



The Mouth-Body Connection

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Healthy teeth and gums are crucial to your overall health

Your mouth speaks volumes about you and we don't mean the revealing comments you make through it. It's been observed that when your dentist looks into your mouth, it's a bit like a master mechanic looking under the hood of a car: he can tell what other parts may be in trouble down the line by the state of the entrance. For in addition to being the outlet for articulating speech and the anchor for your inborn eating utensils, your mouth can indicate the state of your health at distant sites. Mounting evidence suggests that oral health is linked to cardiovascular, reproductive, skeletal and metabolic wellness. Your dentist may be the first to spot the warning signs of problems elsewhere in your body.

Judy McAllister is a case in point. When she was 53, she saw her long-time dentist for a checkup. "He noticed that my gums were swollen and bleeding easily, and I had new cavities, a problem I hadn't had for some years," recalls the Toronto retiree, now 61. "He suggested that I have my blood sugar levels tested. They turned out to be just shy of type 2 diabetes, which I now have."

It makes sense that the health of a large organ such as the mouth, with its inner cheeks, tongue and 32 teeth, can have an impact on general health. According to Dr. Paul Allison, dean of the dentistry faculty at McGill University in Montreal, "What's healthy for your body is healthy for your mouth and vice versa."

Longevity

Studies done at Emory University in Atlanta with the U.S. Centers for Disease Control suggest that people with gum and jawbone disease have a mortality rate that is 23% to 46% higher than those who don't. The link could be due to infections or to heightened cardiovascular risk.

The cardiovascular connection

Although much more research is required to confirm the link to heart disease, scientists think that inflammatory proteins produced by bacteria in inflamed gums could enter the bloodstream and contribute to swelling and narrowing of the coronary blood vessels. Another line of thought is that oral bacteria can attach to fatty plaques in the coronary arteries and contribute to clot formation, which obstructs normal blood flow to the heart and sets the stage for heart attacks and strokes.

Research has found that people with periodontitis (serious gum disease that can erode the bone and

structures supporting the teeth) are almost twice as likely to suffer from atherosclerosis and coronary artery disease as those without periodontal disease. Periodontal disease may also exacerbate existing heart conditions.

"But for now, the jury is still out," says Allison. "Some studies have suggested a link between oral disease and heart disease, while others have not." So to date, the link is more of an indirect association than a clear-cut cause-and-effect relationship, he adds, because heart disease and oral disease share common risk factors such as smoking, obesity and diabetes.

Reproductive health

Here the connection is more established, says Allison. Maternal periodontal disease has been linked to pre-eclampsia, a serious condition that includes elevated blood pressure in pregnant women. According to Health Canada, moms-to-be with gingivitis (inflamed gums) or periodontitis are at increased risk of delivering premature or low-birth-weight babies because of oral bacteria that can invade the placenta and amniotic fluid. The *Journal of Dental Research* reported that women with inflammatory gum disease are more likely to develop gestational diabetes, possibly because inflammation can impair blood glucose control.

In pregnancy, high hormone levels increase blood flow to the gums. "That can make the gums more sensitive and overreactive to dental plaque and oral bacteria," says Dr. Karyn Isbister, a dentist in Edmonton. "The gums may

bleed more easily, and a woman may develop a tiny pregnancy 'tumour' at the point where the gum starts to swell."

So if you're planning to have a child, making sure your teeth and gums are healthy should be part of your pre-pregnancy plan — along with eating a better diet, quitting smoking and taking a folic acid supplement.

"The best option is to have a thorough checkup, a good cleaning and any necessary dental work done before you get pregnant," says Isbister. "And the best time to have dental work done during pregnancy is the second trimester, but any emergency, such as pain or infection, should be looked at immediately."

The nausea and vomiting of pregnancy can harm teeth by creating a highly acidic environment in the mouth. "After a bout of nausea, rinse your mouth with a neutralizing solution of baking soda and water, and do not brush your teeth for 20 minutes," says Isbister. A fluoride rinse is another option.

Osteoporosis

Some researchers believe that routine dental X-rays can show more than cavities.

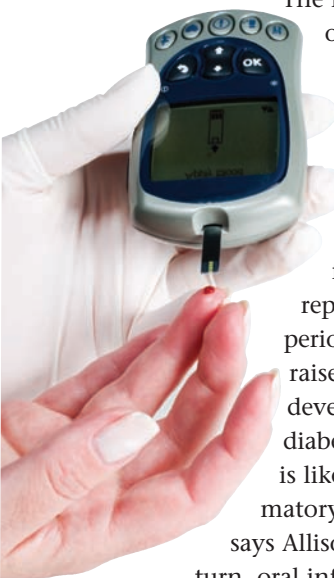
They reveal low bone mineral density and bone loss in the jaw that could signal a risk for underlying bone problems elsewhere, especially in older

people, according to the U.S. National Institute of Arthritis and Musculoskeletal and Skin Diseases in Bethesda, Md., and other research at the State University of New York at Buffalo. Others, however, question the connection, noting that jawbone and tooth loss are due more to dental decay and gum disease than



low calcium and vitamin D intakes, poor calcium absorption and low levels of physical activity. "There's a theoretical connection," says Allison, "and it's being looked into." But once again, no verdict has been returned.

Type 2 diabetes



The link between oral disease and diabetes is also fairly well established. A study in the U.S. journal *Diabetes Care*, for example, reported that periodontal disease raises the risk of developing type 2 diabetes. "Again, it is likely an inflammatory mechanism," says Allison. And, in

turn, oral infections can make established diabetes harder to control because higher levels of blood-borne bacteria can raise blood glucose levels. To make matters worse, people with diabetes are more susceptible to cavities, gum disease, tooth loss and the fungal infection thrush.

It stands to reason that if your blood sugar levels are too high in your bloodstream and other parts of your body, they're also too high in your mouth, where they provide bacteria with an abundant food supply and the fuel to multiply and attack the enamel of the teeth and cause cavities — another dental warning sign of diabetes, as Judy McAllister found.

Sinusitis

Infections in the teeth and gums can invade the sinus cavities, causing chronic sinusitis (see "Sinusitis," p. 30).

Earaches

In adults, certain earaches known as referred ear pain can result from decayed or infected teeth.

Respiratory conditions

Fine droplets from the mouth and throat may be aspirated into the lungs, causing infections of the lower respiratory tract or worsening existing lung conditions. Studies are now under way to learn how poor oral hygiene and periodontitis may be linked to more frequent bouts of respiratory disease in patients with chronic obstructive pulmonary disease.

Psychosocial effects

Poor dental and oral health — an unattractive smile, bleeding gums and malodorous breath — can fuel a lack of confidence and a diminished sense of self-worth. The *Journal of Community Health Nursing* reported that 53% of people with minor or major dental problems suffer from low self-esteem. Missing teeth and oral infection can even affect the way you speak, according to the Canadian Dental Association.

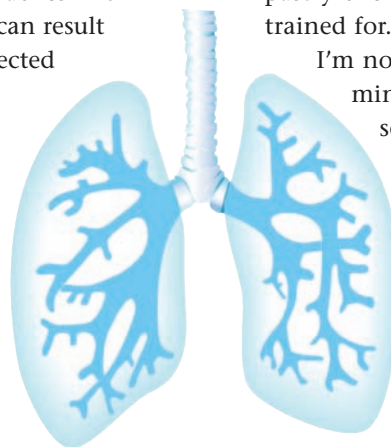
Francine Parent, 48, a pastry chef at a major Montreal hotel, knows how much impact dentition can have on your quality of life.

This past year, Francine underwent major dental work involving the replacement of all of her upper front teeth with implants. "I have new confidence in my career now," says Francine, who has moved from a dead-end cafeteria job to the pastry chef's position she was trained for. "I smile a lot now.

I'm not afraid to speak my mind anymore. And love seems like a real possibility and not just a dream."

Clearly, your mouth and teeth are valuable team players in your psychological and physical well-being. And given the

broad-ranging impact of oral health, it is puzzling that our health-care system tends to separate medical coverage from dental coverage, which today remains largely private. That means that many vulnerable people with the greatest burden of oral disease — the working poor, the institutionalized elderly, recent immigrants — have virtually no access to dental care. "Something has to change," says Allison. "We have to find ways to provide care for underprivileged groups." His institution is now looking at ways to prepare dental



STAT

7%

Estimated proportion of total health expenditures accounted for by dental services in 2007

— Canadian Institute of Health Information, 2007

Oral Cancer

Your dentist is often the first health-care provider to note the presence of oral cancer. But you can check for it, too. The warning signs include the following: unexplained bleeding, open sores that don't heal in seven to 10 days, white or red patches and numbness or tingling. Also check for small lumps or thickenings on the sides or bottom of your tongue, the floor and roof of your mouth, your gums and the insides of your cheeks.

students for working with these groups in the community setting.

Nutritional status


Sore gums and lost teeth can affect your ability to eat a proper diet, particularly if you're elderly, notes Allison. "As people lose teeth and need to wear dentures, they often switch to a softer diet that includes a lot of refined carbohydrates, instead of fresh fruits, vegetables and meats," he says.

He also notes that for the first time in its history, the Canadian Health Measures Survey — which collects key information on the health and lifestyles of the general population — is including a dental health component.

So if Canadians could do just one thing to honour the oral/ general health connection, what would it be? For Isbister, it's flossing. "There's a book out on the best ways to increase your longevity, and flossing is number 10 on the list," she says. For Allison, it's a better diet. "We need to make

healthy food more accessible and unhealthy food less accessible," he says, since a diet that prevents cavities and promotes healthy gums also prevents other chronic health problems. He recommends a regimen rich in calcium and fresh fruits and vegetables, and low in sugar and refined carbohydrates.

If you follow both dentists' recommendations, you'll find yourself in the proverbial win-win situation — for your teeth and gums as well as your heart, blood vessels and blood sugar levels.

For more information on oral health, visit the website of the Canadian Dental Association. Go to www.cda-adc.ca. 



Five Ways to Watch Your Oral Health

- 1 Have regular dental checkups** This is the best way to prevent disease and nip potentially serious problems in the bud.
- 2 Keep a clean mouth** Brush your teeth and tongue a minimum of twice daily with a soft-bristle toothbrush and a fluoride toothpaste. Floss daily — failure to floss leaves more than 30% of your teeth surfaces uncleaned.
- 3 Eat to beat oral problems** A nutritious diet rich in calcium, fruits, vegetables and unrefined carbohydrates helps fight cavities and periodontitis — as well as other serious illnesses such as cancer, diabetes and heart disease. Limit your consumption of cavity-causing sugar and other refined carbohydrates as well as foods high in acid, which can promote tooth erosion.
- 4 Practise self-examination** Check your mouth for the signs of gum disease, including red, shiny, swollen, sore or sensitive gums, bleeding during brushing and flossing and uncontrolled bad breath. Check for signs of tooth decay such sensitivity to heat, cold, sweetness or pressure.
- 5 Avoid tobacco** All tobacco products can promote oral, tongue and lip cancers, infected gums, bad breath and tooth loss.

— Adapted from www.cda-adc.ca