



Vieira Lab Newsletter

Lab News

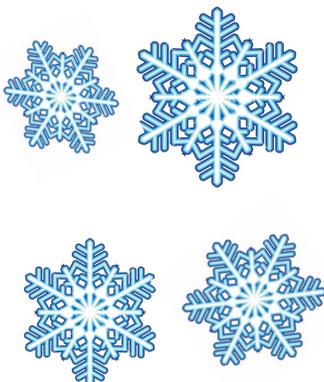
The Wall Street Journal has published an article on January 13, 2017 highlighting the contribution of the genetics of dental caries based on the influential work we developed this past decade. In the article "Do Cavities Run in Your Family", Dr. Michael Glick, editor in chief of JADA, cites [Caries: Review of Human Genetics Research](#).

See page 2 and 3 of the newsletter for the full WSJ article.



Upcoming Events

DRDR Meeting
Thursday, February 2
8:00 a.m.
414 Salk Pavilion



DRDR Update

Tables show running totals of patient recruitment

Subject Recruitment Location

| | | | | | |
|-----------------------|------|--------------------------------------|-----|--|-----|
| Module 1 | 1484 | Emergency Care | 73 | UDHS | 8 |
| Module 2 | 1788 | Oral Surgery | 46 | Orthodontics | 192 |
| Module 3 | 675 | Pediatric Dentistry | 317 | Other | 132 |
| Module 4 | 413 | Implant Center | 15 | AEGD | 26 |
| Dental Hygiene | 381 | Prosthodontics | 100 | Perio | 67 |
| Endo | 72 | Oral Microbiome Study | | | |
| | | Affected by Digestive Disease | 57 | Not Affected by Digestive Disease | 105 |

Recruitment Summary

| | |
|---------------------------|---------------------|
| Subjects Recruited | 5789 |
| Subjects Declined | 1149 |
| Compliance Rate | 83% |
| Gender | 47% male 53% female |

Do Cavities Run in Your Family?

Genetics may indeed increase your chances of getting cavities—and having a sweet tooth can also be inherited

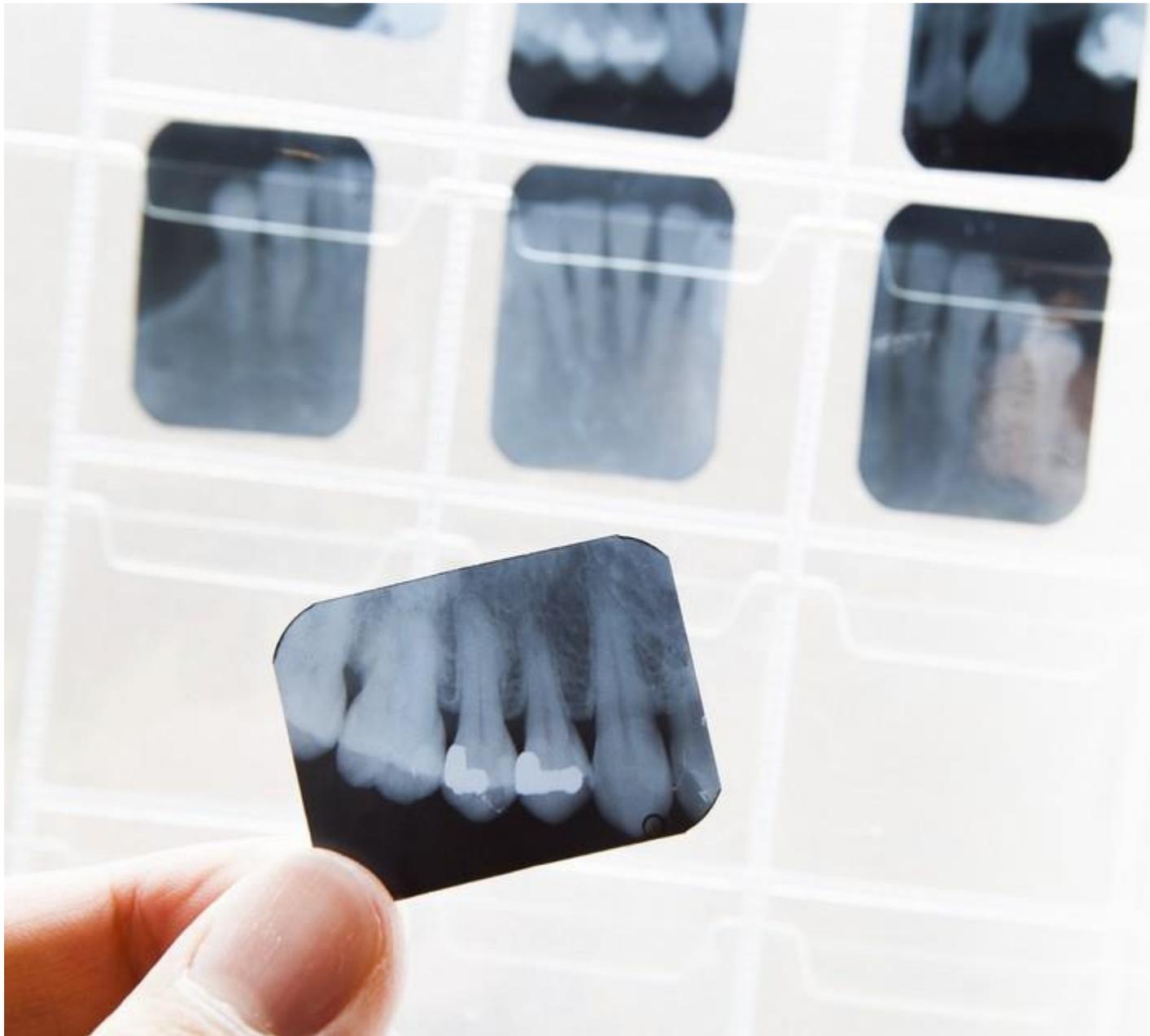


PHOTO: ISTOCK

By

Heidi Mitchell

Jan. 13, 2017 10:59 a.m. ET

7 COMMENTS

Even adults who brush and floss diligently have heard those dreaded words from their dentists: You have a cavity. Lots of factors come into play in causing cavities, but do some people have a cavity gene that exacerbates the problem? One expert, Michael Glick, a professor at the

School of Dental Medicine at the University at Buffalo, State University of New York, explains how DNA may be your dental enemy and why sealants could be your teeth's best friend.

—Heidi Mitchell

BLAME YOUR PARENTS

Genetics may increase your chances of having primary-tooth cavities by up to 64% [according to some studies](#), says Dr. Glick, who is editor in chief of the Journal of the American Dental Association. But it isn't clear which part of the cavity-forming process is affected. "The way enamel is formed on the tooth is probably the best candidate for genetics to have an impact," he says.

Information about the genetic roots to tooth decay comes mainly from research on identical twins. But those studies also have shown that having a sweet tooth can be inherited, Dr. Glick says. "It's hard to separate a high-sugar diet that will predispose one to develop cavities from a genetic predisposition," he says.

No groups of people have yet been shown to be more genetically predisposed to cavities than others, Dr. Glick says. While certain communities tend to have more cavities, this is most likely related to dietary choices.

SUGAR IS THE ENEMY

Even if you're convinced you have the cavity gene, "there is solid evidence that without sugar you cannot get cavities," Dr. Glick says. He tells everyone to reduce how much sugar they consume, and how frequently they ingest it, especially the kind that clings to teeth such as sticky candy and sugary drinks. "If we look at places in America where sugary sodas are the drink of choice, people there have pretty bad teeth."

TAKING EXTRA CARE

If you believe you have a predisposition to tooth decay, Dr. Glick says it is especially important to follow hygiene recommendations—brush twice a day, floss regularly, rinse daily with an antibacterial mouth wash and see a dentist at least twice a year. "Fluoride is put into the water in many American communities and it is one of the best public-health interventions we've had since the 1950s. It works," he says.

Plastic sealants, which are applied in a dentist's chair, are also very effective at preventing cavities. "This material covers the natural cracks in the teeth, which means food and sugar don't get stuck in there," he says. Sealants also help re-mineralize teeth, "so if you have the early stages of a cavity, your tooth can strengthen the enamel a little and heal itself."

CAVITIES, CAVITIES EVERYWHERE

Tooth decay is fairly common, and people shouldn't be overly concerned with whether they are genetically predisposed to it or not, Dr. Glick says. One-fifth of people in the U.S. have untreated cavities, which can lead to root canals and lots of pain. And many people neglect their oral hygiene—about 25% of Americans over age 60 have lost all their teeth, he says.

Don't sweat the genetics, he says. "See your dentist often, brush regularly and get your cavities filled quickly," whether your parents had lots of cavities or not.