

## Adult Congenital Heart Disease and Dental Issues: What's Up with Preventive Antibiotics?

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### What is endocarditis?

Endocarditis (also called subacute bacterial endocarditis, or SBE) is an infection of the inner lining of the heart. It can destroy heart tissue and spread infection throughout your body. SBE can cause severe illness or even death.

### How do you get endocarditis?

Bacteria can get into your bloodstream in many different ways, especially through your mouth. Bacteria live in your mouth, often around your gums and teeth. These bacteria can get into your bloodstream especially if you have bleeding gums. As the blood travels through your heart, the bacteria can settle in the heart tissue or valves. This is more likely to happen if there are areas in your heart that are abnormal, if you have abnormal valves or in areas that have had surgery.

### How can I protect my heart from SBE?

The best way to protect yourself from SBE is by keeping your mouth as healthy and clean as possible! Good oral health is really important. Chewing your food well, brushing and flossing will keep the bacteria levels in your mouth low.

### My adult congenital heart disease (ACHD) doctors told me to take antibiotics before I go to the dentist to help protect my heart from SBE. Do antibiotics help?

Sometimes. Heart doctors used to recommend that all patients with CHD take antibiotics before certain kinds of medical procedures that might involve bleeding. This included visits to the dentist. However, the American Dental Association found that keeping your mouth as clean and healthy as possible can lower the amount of bacteria you

are exposed to in daily life without antibiotic use. This is **more important** to lowering your risk of SBE than taking antibiotics before a dental procedure. In other words, you are more likely to get SBE from bacteria living in a dirty mouth than from a dental procedure.

In March 2007 the American Heart Association (AHA) released recommendations for preventing SBE.

### What do these most recent AHA recommendations mean for me?

Most CHD patients do not need to take antibiotics before dental visits or other medical procedures.

### Which CHD patients should still take antibiotics?

The AHA knows that certain patients have a higher risk of getting very ill or dying if they develop SBE. These people should continue to take antibiotics before dental visits or other procedures. This includes:

- People who have unrepaired cyanotic (“blue”) CHD. This includes people with palliative shunts, conduits and single ventricles.
- People who have repaired CHD but who have a prosthetic device or have defects near a prosthetic device.
- All patients with a mechanical or tissue artificial valve.
- All patients with other prosthetic materials, such as Gore-tex patches, for **six months** after placement.
- Patients who have ever had SBE before.
- Patients who received a heart transplant and who later developed abnormal heart valves.

### If I am part of the group that should take antibiotics, WHEN do I need them?

You should take antibiotics before all dental procedures when:

- Your gums or top region of your teeth might be moved around. This includes dental cleanings and the filling of cavities.
- The inside soft tissues of your mouth (oral mucosa) might be punctured.

You do not need antibiotics:

- Before dental X-rays.
- If you have bleeding of the mouth or lips from an accident or trauma.

### If I need to take antibiotics, WHAT kind do I need?

This is a question your heart care team will need to answer.

### **I've always taken antibiotics before dental visits, but now it looks like I don't really need to. Do I HAVE to stop taking them?**

No. The AHA and the American College of Cardiology (ACC) only give advice to help you be healthy. These are not rules. Some people may find it difficult to change the way they have cared for their heart. Discuss any questions or concerns you have with your ACHD doctor.

### **Have more people gotten SBE since the recommendations were changed?**

No. In fact, a research study in 2012 found no increase in SBE cases after the new AHA recommendations were made.

### **How does having a healthy mouth help protect me from SBE?**

In a healthy mouth there is a thin surface of tissue that prevents bacteria from getting into your bloodstream and lymphatic system, a group of vessels that drains fluid from your body into your blood stream. Your mouth is also full of saliva and saliva is your friend! It is antimicrobial, balances the pH of your mouth and helps control plaque. Saliva also contains tiny amounts of minerals that help protect your tooth enamel.

### **What kind of health problems can happen in my mouth?**

There are many kinds of health problems you may experience in your mouth. Some of the most common include:

- **Cavities.** A cavity is a hole or structural damage in a tooth.
- **Gum disease.** Gum disease can include gingivitis (red swollen gums that bleed easily) and periodontal disease (gums that have been destroyed).
- **Dry mouth.** This is when there is not enough saliva in your mouth. Dry mouth can be caused by some kinds of medications, especially diuretics (water pills) and blood pressure medicines. It may be caused by hormonal or nutrient deficiencies. You can also have dry mouth from anxiety or depression, diabetes, or a blocked saliva gland.
- **Oral cancer.** Cancers of your mouth often include your lips or tongue.
- **Canker sores and cold sores.** Canker sores are painful, open sores in your mouth. They can happen after an injury to your mouth or be caused by many other things like a virus, stress or a lack of vitamins. Cold sores (also called fever blisters) are small, painful blisters caused by the herpes simplex virus.

### **How can I make sure my mouth is healthy and helps protect my heart?**

Dedicate five minutes every day to your heart health! Taking care of your mouth helps protect your heart.

Here are easy steps for keeping your mouth—and your heart—healthy:

- **Brush your teeth at least twice a day for 2 minutes each time.** It's best to brush your teeth after meals. This cuts down on the amount of time that your teeth are exposed to sweet or acidic things that can break down tooth enamel. You should gently brush all sides of your teeth with a soft brush using round and short back-and-forth strokes. Gently brush along the gum line and lightly brush your tongue.
- **Floss your teeth at least once a day.** Have your dentist or your dental hygienist show you the best way to floss.
- **Change your toothbrush every three months.**
- **Get regular dental check-ups twice a year,** or more if your dentist thinks you need to pay extra attention to your teeth.

Your dentist is also your ally in helping protect your heart. See your dentist immediately if:

- Your gums bleed often.
- You have red or white patches on your gums, tongue, or the floor of your mouth (under your tongue).
- You have mouth/jaw pain.
- You have sores that do not heal.
- You have problems swallowing or chewing.

### **Are there any other ways to help protect my mouth and my heart?**

Yes—living a heart-healthy lifestyle affects your oral health, and vice-versa. Both your ACHD doctor and your dentist would advise you to:

- Eat a healthy diet with fiber-rich fruits and vegetables. These foods stimulate your mouth to produce saliva, which protects and strengthens your tooth enamel.
- Limit soda, even diet soda, because it can erode the enamel.
- Avoid snacking on sugary or starchy snacks between meals.
- Do not use tobacco products. This includes chewing tobacco. Tobacco products can cause gum disease, oral and throat cancers, oral fungal infections, stained teeth, and bad breath.
- Limit the amount of alcohol you drink. Alcohol use has been linked to oral and throat cancers.

### **The bottom line:**

Poor oral health is associated with (though not necessarily the cause of) the development of general heart disease. Good oral health is essential to helping protect your heart. According to Healthy People 2020, a 10-year program to improve the health of all Americans, good oral health makes it easier for you to speak, taste, smile, smell, touch, chew, swallow and make facial expressions to show your feelings and emotion, all important to living a full and complete life.

ACHA partnered with **Disty Pearson, PA-C**, senior physician assistant with the Boston Adult Congenital Heart and Pulmonary Hypertension service at Boston Children's Hospital and Brigham & Women's Hospital. She has been a member of the ACHA Medical Advisory Board since its beginning, and has worked with adults with CHD for more than 30 years.