancer doesn't change after having a root canal treatment.





Root canals: what's involved

Root canals can be performed by dentists or endodontists. (Endodontics is a specialty of dentistry concerned with the treatment of the dental pulp, root or nerve of the tooth.) "Root canal treatment is all that we do," says Dr. Natalie Dugas. "With such practice comes the ability to deliver these treatments very quickly, efficiently and painlessly." Children may be referred to a pediatric dentist.

What is the procedure?

The dentist administers a local anesthetic ("freezing"). An opening is made in the tooth to reach the damaged pulp. Using very fine dental instruments, the dentist removes the pulp by cleaning and enlarging the root canal system. After the canal has been cleaned, the canal is filled and sealed. The opening of the tooth is sealed with a permanent filing or a crown to restore the tooth. Root canal treatment may be done in one or two appointments.

"Most patients resume normal activities immediately after their procedure, and root canal therapy has a very high success rate (well over 90 per cent)," says Dr. Allan Katchky. "Millions of Canadians have had successful root canal treatment, and they can attest to the prompt relief of toothache pain and the benefits of keeping a tooth that would otherwise need to be removed."

"These misleading studies are an intricate way to advertise for holistic dentistry and are designed to create fear about credible dental treatments," says Dr. Hapak. "Fear and anxiety can lead to delays in seeking treatment and ultimately result in losing a tooth that would otherwise be treatable."

Myth 6: A tooth with a root canal can look fine on an X-ray, but may actually contain a cyst or

This one is true. "An infected tooth eventually spreads infection down into the jawbone. Once the abscess seeps into this bone, the bone reacts by eroding away from the tip of the root, leaving a 'shadow' visible on the X-ray," says Dr. Dugas. This shadow reflects the bone that is lost due to the infection, and the more chronic and aggressive the infection, the more bone will be lost to the infection, and the more visible it will be on a radiograph, she explains.





"Very early abscesses are sometimes not visible on X-rays, as these infections have not yet caused enough bone loss to be detected," says Dr. Dugas. However, with modern advancements in dentistry, and with digital X-rays in particular, early infections are becoming easier to spot. "Fortunately, modern technological advances are helping us with these downfalls," she adds. "More and more specialty dental offices — and some modern general dental offices are now installing cone beam computed tomography (CBCT — commonly known as CAT scan) machines in their offices." These images, being three-dimensional images of three-dimensional teeth, are very precise and sensitive at detecting early bone loss from tooth infections that may not be visible on two-dimensional digital X-rays.

Children and root canals

Unfortunately, kids also get cavities. We asked Dr. Edina Heder, a pediatric dental specialist with Kids Dental in Markham, about root canals.

Why do children need root canals?

"When cavities are large, and a simple filling will not suffice, we do a more complex procedure to save the tooth. Extraction is always an option; however, primary (baby) teeth, especially posterior ones [molars and premolars], have their purpose, and if not present, may cause future spacing problems.

When it comes to trying to save the primary tooth, the procedures are slightly different from the ones performed on a permanent tooth. The most common procedure is called a pulpotomy, performed on a tooth that is still vital. The affected part of the nerve is removed and the rest is preserved. In our office, we use a new material to protect the nerve in hopes that the rest of the tooth will heal itself."

Coconut Oil: Oral Health Friend or Foe?



Welcome to our new Q&A column! Each issue, we'll feature a question sent to us by you, our readers. Questions will be answered by an ODA-member dentist.



Q: My yoga instructor recently told our class that she practises oil-pulling. Can you please explain how this may benefit my health, including my oral health?

Dr. Allan Katchky, YourOralHealth.ca's new Consulting Editor, answers this issue's question.

A: This is a great question! The use of coconut oil for nutritional and health benefits is not a new phenomenon. In fact, its roots are in Ayurvedic medicine, the centuries-old traditional medicine practised in India. A recent wave of interest in coconut oil has hit North America, spurred on by a combination of Internet discussion and promotion by celebrities.

The cited benefits of coconut oil include decreased risk for heart disease, weight loss and appetite suppression, reduction in epileptic seizures, lowering of blood cholesterol, improved brain functioning in people with Alzheimer's and improved skin health.

An equally impressive list of cited dental benefits of coconut oil exist for "oil-pulling," a 20-minute procedure involving the gentle oral swishing of liquefied coconut oil. The alleged benefits include: whiter teeth, fewer

cavities, improved gum health, fresher breath and lower oral bacterial, viral and fungal counts.

While oil-pulling is attracting much attention, an alarming lack of long-term scientific studies of its validity also exist. Recent reports from respected research institutions, including Harvard, Columbia and Cornell, all question the validity of the claims of health benefits derived from

coconut oil. Not one of the reports, however, denounced or even cautioned against the use of coconut oil. They stated more long-term research is required before a conclusion can be reached.

Most dentists trained in Canada and the United States are somewhat reluctant to give their patients advice about whether oil-pulling might be beneficial to their oral health. Admittedly, the majority of us have little or no training in Ayurvedic medicine, and the topic has not yet been incorporated into the North American dental school program. In fairness to those who promote oil-pulling as beneficial to oral health, they do not advocate coconut oil as an alternative to brushing and flossing. In fact, proponents of coconut oil recommend that oil-pulling be followed by salt water rinsing, brushing and flossing.

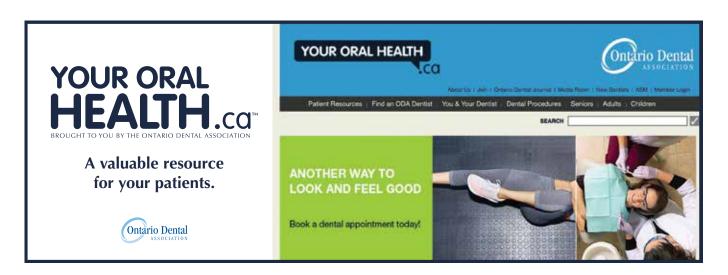
While the scientific community at large is still reviewing whether coconut oil falls into the category of "health" or "hype," I must add my personal opinion on whether oil-pulling will become an accepted part of daily oral hygiene practice. Statistics show that only 20 per cent of the general adult population are regular flossers, even though the scientific evidence of its benefits is compelling and generally accepted. Patients' reasons for not flossing are many and varied, but one of them is the extra time it takes beyond the time spent on brushing. Keeping in mind

that flossing takes one to two minutes per day, and oil-pulling takes 20 minutes per day, I suspect that most people who try oil-pulling will give it up after a short period of time, given the time commitment required. In all likelihood, the current trend of oil-pulling will soon pass.

Proponents of coconut oil recommend that oil-pulling be followed by... flossing.



If you have an oral health-related question, please email us at yoh@oda.ca, and we may feature it in an upcoming issue of *YourOralHealth.ca*.



Watch Your Mouth!

By Donna Paris

We talked to Dr. Charles Goldberg and Dr. Marvin Lean, team dentists for the Toronto Maple Leafs, about mouthguards — vital equipment for professional hockey players and weekend athletes alike

We all know the benefits of wearing mouthguards they protect the teeth from fractures, but they may also help prevent concussions and protect the upper jaw from fractures, according to Dr. Charles Goldberg and Dr. Marvin Lean, team dentists for the Toronto Maple Leafs. "There are some things you just don't think of," says Dr. Goldberg. "You think if someone gets hit by a puck or a fist or a stick, it's just going to break their teeth, but if the blow is severe enough, other things can happen." Teeth can be pushed up or pushed back into the palate, he adds.

So, mouthguards are a good thing. But is it necessary to get one custom-made? "There's no comparison between the two," says Dr. Goldberg. Custom mouthquards fit perfectly, covering the teeth and providing the most protection. A good fit means they will not slip off the teeth, fall back and block the airway, and they also allow the player to be better able to communicate with their teammates,

he says. Despite young children playing hockey and wearing full cages, mouthguards are still recommended. "If they get hit, the mouthguard protects them from the initial blow and helps to absorb the shock," says

Dr. Lean. "Custom-made mouthquards provide the best comfort and protection. Mouthquards don't last forever and need to be checked for fit and wear regularly and replaced as required," he says.

To make custom mouthquards, an impression is taken, then a lab fabricates the mouthquard from the impression and model. This method provides the best fit. "It captures all the imprints in the mouth and picks up all the undercuts, which help to hold in the mouthguard," says Dr. Lean. "Using the best mouthguard material and a proficient lab with experience in making mouthquard fabrication is very important, as is custom trimming and adjustments, so each works optimally for the player," explains Dr. Goldberg.

One point Dr. Goldberg makes is that it's not just kids playing hockey who need mouthquards. He emphasizes

anyone playing a contact sport or sport with a ball, racquet or stick should wear mouth protection, and of course, in hockey, the best protection for the mouth would be to wear a cage attached to the helmet.

And don't forget the fun With customized mouthquards, there are many options. "For [professional] players, we've made all kinds

for special events," says Dr. Lean. "One player wanted a pink mouthquard because the game was being dedicated to breast cancer. We've also had players who have requested numbers, names and other decals on them, too."

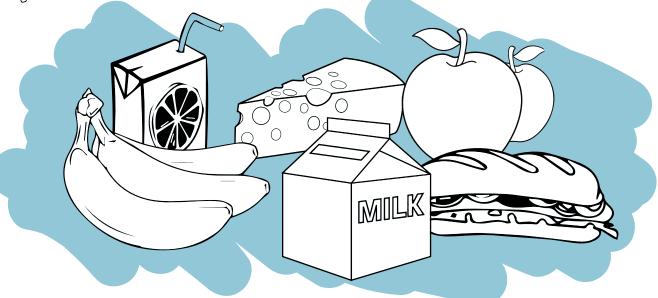
> A question that both dentists get asked all the time is why NHL players have their mouthquards hanging out of their mouths and why they chew on their mouthquards sometimes while they're sitting on the bench. "It's just a habit," says Dr. Lean. "So there are some players who need five or six mouthquards each year because they chew through them, and others will need one for the entire season.

The bottom line? "Mouthquards are important," says Dr. Goldberg. mi



Spot the Differences









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L sesame seeds on the bread banana 4. milk sign S.holes in the cheese 6. apple in the back Answers: 1. straws 2. orange slices on juice box 3. one extra

