Oral Health and HIV

(updated January 2023)



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This educational packet is a curated compilation of resources on Oral Health and HIV.

The contents of this packet are listed below:

- HIV/AIDS and Oral Health (National Institute of Dental and Craniofacial Research)
- El VIH/SIDA y la Salud Oral (National Institute of Dental and Craniofacial Research)
- Oral Health Affects Your Whole Body (New York State Department of Health and Northeast/Caribbean AETC)
- Oral Health Medical/Dental Considerations for Patients with HIV on Antiretroviral Therapy (Southeast AETC)
- HIV-Related Mouth Sores: Symptoms and Treatments (WebMD)
- HIV and Your Mouth (The Well Project)

You may wish to customize this packet to meet the needs or interests of particular groups, such as event participants, providers, patients, clients, or the general public. So please feel free to distribute all or part of this document as either a printout or PDF.

HIV/AIDS & Oral Health



nidcr.nih.gov/health-info/hiv-aids

Overview

People with human immunodeficiency virus (HIV), the virus that causes acquired immunodeficiency syndrome (AIDS), are at special risk for oral health problems. Some of the most common oral problems for people with HIV/AIDS are: chronic dry mouth, gingivitis, bone loss around the teeth (periodontitis), canker sores, oral warts, fever blisters, oral candidiasis (thrush), hairy leukoplakia (which causes a rough, white patch on the tongue), and dental caries. Combination antiretroviral therapy, which is used to treat the HIV condition and restore immune system function, has made some oral problems less common. Oral conditions can be painful, annoying, and can lead to other problems.

Causes

People with HIV/AIDS have an increased risk for oral health problems because HIV/AIDS weakens the immune system and makes it harder to fight off infection.

Symptoms

Oral health problems may include:

Photo	Description	It could be:	What & where?	Painful?	Contagious?	Treatment
Click to enlarge	Red sores ulcers	Aphthous (AF-thus) ulcers. Also known as Canker Sores	Red sores that might also have a yellow-gray film on top. They are usually on the moveable parts of the mouth such as the tongue or inside of the cheeks and lips.	Yes	No	Mild cases – Over-the- counter cream or prescription mouthwash that contains corticosteroids; More severe cases – corticosteroids in a pill form

Photo	Description	It could be:	What & where?	Painful?	Contagious?	Treatment
Click to enlarge	Red sores ulcers	Herpes (HER-peez) A viral infection	Red sores usually on the roof of the mouth. They are sometimes on the outside of the lips, where they are called fever blisters.	Sometimes	Yes	Prescription pill can reduce healing time and frequency of outbreaks.
Click to enlarge	White hairlike growth	Hairy Leukoplakia (Loo-ko- PLAY-key- uh) caused by the Epstein- Barr virus	White patches that do not wipe away; sometimes very thick and "hairlike." Usually appear on the side of the tongue or sometimes inside the cheeks and lower lip.	Not usually	No	Mild cases – not usually required; More severe cases – a prescription pill that may reduce severity of symptoms. In some severe cases, a pain reliever might also be required.
Click to enlarge	White creamy or bumpy patches like cottage cheese	Candidiasis (CAN-di-dye-uh-sis), a fungal (yeast) infection – Also known as thrush	White or yellowish patches (or can sometimes be red). If wiped away, there will be redness or bleeding underneath. They can appear anywhere in the mouth.	Sometimes, a burning feeling	No	Mild cases – prescription antifungal lozenge or mouthwash; More severe cases – prescription antifungal pills.

Photo	Description	It could be:	What & where?	Painful?	Contagious?	Treatment
Click to enlarge	Warts		Small, white, gray, or pinkish rough bumps that look like cauliflower. They can appear inside the lips and on other parts of the mouth.	Not usually	Possibly	Inside the mouth – a doctor can remove them surgically or use "cryosurgery" – a way of freezing them off; On the lips – a prescription cream that will wear away the wart. Warts can return after treatment.

Photos courtesy of Dr. David Reznik, HIVDent.org; and Dr. Jeff Lennox

Treatment

The most common oral problems linked with HIV can be treated. So talk with your doctor or dentist about what treatment might work for you.

Helpful Tips

In addition to the problems listed in the table above, you may experience dry mouth. Dry mouth happens when you don't have enough saliva, or spit, to keep your mouth wet. Saliva helps you chew and digest food, protects teeth from decay, and prevents infections by controlling bacteria and fungi in the mouth. Without enough saliva, you could develop tooth decay or other infections and might have trouble chewing and swallowing. Your mouth might also feel sticky or dry and have a burning feeling, and you may have cracked, chapped lips.

To help with a dry mouth, try these things:

- Sip water or sugarless drinks often.
- Chew sugarless gum or suck on sugarless hard candy.
- Avoid tobacco.
- · Avoid alcohol.
- Avoid salty foods.
- Use a humidifier at night.

Talk to your doctor or dentist about prescribing artificial saliva, which may help keep your mouth moist.

El VIH/sida y la salud oral

nidcr.nih.gov/espanol/temas-de-salud/vih-sida-y-la-salud-oral

Aspectos generales

Las personas con el virus de la inmunodeficiencia humana (VIH), el virus que causa el síndrome de inmunodeficiencia adquirida (sida), tienen un riesgo particular de tener problemas de salud oral. Algunos de los problemas de la boca más frecuentes para las personas con el VIH/sida son sequedad crónica de la boca, gingivitis, pérdida de hueso alrededor de los dientes (periodontitis), aftas bucales, verrugas bucales, ampollas febriles, candidiasis de la boca (muguet), leucoplasia vellosa (que causa un parche blanco y áspero en la lengua) y caries dental. La terapia antirretroviral combinada, que se usa para tratar el VIH y restablecer la función del sistema inmunitario, ha hecho que algunos de los problemas de la boca ocurran con menos frecuencia. Los problemas en la boca pueden ser dolorosos, molestos y pueden llevar a otros problemas.

Causas

Las personas con VIH/sida tienen un mayor riesgo de tener problemas de salud oral debido a que el VIH/sida debilita el sistema inmunitario y hace que sea más difícil luchar contra las infecciones.

Síntomas

Los problemas relacionados a la salud oral pueden incluir:

Foto	Descripción	Podría ser:	¿Qué y dónde?	¿Duele?	¿Es contagioso?	Tratamiento
Haga clic aquí para agrandar	Llagas rojas úlceras	Aftas	Llagas rojas que también pueden estar cubiertas por una delgada capa de color amarillo grisáceo en la parte superior. Por lo general, se encuentran en las partes móviles de la boca como la lengua o la parte interior de las mejillas y los labios.	Sí	No	Casos leves - Crema sin receta médica o enjuague bucal con receta médica que contenga corticoesteroides. Casos más graves - corticoesteroides en píldoras.

Foto	Descripción	Podría ser:	¿Qué y dónde?	¿Duele?	¿Es contagioso?	Tratamiento
Haga clic aquí para agrandar	Llagas rojas úlceras	Herpes, una infección viral	Llagas rojas por lo general en el paladar. En ocasiones se encuentran por fuera de los labios, donde reciben el nombre de ampollas febriles.	A veces	Sí	Una píldora con receta médica puede reducir el tiempo de curación y la frecuencia de los brotes.
Haga clic aquí para agrandar	Crecimiento blanco velloso	Leucoplasia vellosa causada por el virus de Epstein- Barr	Parches blancos que no se desprenden; en ocasiones muy gruesos y de apariencia "velluda". Suelen aparecer a los lados de la lengua o a veces por dentro de las mejillas y del labio inferior.	Por lo general no	No	Casos leves - por lo general, no requieren tratamiento. Casos más graves - una píldora con receta médica que puede reducir la gravedad de los síntomas. En algunos casos graves, también se puede necesitar un analgésico para aliviar el dolor.
Haga clic aquí para agrandar	Parches blancos cremosos o levantados yparecidos al requesón	Candidiasis, una infección por hongos (levaduras), que también se conoce como "muguet"	Parches blanquecinos o amarillentos (en ocasiones pueden ser rojos). Si se desprenden, habrá enrojecimiento o sangrado por debajo. Pueden aparecer en cualquier lugar de la boca.	A veces, una sensación de ardor	No	Casos leves - agentes antimicóticos con receta médica en forma de pastillas que se disuelven en la boca o de enjuague bucal. Casos más graves - píldoras antimicóticas con receta médica.

Foto	Descripción	Podría ser:	¿Qué y dónde?	¿Duele?	¿Es contagioso?	Tratamiento
Haga clic aquí para agrandar	Verrugas		Pequeños crecimientos o abultamientos rugosos, de color blanco, gris o rosáceo que tienen apariencia de coliflor. Pueden estar por dentro de los labios y en otras partes de la boca.	Por lo general no	Es posible	Dentro de la boca - el médico puede eliminarlas de forma quirúrgica o usar "criocirugía", una forma de removerlas congelándolas. En los labios - una crema con receta médica que ayuda a desgastar la verruga. Las verrugas pueden reaparecer después del tratamiento.

Las fotografías son cortesía del Dr. David Reznik, de HIVDent.org, y del Dr. Jeff Lennox.

Tratamiento

Los problemas más frecuentes de la boca relacionados con el VIH se pueden tratar. Por lo tanto, hable con el médico o dentista sobre qué tratamiento podría ser el adecuado para usted.

Consejos útiles

Además de los problemas indicados en la tabla anterior, también puede tener sequedad en la boca. La sequedad en la boca ocurre cuando no tiene suficiente saliva para mantener la boca húmeda. La saliva le ayuda a masticar y a digerir los alimentos, protege los dientes de la caries y previene las infecciones al controlar las bacterias y los hongos en la boca. Si no hay suficiente saliva, podría llegar a tener caries dental u otras infecciones y podría tener problemas para masticar y tragar. Además, la boca puede sentirse pegajosa o seca y arder, y puede tener los labios agrietados.

Para ayudar con la sequedad en la boca, intente estas cosas:

- beba agua o bebidas sin azúcar a menudo,
- mastique goma de mascar sin azúcar o chupe dulces duros (caramelos) sin azúcar,
- evite el tabaco,
- evite el alcohol,
- evite las comidas saladas,
- use un humidificador por la noche.

Hable con el médico o dentista sobre la posibilidad de recetarle saliva artificial, que le puede ayudar a mantener la boca húmeda.

Oral health affects your whole body.

It's an important part of your HIV care.

Did you know, and health problems can be prevented or readily treated.

Dental Floss

Take care of your mouth.

People with HIV often have weakened immune systems that may contribute to oral health problems. Many of these problems with the teeth, gums, or mouth can be prevented or quickly treated.

If you are HIV-positive, tell your dental health care provider so they can give you the best care possible. They can work with your doctors, nurses, and case managers to make sure you get the treatment you need. The sooner you get treatment, the sooner you will feel better.

Some oral health problems are painful. They can make eating and drinking uncomfortable. Early treatment can take care of these problems and stop them from getting worse.



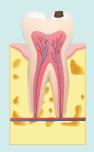
TIP

Dental floss cleans areas where a toothbrush cannot reach. If you have problems using dental floss, ask your dentist how you can clean between your teeth.

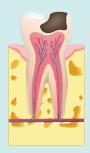
Cavities and Gum Disease

What are cavities?









Cavities are soft spots or small holes in your teeth. They're caused by a sticky, white coating on your teeth. It's called, plaque (plak).

Plaque is made up of bacteria (germs) and tiny bits of food left in your mouth. These bacteria make acid that eats away at your teeth. Good oral health care at home helps prevent cavities by getting rid of plaque. Brush and floss your teeth regularly.

At first, a cavity is small and does not hurt. As it gets deeper, it becomes painful. A root canal may be needed to save your tooth. When a cavity is not treated, it can lead to a dangerous infection in your mouth. You may even lose your tooth.



TIP

Choose a toothpaste with fluoride and use a soft-bristled toothbrush. Change your toothbrush every 3 to 4 months. Change it sooner if the bristles wear out.



Your gums and bone hold your teeth in your mouth. You have gum disease when the gums and bone in your mouth gets infected. Many people with HIV have gum disease that gets worse very fast.

Signs to look for:

- red or swollen gums
- gums that bleed when you brush or floss your teeth
- · gums that are pulling away from your teeth
- · loose teeth

FLUORIDE

See your dentist regularly. Early treatment of gum disease is important. If gum disease is not treated, your teeth may shift or get so loose they may need to be removed.



Infections and Mouth Sores

People with HIV are more likely to have sores and infections in their mouth. This includes the tongue and lips. The most common types of sores or infections that affect people with HIV are:

- Thrush candidiasis (kan-dee-die-eh-sis)
- Mouth sores canker sores, cold sores, or fever blisters.
 Some of these infections are rare. Only your dentist can find them. Other infections are common. They create symptoms you can see or feel.

What is thrush?

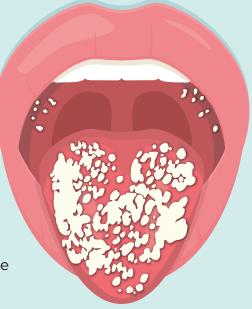
Thrush is an infection on the inside of your mouth. It's caused by a fungus.

Thrush may look like:

- white patches in your mouth that can be wiped off
- a flat, red sore that burns, especially when you eat spicy or salty foods
- cracks in the skin around the corners of your mouth

Many things can cause thrush – using some medicines, wearing dentures, or a change in your health. If you think you see thrush, contact your health care provider.

Thrush can be treated with mouth rinses, pills, or lozenges (pills that melt in your mouth). If thrush is not treated, it can spread down your throat. If this happens, you may need a more complex treatment. You may even need to stay in the hospital. Getting treatment early is best.





What are mouth sores?

Mouth sores include canker sores and cold sores, or fever blisters. Mouth sores are common, even in people who do not have HIV. But people with HIV can have larger, more painful sores that take longer to heal. If you have a sore that does not go away or heal within 7 to 10 days, see your dentist.

To reduce pain from mouth sores:

- avoid acidic foods like orange juice or tomatoes
- · avoid spicy foods like hot sauce
- talk to your dentist about over-the-counter medicines.
 Your dentist can prescribe medicines to prevent certain types of mouth sores.

Prevention

Cavities, gum disease, and mouth sores can happen to anyone. The good news is that you can prevent many of these problems.

Follow these easy steps:

- Brush your teeth after each meal or at least twice a day.
- · Use dental floss every day.
- · Use mouth rinse every day.
- Ask your dentist if there is a specific mouth rinse you should use.
- Use dry-mouth products for relief for a short time.
- You can help create more saliva and keep your mouth moist by chewing sugar-free gum and drink water instead of sugary drinks.
- Visit your dentist every 6 months for a routine cleaning and a general exam. Do this even if your teeth look normal.

Your dentist can find and remove cavities before they cause you pain. They can also check for gum disease, mouth infections, sores, and cancer. You should visit your dentist even if you have no teeth.

Check your mouth

At least once a month check your mouth for signs of infections and sores.

Check your:

- tongue –
 top and bottom
- lips
- gums
- cheeks
- the roof of your mouth

Visit your dentist if you see:

- white, purple, or red patches
- painful sores
- bumps
- sores that do not heal after 7 to 10 days



Good nutrition

Healthy eating is important to manage your HIV infection. You need healthy, nutritious food to stay healthy – and for good oral health. Choosing a well-balanced diet helps your body fight HIV.

Avoid foods and drinks that have a lot of sugar. Sugar helps create cavities.

Talk to a member of your health care team about the value of a healthy, balanced diet. Ask for tips about food and drinks that do not cause cavities.



IMPORTANT LAB VALUES:

CD4 COUNT: T- 4 LYMPHOCYTES

Normal CD4 count: 400 - 2000 cells/mm3 (per lab standard) - Indicates progression of HIV infection and degree of immune suppression

- <u>Usually Asymptomatic</u>: 500-600
- May be Symptomatic: 200 499
- AIDS: <200

VIRAL LOAD HIV RNA

Indicates level / rate of viral replication and the effectiveness of ART

- An increasing viral load indicates a faster progression of HIV disease and a decrease in the long term prognosis
- An <u>undetectable viral load</u> (< 20-50 copies/mL; indicates a success of ART and will decrease HIV transmission and disease progression

NEUTROPHIL COUNT

Important indicator of oral infection risk

Normal neutrophil count: 1,800 -7,000 cells/mm3

Severe neutropenia < 1000 cells/mm³

THIS REQUIRES MEDICAL CONSULTATIION AND PREMEDICATION WITH ANITMICROBIAL PROPHYLAXIS

Amoxicillin at one dose of 2 g / 30 to 60 minutes before the procedure. If allergic may receive cephalexin, 2 g; clindamycin, 600 mg; azithromycin or clarithromycin, 500 mg, one dose 30 to 60 minutes before procedure

PLATELET COUNT

Normal platelet count: 150 – 400 x 10³ cells/mm³

>60,000: Routine dental care can be provided simple extractions / scaling and root planning

POINTS TO REMEMBER FOR PATIENTS WITH HIV IN THE ERA OF ART

- Dental treatment is the same for all patients including those with HIV
- The CD4 count and viral load are not indicators to withhold dental treatment
- Universal Precautions should be used for all patients
- Routine antibiotic prophylaxis is only based on the neutrophil count (or medical provider recommendation)
- The best treatment for oral manifestations of HIV is effective ART including viral suppression
- Maintain open communication with the patient and medical providers
- Listen

WHEN IN DOUBT GET A MEDICAL/DENTAL CONSULT

USEFUL RESOURCES

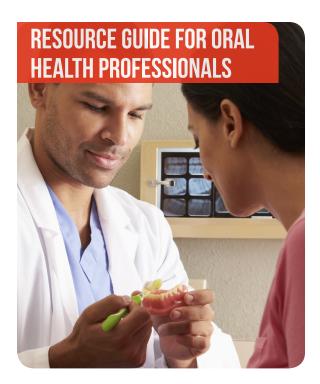
https://www.hiv-druginteractions.org (Evaluation of drug interactions)

https://www.hiv.gov/topics/aids2016 (Comprehensive HIV information)

https://c.ymcdn.com/sites/www.mpca.net/resource/resmgr/oral_health (Mountain Plains AETC Oral Health)

www.hivdent.org (Comprehensive HIV oral health information)

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ORAL HEALTH MEDICAL/ DENTAL CONSIDERATIONS FOR PATIENTS WITH HIV ON ANTIRETROVIRAL THERAPY

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INTRODUCTION

According to DHHS guidelines, Antiretroviral therapy (ART) is recommended for all individuals with HIV regardless of CD4 T lymphocyte cell count, to reduce the mortality and morbidity associated with HIV infection and to prevent HIV transmission.1 Increased efficacy and tolerability of ART has led to a gradual increase in the number of patients on ART with an increase in the number of patients that are adherent to ART and virally suppressed. This guide aims to assist health professionals in evaluating medical and dental considerations for treating patients with HIV in the era of ART. Oral health professionals play a critical role in both evaluation of oral lesions, as well as monitoring health outcomes and ART adherence.

1.https://aidsinfo.nih.gov/guidelines/html/1/adult-and-adolescent-arv/10/initiation-of-antiretroviral-therapy



IMPORTANT FACTS:

90% of PWHA (people with HIV and AIDS) have at least one chronic oral condition

- 32-46 percent of PWHA will have at least one major HIV-related oral health problem
- 58-68 percent PWHA do not receive regular oral health care

https://hab.hrsa.gov/sites/default/files/hab/Publications/factsheets/programfactsheet-part-f-dental.pdf



IMPORTANT MEDICAL CONSIDERATIONS:

Take an accurate medical/dental history including all prescription and over the counter drugs and update at each visit. Carefully consider drug/drug interactions

· Communicate regularly with all health providers including case managers and mental health providers and obtain regular lab test results.



IMPORTANT DENTAL CONSIDERATIONS:

· Complete a thorough Intra/extra oral examination at each visit

- Refer to oral medicine specialist for any suspicious oral lesions or oral lesions that do not resolve with or without treatment in two weeks
- Follow UNIVERSAL PRECAUTIONS for all patients

IN THE ERA OF ART CHANGES IN ORAL MANIFESTATIONS

Decreasing:

- Candidiasis
- Necrotizing Gingivitis
- Kaposi's Sarcoma
- Oral Hairy Leukoplakia



Increasing:

- Xerostomia
- Dental Decay
- · Periodontal Disease
- Oral HPV

TREATMENT RECOMMENDATIONS FOR COMMON ORAL MANIFESTATIONS FOR PATIENT ON ART

XEROSTOMIA AND DENTAL CARIES:

- Increase water intake. OTC and/or prescription fluoride products
- Nutritional/Tobacco counseling
- Evaluation and referral for treatment of alcohol and illegal drug use
- Salivary stimulants such a sugarless gum or
- Oral cavity moisturizing products (Biotene)
- Pilocarpine 5mg 4x daily (obtain clearance from medical provider)
- Oral hygiene instructions and regular dental maintenance treatment intervals

PERIODONTAL DISEASE

- Regular periodontal evaluations (complete perio exam yearly) and appropriate treatment intervals
- Acute periodontal infections should be treated with Amoxicillin 250mg 3 x/day with Metronidazole 250mg 3X/day x 5-7days
- Antimicrobial rinses (0.12% Chlorhexidine) 15cc twice daily for 14days and antifungal therapy if there is an overlying candidiasis infection

ORAL HPV

- Biopsy and surgical removal
- HPV Positive Cancer- chemotherapy or radiation therapy or surgery followed by radiation therapy with or without the addition of chemotherapy

SIGNIFICANCE OF ORAL LESIONS

First sign of clinical disease*

Signify disease progression*

Signify possible ART failure*

* Should immediately be referred for dental/medical evaluation

HIV-Related Mouth Sores: Symptoms and Treatments

webmd.com/hiv-aids/hiv-mouth-sores

Mouth sores are common in people with human immunodeficiency virus (HIV). They usually happen because the virus weakens your immune system, so your body has a hard time fighting infections that cause them.

While they aren't life-threatening, they can impact your quality of life. They can be painful or make it hard for you to eat. But whatever the cause, there's likely an effective treatment.

Sores Inside Your Mouth

When you have HIV, there are several reasons the inside of your mouth might hurt.

Aphthous ulcers. Also called canker sores, aphthous ulcers can appear many places inside your mouth: the inner surface of your cheeks and lips, your tongue or soft palate, or the base of your gums. People with HIV are more likely to get them than people who don't have the virus. The sores aren't contagious, but they are often very painful.

For mild cases, your doctor might recommend an antiseptic mouthwash.

Oral hairy leukoplakia. These are white patches with ridges in them. Hair-like growths come out between the ridges. They're typically on the tongue, but they can also show up elsewhere in your mouth. The Epstein-Barr virus is what triggers them. Because they happen in people with weak immune systems, they could be a sign that your HIV is getting worse.

You may not need treatment if you have a mild case. If you have severe symptoms, a doctor might prescribe a prescription pill to suppress the Epstein-Barr virus that causes it.

Thrush. Also known as candidiasis, this fungal infection causes cream-colored patches in the mouth, soreness, and bleeding. It's a common symptom of advanced HIV. It's an opportunistic infection, which means it easily takes hold when HIV has caused major damage to your immune system.

A prescription antifungal lozenge or mouthwash can knock out mild cases. You may need prescription antifungal pills if your thrush is severe.

Other STIs. Mouth sores can be a symptom of several types of sexually transmitted infections, including:

• HPV (human papillomavirus), which may cause painless mouth lesions or warts. Your doctor will usually use surgery to remove them.

- Syphilis, which can cause sores on your lips, tongue, gums, or at the back of your mouth. Your doctor will typically treat it with antibiotics by injection and pills.
- Gonorrhea, which could cause a sore throat and sometimes white spots in your mouth. Antibiotics are the usual treatment.

Sores on or Near Your Mouth

Oral herpes. Many conditions can cause sores on or near your mouth, whether or not you have HIV. But if you have HIV and sores on your lips or inside your mouth, there's a good chance the herpes simplex virus (HSV) is causing them.

HSV infections are common in people who have HIV. That's because the herpes virus -- which was likely in the body long before HIV -- "wakes up" as HIV attacks the immune system.

Two types of herpes simplex virus (HSV) cause sores. HSV-1 typically causes sores on or near the mouth. HSV-2 usually causes sores on or near the genitals.

Here's what you should know about oral herpes:

- Sores may be clear, pink, red, yellow, or gray.
- It's very contagious right before and during an outbreak.
- Some infections are resistant to treatment.
- Treatment-resistant viruses can cause worse symptoms.
- Longstanding, severe HSV sores may be an early symptom of AIDS.

Prescription antiviral drugs can help sores heal faster and make outbreaks less frequent.

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HIV and Your Mouth | The Well Project

thewellproject.org/hiv-information/hiv-and-your-mouth

October 27, 2021

Oral Problems Are Common

Oral (mouth) problems can be very common in people living with HIV. Oral health can often be an indicator of overall health. Therefore, if HIV weakens your <u>immune system</u>, you may be at greater risk for gum problems (gingivitis or periodontal disease), mouth infections, and sores. Often, the best way to prevent and treat problems in the mouth is to treat HIV by taking HIV drugs so that you stay as healthy as possible overall.

Oral problems can cause discomfort and embarrassment and affect how you feel about yourself. Oral problems can also lead to trouble with eating and speaking. If mouth pain or tenderness makes it difficult to chew and swallow, or if you cannot taste as well as you used to, you may not eat the food you need to stay well. It is important to see your dentist or health care provider as soon as possible if you notice any changes in your mouth.

Oral Conditions That Are More Common in People Living with HIV:

Condition	What and Where	Treatment
Aphthous ulcers (canker sores)	Painful red sores that might have a yellow-gray film on top. Usually on the underside of the tongue or the inside of the cheeks and lips.	Mild cases – Over-the-counter cream or prescription mouthwash that contains steroids. More severe cases – steroids in pill form.
Herpes Simplex (cold sores) are caused by a virus	One or more small blisters or ulcers (sores) on the lips or on the roof of the mouth and/or gums	Antiviral medications (e.g., acyclovir, valacyclovir) in pill form are prescribed and can dramatically reduce healing time. Over-the-counter medicine may help ease symptoms.

Condition	What and Where	Treatment
Oral hairy leukoplakia (OHL) is caused by the Epstein-Barr virus (also known as human herpes virus 4)	White patches that do not wipe away; sometimes very thick and "hair-like." Usually appear on the side of the tongue.	OHL is not harmful and usually goes away without treatment. More severe cases can be treated with antiviral medication (e.g., acyclovir or valacyclovir). Topical (applied to the body surface) treatments are also available. Stopping smoking and not drinking alcohol can help.
Candidiasis (thrush) is a <u>fungal</u> (yeast) infection	White or yellowish patches inside the mouth, throat and on the tongue. If wiped away, there will be redness or bleeding underneath.	Mild cases – prescription antifungal lozenge (pill that dissolves in the mouth) or mouthwash More severe cases – prescription antifungal pills
Angular Cheilitis is caused by a fungus or by malnutrition (too little vitamin B2, zinc, or iron)	Cracks on the corners of the mouth	Antifungal cream applied directly to the site, or pill or liquid taken orally, fluconazole, if fungal; improved diet or vitamin and mineral supplements, if malnutrition.
Oral Warts are caused by the human papilloma virus (HPV)	Small, white, gray, or pinkish rough bumps that look like cauliflower. They can appear inside the lips and on other parts of the mouth.	Inside the mouth — a health care provider can remove them surgically or use "cryosurgery" — a way of freezing them off. If possible, consult a dentist who is an expert in HIV care. On the lips — a prescription cream that will wear away the wart. Warts can return after treatment.
Kaposi sarcoma (KS) is a cancer associated with HIV and caused by a virus (human herpes virus 8). Considered an AIDS-defining condition.	Red or purple lesions (changes to the tissue) that can be raised or flat. KS usually occurs on the roof of the mouth but can be found anywhere in the mouth.	The best treatment is keeping the immune system healthy by taking your HIV drugs. There are several other therapies for KS, depending on how many and how severe the lesions are. If possible, consult a dermatologist (skin doctor) or oncologist (cancer doctor) who is familiar with KS.

Condition	What and Where	Treatment
Periodontal disease is an infection of the gums and supporting bone	Red gums that bleed easily and bad breath	Regular visits to the dentist and good oral hygiene both prevent and treat periodontal disease. Regular use of dental floss may prevent periodontal disease.
Xerostomia (dry mouth) can be caused by HIV, HIV drugs, or antidepressants	Lack of saliva (spit); trouble chewing and swallowing; dry, sticky, or burning mouth; and cracked or chapped lips. If untreated, dry mouth can lead to tooth decay (rotting teeth).	Use artificial saliva, sip water or sugarless drinks, chew sugarless gum or suck sugarless hard candy; avoid tobacco and alcohol

Oral Health and Street Drugs

You may have additional mouth problems if you use <u>street drugs</u>. Opium, heroin, and cocaine can increase tooth decay and gum disease. Crystal meth can cause severe oral problems, sometimes described as "meth mouth," including dry mouth and widespread tooth decay.

Oral Health and Tobacco

Tobacco use is a primary cause of several oral diseases and conditions. People who use tobacco, whether they smoke it (e.g., cigarettes, cigars, pipes), use smokeless tobacco products (e.g., chew, plug, loose leaf, twist, or snuff) or use e-cigarettes (vaping), are more likely to develop oral cancer, throat cancer, and gum problems (periodontal disease). In fact, in the US, smoking is the single biggest risk factor for non-AIDS defining cancers among people living with HIV. In people living with HIV, smoking affects their risk of developing cancer more than if they have a low <u>CD4 count</u>, a non-suppressed <u>viral load</u>, <u>hepatitis C</u>, or an AIDS diagnosis.

Tobacco use commonly causes tooth decay, discoloration of your teeth (yellow teeth), and bad breath. Using tobacco also weakens the immune system's response to infections in your mouth. As a result, you will be more likely to get infections in your mouth and these infections will heal more slowly. Since the immune system of people living with HIV is already weakened, it is important not to further weaken it by using tobacco products. If you use tobacco, talk to your health care provider about how to stop smoking or chewing. For more information and help with stopping smoking, see our article on <u>Smoking and Tobacco Use</u>.

Getting Dental Care in the US

You cannot legally be refused dental treatment because of your HIV status but finding dental care can be difficult depending on your financial resources, insurance coverage, and where you live. Ask your health care provider or HIV specialist for suggestions on where to find dental care in your area. Options for people with fixed incomes and/or no insurance are limited, but they do exist:

- Federal Ryan White CARE Act-funded dental clinics: These clinics may be able to provide low- or no-cost dental care; however, there may be a waiting list. These dentists are generally experts in the dental care of persons living with HIV. Find a provider in your area (Find a Ryan White HIV/AIDS Program Medical Provider)
- Dental schools: Some cities have dental schools or dental hygiene schools that provide good quality care at reduced rates. Check for a program near you (<u>Search for Dental</u> <u>Programs</u>)
- Public health or community-based primary care clinics: Clinics provide treatment at either a reduced rate or free of charge. Call your local Department of Health to find a clinic or check the <u>US Department of Health and Human Services service locator</u>

Taking Care of Yourself

Because of the increased risk for oral problems, it is especially important for people living with HIV to take good care of their mouths. Proper dental care is needed to keep teeth and gums healthy. Basic guidelines for good oral health suggest that you:

- Develop a good home care routine brush two to three times daily and floss once a day (preferably at night)
- Use a toothpaste or mouthwash that contains fluoride
- See the dentist every six months or more often if the dentist suggests it
- Avoid <u>smoking</u>, using tobacco products, and street drugs
- Eat a <u>healthy diet</u>

Most common oral conditions linked to HIV can be treated. If you notice any problems, it is important to talk with your health care provider or dentist about what treatment might work for you. Remember, with the right treatment, your mouth can feel better. And that is a very important step toward living well with HIV.