

Word^d OF MOUTH[®]

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**Online Orthodontics:
TOO GOOD TO BE TRUE?**



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The Massachusetts Dental Society (MDS) is pleased to make this publication available to our member dentists as a way of communicating important oral health information to their patients.

Information in *WORD OF MOUTH* articles comes from dental health care professionals of the MDS and other leading professional dental organizations, including the American Dental Association. If you have any questions about specific content that may affect your oral health, please contact your dentist. For more information regarding oral health, please visit the Public Resources section of the MDS website at massdental.org.

Your comments and suggestions regarding *WORD OF MOUTH* are always welcome. All correspondence and requests for additional copies may be sent to:

Melissa Carman
Director, Publications
Massachusetts Dental Society
Two Willow Street
Southborough, MA 01745-1027
Email: mcarman@massdental.org

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Robert E. Boose, EdD – *Executive Director*

Melissa Carman – *Director, Publications*

Suzanne Gulledge – *Graphic Designer*

Kathleen McKeon – *Manager, Strategic Communications*

Todd Belfecker, DMD – *Consultant*



Oral and Throat Cancer: What You Should Know

Cancer can develop in or around the mouth or in the throat. Cancer that develops on the lips, in the front of the mouth or tongue, under the tongue, or on the insides of the cheeks is called oral cancer. Cancer in the back of the mouth, including the throat, the back part of the tongue, the soft part of the roof of the mouth, and the tonsils is called oropharyngeal cancer.

Chances of survival from head and neck cancers are very good if they are treated before they spread to other parts of the body. Two keys to help you avoid or spot the disease early are knowing what puts you at risk and recognizing the signs and symptoms of these cancers.

WHAT PUTS YOU AT RISK?

Some people are at higher risk of oral and oropharyngeal cancers than others. For example, men develop these cancers more often than women. They also are more common after age 65. Some behaviors can increase the risk, such as:

- Tobacco use
- Heavy alcohol use (more than four drinks per day)

People who do both—use tobacco and drink heavily—significantly increase the risk of developing these cancers.

There are other risks specific to certain types of cancer. Spending a lot of time in the sun increases the risk of developing lip cancer, for example. And the human papilloma virus (HPV) has been associated with oropharyngeal cancer. Children as young as pre-teens can get HPV, but the cancer may not develop until years later, as late as the mid-50s.

Because HPV-associated cancers are preventable, the Centers for Disease Control and Prevention recommends that children as young as 9 years old get vaccinated against HPV. Talk to your dentist or physician about whether the vaccine is right for you or your child.

WHAT TO WATCH FOR

You know your body better than anyone. If you notice any of these signs, talk to your dentist or physician:

- A sore on the lips or in the mouth that does not heal
- Red or white patches in the mouth that don't go away

- Pain, tenderness, or numbness on the lips or in the mouth
- A lump, thickening, or swelling in or around the mouth or throat
- A rough, crusty, or eroded area on the lips
- Difficulty chewing, swallowing, speaking, or moving the jaw or tongue
- A change in the way your teeth fit together when you close your mouth or the way your dentures fit
- A cough or sore throat that won't go away
- Earaches
- Hoarseness or other changes in your voice
- Trouble opening your mouth fully

WHAT CAN YOU DO TO PROTECT YOURSELF?

There are some things you can do that could help limit the risk of developing oral or oropharyngeal cancer:

- Avoid tobacco
- Avoid or limit the use of alcohol
- Don't use tobacco and alcohol together
- Keep an eye on your lips and mouth for anything unusual
- Avoid spending large amounts of time in the sun
- Talk to your doctor or dentist about the HPV vaccine

Also, see your dentist regularly. He or she can complete an oral exam to check for signs or symptoms of cancer.

CONCLUSION

Oral and oropharyngeal cancer is easiest to beat if it is treated early. Watch for any signs that could signal a problem. Avoid behaviors that can increase the risk of these cancers. If you are between 9 and 26 years of age (or if recommended for you when older), ask your dentist or physician about getting vaccinated against HPV. And see your dentist regularly, so he or she can help look for anything unusual.

This article is reprinted with permission from the Journal of the American Dental Association.

References available on request by contacting Melissa Carman at mcarman@massdental.org.

Online Orthodontics: TOO GOOD TO BE TRUE?



You're scrolling through your Facebook newsfeed and you see a smiling face. It's not a friend, but an attractive model and an ad promising straighter teeth "3x faster than braces" and invisible aligners delivered directly to you. Sounds appealing, right?

Targeting younger adults, a new breed of "do-it-yourself," or DIY, online orthodontic companies offer a seemingly simple solution to those seeking a better smile: Answer a few multiple-choice questions, snap a picture on your phone, bite down on an impression tray, and "snap," you'll have some plastic teeth aligners delivered to your door.

Thousands of consumers have responded to the allure of "quick," "convenient," "cost-effective," and "hassle-free" orthodontics by putting their smile—and their oral health—in the hands of these online companies. But is it safe?

Here's what you should know before deciding on remote treatment through a direct-to-consumer orthodontic company.

BENEFITS OF AN IN-OFFICE VISIT

Online, mail-order orthodontic services reportedly include remote treatment planning and case review for each customer by a licensed dentist. However, the appropriate standard of care for determining the suitability of a person for orthodontic treatment requires a clinical examination by a licensed dentist and includes the review of current X-rays.

When you see a licensed dentist, he or she will assess your overall oral health. Through a clinical examination of your teeth, bite, jaw alignment, and the relationship of your teeth to your skeletal structures, your dentist or orthodontist will identify any problems, especially those not seen with the naked eye. An in-person exam and X-rays are often critical for diagnosing if a specific treatment is right for you and helping to ensure that any treatment does not lead to more problems than it cures.

Your dentist can discuss the risks and benefits of any dental treatment, as well as options that address budgetary concerns.

THE RISKS

The Massachusetts Dental Society and the American Dental Association discourage the use of direct-to-consumer ortho-

dontic aligners because self-administered, unsupervised dental treatments have the potential to cause damage and irreversible complications for patients.

It's easy to forget that teeth are alive, with complex features such as nerves, blood circulation, and roots that extend into the jawbone. Stabilized by ligaments in close proximity, teeth are not meant to move easily. Without an in-person evaluation or review of current X-rays that could identify undiagnosed dental disease or underlying issues that would make a patient an unsuitable candidate for clear aligner orthodontic therapy, a patient is at considerably higher risk of injury as a result of orthodontic treatment. A patient may be exposed to irreversible harm, including potential bone loss and receding gums, loose teeth, a misaligned bite, and other issues.

ONLINE ORTHODONTICS GONE WRONG

Without direct oversight and in-person monitoring by a licensed dental practitioner, increased access to DIY orthodontics and the promise of an easy fix for complex oral health issues have the potential to place consumers on a path fraught with painful, costly, and lasting consequences.

Unfortunately, many licensed dentists across Massachusetts have encountered patients who have suffered the consequences of online orthodontics gone wrong.

One general dentist reported seeing a patient who came to her office after many months of using mail-order orthodontic aligners with "remote" monitoring by a provider. The patient complained that her teeth were moving. The mobility of the patient's teeth was so severe that she was referred to a periodontist (gum specialist) for splinting. The damage was irreversible and will require lifelong maintenance.

Another dentist saw a patient who had "finished" her DIY orthodontic treatment, but said that her front tooth started chipping after treatment. Upon examination, the dentist noted that the tooth was loose, and the patient required a significant bite adjustment and subsequent bonding.

An orthodontist saw a male patient in his late 30s who had tried mail-order aligners but, after completing the course of aligners, still did not have straight teeth. So the patient came to the orthodontist to have his teeth straightened, and upon examination, the orthodontist noted that

the patient could have benefited from tooth extractions to alleviate tooth crowding, attachments bonded to his teeth, and a procedure to remove enamel from between his teeth—all solutions that are not offered to a consumer purchasing DIY orthodontic aligners to use at home.

An oral surgeon reported seeing a patient who came in because her teeth were not moving during aligner therapy. The patient had implants, which could have been detected with an X-ray or in-person exam, but the patient reported that she never had X-rays prior to the aligner treatment.

One pediatric dentist saw a teenage patient who used a remote orthodontic company to save money. He came in for a routine cleaning and exam after completing clear aligner therapy and presented with a misaligned bite, which would require repeated orthodontics to correct it—at a likely cost of \$5,000 to \$6,000. The teen’s father contacted the online orthodontics company several times, but the company concluded that the case was complete.

In addition to these patient stories, the Better Business Bureau’s online portal shows nearly 900 complaints against a single company, including patients who reported enamel damage, jaw pain, and tooth loss after using DIY aligners. There are also Facebook groups, social media handles, and YouTube videos dedicated to consumer complaints of DIY orthodontics gone wrong.

So, before taking your dental health in your own hands, talk to your dentist.

Have You Encountered Problems Using Online Orthodontics?

If you have experienced injury or adverse results from using mail-order orthodontic devices or undergoing remote dental treatment, you can report the issue to state and federal regulators. In Massachusetts, the Office of the Attorney General can help resolve consumer complaints against businesses, and the Department of Public Health Bureau of Health Professional Licensure investigates complaints regarding dental treatments on behalf of the Massachusetts Board of Registration in Dentistry.

Massachusetts Attorney General’s Office Health Care Division

- Call the Health Care Helpline: 888.830.6277
- File a complaint online: mass.gov/how-to/file-a-health-care-complaint

Massachusetts Board of Registration in Dentistry

- Call: 800.414.0168
- Email: dentistry.admin@state.ma.us

At the federal level, because plastic teeth aligners and dental impression materials are regulated by the U.S. Food and Drug Administration as “by prescription only” devices, consumers can report any problems using the FDA MedWatch Voluntary Reporting Form.

U.S. FDA MedWatch Voluntary Report

- Visit: fda.gov/safety/medwatch



QUESTIONS TO CONSIDER

Before you pursue remote treatment through an online orthodontic company, the American Association of Orthodontists suggests some questions you may want to consider:

- Are comprehensive diagnostic records like X-rays taken before your treatment?
- How do you know if your teeth and gums are healthy enough for orthodontic treatment?
- What are the possible risks (financial, health, etc.) associated with your orthodontic treatment?
- As part of your treatment fee, do you receive any in-person visits to a dentist’s or an orthodontist’s office during your treatment?
- Who can you speak with at the online orthodontic company about your orthodontic treatment?
- Who is responsible for detecting any issues that may occur during your orthodontic treatment?
- If a doctor is involved with your orthodontic treatment, do you know the name of the dentist or orthodontist who will be involved with your case? How can you contact him or her over the course of your treatment?
- If an emergency arises, does the company have a dentist or an orthodontist in your area whom you can see in-person? If not, who would cover the costs associated with seeing a dentist or an orthodontist in your area?
- Are you asked to sign any forms that seek to release the company from liability?
- If you are injured or have another dispute involving your orthodontic treatment, how is it handled (litigation, arbitration, etc.)?



An Eating Plan for **HEALTHY GUMS**

We are constantly inundated these days with social media posts and news stories touting popular diet trends. Paleo, keto, Whole 30, intermittent fasting, vegetarian, vegan, pescatarian, flexitarian, low carb, no carb . . . you name it. When deciding to embark on a healthy eating journey, it can be overwhelming to determine which plan is right for you. The obvious through line for all of these plans is that what you eat affects your health, but did you know that includes your oral health? Research shows there is a link between your oral health and your overall health: Teeth and gums hold important clues to other systemic health issues. In fact, gum (periodontal) disease has been directly linked to serious health conditions, including cardiovascular disease, stroke, diabetes, osteoporosis, and low-birth-weight and/or premature births. Now, a study from German researchers indicates that another diet trend, the anti-inflammatory diet, may help ward off gingivitis, which is the early stage of gum disease.

The study, published last spring in the *Journal of Clinical Periodontology*, investigated the influence of an anti-inflammatory diet on 30 patients with gingivitis. The researchers randomly placed half of the study subjects in a group that had to adopt an anti-inflammatory diet, which is high in vitamin- and anti-oxidant-rich fruits and vegetables, whole grains, plant-based proteins, and fatty fish; the control group did not have to change its diet. Both groups were instructed to cease flossing for the duration of the four-week study. While the results showed no difference between the groups in terms of level of plaque—the film that builds up between the teeth and gums that leads to gum disease—it did show that study participants on the anti-inflammatory diet had significantly less gum bleeding and a marked increase in vitamin D levels, as well as significant weight loss.

Recommended by physicians and nutritionists to people suffering from autoimmune diseases and other inflammatory illnesses, such as rheumatoid arthritis and lupus, an anti-inflammatory diet consists of plenty of fruits and vegetables, whole grains, plant-based proteins (like beans and nuts), healthy fats like olive oil, and fatty fish with omega-3 acids (think salmon, tuna, and sardines). It also calls for eliminating

refined, processed, and manufactured foods (e.g., fast food) from your diet. Researchers, like those at the Harvard School of Public Health, believe that by choosing the right anti-inflammatory foods, you may help reduce your risk of illness and that by eating foods that cause inflammation, such as fried food, refined carbohydrates (e.g., white bread), red meat, margarine, soda and sugary beverages, and highly processed foods, you could accelerate inflammation in your body.

Why is inflammation an issue? Inflammation is the body's instinctive reaction to fight off infection, protect against injury, and shield against irritation. Inflammation can be characterized by swelling, redness, heat, and pain around the affected area. While inflammation initially aims to heal the body, over time chronic inflammation can lead to dysfunction of the infected tissues and is linked to diseases like cancer, diabetes, arthritis, depression, Alzheimer's, and heart disease. Gum disease is considered an inflammatory disease, with periodontitis—its advanced stage—affecting 47.2% of U.S. adults over the age of 30, according to the American Dental Association.

The foods and beverages that you put into your mouth impact your oral health, because when you eat or drink anything, the bacteria that are already present in your mouth convert the sugar and starch in these items into acids, which attack the enamel on your teeth and cause tooth decay. When the bacteria in plaque builds up between your teeth and gums, it causes the gums surrounding the teeth to become inflamed. If the inflammation is not treated and becomes more severe, it can cause the gums and supporting bone structure to deteriorate, leading to gum recession, pocketing (separation of the gum from the tooth, allowing bacteria to collect under the gums and along the roots), loose teeth, and tooth loss. Signs of gum disease include bleeding or puffy gums, loose or shifting teeth, chronic bad breath, and receding gums. If you notice any of these symptoms, see your dentist.

In addition to kicking the sugar habit and adopting healthier eating habits, like an anti-inflammatory diet, you can lessen your risk of gum disease by brushing for two minutes at least twice a day with a fluoride toothpaste and flossing every day, along with visiting your dentist twice a year.



Toothpaste and Kids: A Little Dab Will Do Ya'

It goes without saying that one of the keys to a healthy smile is regularly brushing teeth with a fluoride toothpaste. A naturally occurring mineral, fluoride helps prevent cavities in both children and adults by making tooth enamel more resistant to the acid attacks that cause tooth decay. However, when it comes to the little ones, too much toothpaste may be too much of a good thing.

A study released earlier this year by the Centers for Disease Control and Prevention found that nearly 40% of children ages 3 to 6 use more than the recommended amount of toothpaste when brushing, putting them at risk for developing enamel fluorosis. Because the enamel on young children's teeth is not completely formed yet, children under the age of 6 are at risk for the development of fluorosis, a condition that affects the appearance of teeth, resulting in faint white lines or streaks. Parents should note that fluorosis is not a disease and it doesn't affect the health of teeth; it is strictly cosmetic, according to the American Dental Association (ADA). Younger children who consume too much fluoride—from any source—over long periods when teeth are developing under the gums could potentially develop fluorosis. In most cases, the effect is so subtle that only a dentist would notice it during an examination. And once teeth break through the gums (i.e., at around the age of 8), the chance of developing fluorosis ceases.

What steps can parents take to ensure their children have healthy teeth and gums without overdoing the fluoride? First, don't stop using fluoride toothpaste, because extensive research over the past 70 years has shown that the health benefits of fluoride use far outweigh the risks. But parents should supervise their children's brushing not only to make sure they are brushing correctly and for the right length of time (two minutes twice a day is recommended), but also to ensure that they use the appropriate amount of toothpaste and are not swallowing it.

According to the ADA, children under the age of 3 need only a "smear" (the size of a grain of rice) of toothpaste and kids ages 3 to 6 need only a "dab" (the size of a pea). Children under 3 are too young to brush their own teeth, so parents will need to take charge of that task, while children ages 3 to 6 can brush their own teeth under the watchful eye of Mom and Dad. Since many cases of fluorosis can be prevented by keeping children from swallowing fluoride products like toothpaste, parents should keep a close eye on their children's brushing and remind them not to swallow the toothpaste.

For your child's optimal oral health, be sure she or he is brushing with the right amount of the right stuff—fluoride toothpaste. Not doing so could put your little one at risk for tooth decay, the most common chronic disease in children.





FLUORIDE

It Does a Mouth Good

Fluoride, a naturally occurring mineral found in water sources all over the world, is good for your teeth because it is absorbed easily into tooth enamel and is effective at preventing cavities by keeping tooth enamel strong. Strong enamel means strong teeth—and less dental decay.



Learn more about the oral health benefits of fluoride at massdental.org/fluoride

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