HIV AND THE MOUTH

ways to prevent and treat the oral conditions associated with hiv

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Taking care of your mouth and teeth is a very important, yet often overlooked, part of maintaining your general health. Good oral health can help you prevent or catch infections early. It can also give you clues as to the state of your overall health and the health of your immune system.

Starting and keeping good oral health

General guidelines for good oral health suggest that you: (1) thoroughly brush your teeth, at least once a day; (2) use toothpastes or rinses that contain fluoride; (3) floss once a day; (4) regularly use a mouthwash; and (5) regularly visit your dentist. Most of these are basic things to do, but they're often not followed.

Brushing

A good brushing should take at least two minutes, not the 30 seconds or less that most people devote to it. The way you brush is also important. It's recommended that you brush with a gentle, circular motion and slowly work your way from one side of your mouth to the other. Keep bristles at a 45° angle to the gum line when brushing your front teeth and gums. Pay special attention to areas you tend to neglect, like the back of your front bottom teeth, the sides of wisdom teeth and the back side of your lower teeth below your tongue. You should also brush your tongue to remove bacteria causing bad breath. It's important to avoid scrubbing your teeth, which may cause small cuts or scrapes.

WHAT'S INSIDE

Toothbrush and toothpaste

Dentists recommend toothbrushes with soft bristles because hard ones can cause the gums to bleed and recede, leaving unprotected areas prone to infection. Toothbrushes should be replaced every month or two.

Electric toothbrushes can sometimes be more effective for people unwilling or unable to spend a lot of time and attention brushing. However, they may be expensive for some, and sometimes people stop using them once the novelty wears off.

The most important concern about toothpaste is whether or not it has fluoride. Aside from that, specific brands and flavors are more of a personal choice and needs.

Dental floss

To floss, use a long length of floss and wrap the ends around your index fingers. Gently push it between your teeth and all the way to the gums. If you rarely or never floss, you may find some slight bleeding. This will stop once your gums get used to it and your flossing becomes a habit. If it continues to be difficult or painful to do, consider using a waxed floss or check with your dentist to see if you're flossing properly.

Mouthwash

Using a mouthwash at least twice a day can add fluoride to your teeth, kill bacteria often responsible for bad breath, reduce plaque that can cause cavities, and prevent gum disease.

Many prescription and over-the-counter mouthwashes are effective, but most contain up to 25% alcohol. Since this amount of alcohol can cause a burning sensation, some may find it necessary to use an alcohol-free rinse. Most alcohol-free mouthwashes are as effective as those with alcohol.

Dental visits

Regardless of a person's HIV status, regular visits involve going to the dentist about every six months. The visits allow your dentist to find infections and conditions early and treat them before they become a problem.

Also, studies show that cavities in people living with HIV can act as fungal reservoirs. Thus, treating cavities promptly may reduce infections like thrush. Also, dental professionals who have expertise in treating people living with HIV routinely check for oral signs of HIV-related illnesses to observe the progression of HIV disease.

Disclosing your HIV status

For proper care, it's helpful for a dentist to know that you're living with HIV because there are conditions (as described in this publication) that they will want to pay extra attention to. Finding a dentist who you trust, who's supportive and who can help you make informed treatment decisions is desirable.

If you don't already have a dentist who you trust and feel comfortable with, consider a referral from your doctor, a friend or an AIDS service organization. However, before you ultimately choose one and decide to disclose your status, you may want to talk to him or her yourself. Find out how experienced they are, get a feel for the overall atmosphere of the office, and discuss what information will be included in your file and what impact, if any, it may have on your insurance.

It's estimated that 90% of people with HIV will develop at least one oral condition related to HIV disease. These conditions, like candidiasis and hairy leukoplakia, may be the first sign of immune suppression linked to HIV infection and in many people are the first signals that lead doctors to encourage HIV testing. Most show up as lesions or sores and can be categorized into four types: abnormal cell growth, bacterial, viral and fungal.

The most common oral conditions of HIV infection are discussed below, but many others exist. In fact, at least 40 conditions have been recorded, so it's important to pay attention to changes in your oral health.

oral conditions of HIV disease

Abnormal cell growth

Abnormal cell growth (called *neoplastic lesions*) is essentially growths of tissue that may be harmless (*benign*) or cancerous. The most common cancers associated with HIV, which can affect the mouth, include Kaposi's sarcoma (KS) and lymphoma.

Kaposi's sarcoma

Kaposi sarcoma (KS) is the most common AIDS-related cancer, reported in about 15% of people with AIDS. Commonly KS is on the skin, although over half the people with it report oral lesions as well. Sometimes oral lesions, that appear as patches or swellings, are the first obvious signs of KS. Their color can be red or purple and they can be either raised or flat. The roof of the mouth is the most common site, but they also occur on the gums, tongue and at the back of the mouth, near the throat.

Oral KS usually is not painful, but it can occasionally become painful because of ulcers or other infection. Sometimes, KS lesions may interfere with chewing or talking. Good oral hygiene and professional cleaning are important in managing oral KS.

Treating KS in the mouth will vary based on the extent of the problem and if it interferes with quality of life. If a KS lesion isn't bothersome, no treatment is an option. If treatment is necessary, depending on the degree of the overall KS, it can range from treating a single lesion (directly injecting chemotherapy or surgical removal) to treating it systemically (throughout the body) by injection into a vein. Many patients find that once they are on effective anti-HIV therapy, the KS lesions resolve.

In addition, not every purple lesion is KS. If you have any silver filling that is under the gum, the gum may turn purple. For more information, read the publication, *Kaposi Sarcoma*, available from Project Inform at 1-800-822-7422 or *www.projectinform.org*.

Lymphoma

Lymphoma is more rare than KS and generally more serious. Oral symptoms, which may simply be a small lump in the mouth or near the tonsils, are often the first sign of lymphoma. The lesions include firm masses and persistent ulcers. It's possible to detect this condition early by having regular dental exams. Lymphoma can only be diagnosed with a biopsy. No one specific treatment is used to treat the oral lesions of lymphoma, but depending on the person's condition, they're often offered chemotherapy.

bacterial infections

Some of the most common oral signs of HIV disease result from overgrown bacteria. Fortunately, these infections are among the easiest to treat; but if left untreated or detected too late, serious health problems may occur.

Gingivitis and periodontal disease

Gingivitis is inflammation of the gums, sometimes accompanied by bleeding and bad breath, caused by a bacterial infection. Periodontal disease includes all diseases of the gums, teeth and underlying bone. People living with HIV are more at risk to these fairly common conditions and may also face more rapid and severe forms of gingivitis and periodontal disease. These more severe forms include linear gingivitis erythema (LGE) and necrotizing ulcerative periodontitis (NUP), conditions that occur almost exclusively in people living with HIV.

LGE, or red band gingivitis, is marked by a profound red banding along the teeth where the gums and teeth meet. Because it often occurs with occasional bleeding, LGE may be difficult to tell from ordinary gingivitis. LGE is related to, and may be a precursor of, other HIV-related NUP.

NUP is a condition that causes pain, spontaneous bleeding of the gums and rapid destruction of gum tissue and bone, which may lead to tooth loss. People often describe their discomfort as "deep jaw pain". What causes NUP is still unknown, but effective treatments are nonetheless available.

NUP and LGE are best treated with a thorough dental cleaning and by using a chlorhexidine rinse. People suffering from more severe NUP are also placed on antibiotics (typically 250mg metronidazole 3–4 times a day for 7–10 days or amoxicillin 500mg three times a day for 7–10 days) and a 0.12% chlorhexidine rinse for two weeks. Antibiotics may also be used for those with LGE. Early detection and treatment is very important. People unable to get emergency dental care might find relief by using chlorhexidine rinses, antibiotics, pain management and nutritional supplements until a dental appointment can be made.

In some cases, NUP may progress to include larger ulcers on the roof of the mouth and gums (called necrotizing stomatitis, or NS). NS is most often seen in people with lower CD4+ cell counts (below 200) and can be managed with antibiotics. This often involves taking the medicine through a vein (intravenously). Once NS, NUP or LGE is under control, keeping excellent oral health is crucial to prevent it from coming back.

Mycobacterium avium complex

Mycobacterium avium complex (MAC) is caused by bacteria and leads to symptoms like night sweats, fevers and weight loss. Oral lesions are uncommon in MAC disease, but when they occur they're likely to be ulcers on the roof of the mouth. For more information, read Project Inform's publication, *Mycobacterium Avium Complex*, available at 1-800-822-7422 or *www.projectinform.org*.

oral conditions at a glance

Aphthous Ulcers

SYMPTOMS
The formation of sores; pain, discomfort.

AFFECTED AREAS
Mostly *soft* parts of the mouth like the cheeks and sides of the tongue.

DIAGNOSIS
With strong history of aphthous ulcers, or when other possible causes are ruled out.

TREATMENT
Systemic and topical corticosteroid, occasionally thalidomide.

PREVENTION
None.

Cytomegalovirus

SYMPTOMS
The formation of mouth sores; pain, difficulty swallowing.

AFFECTED AREAS
Anywhere in the mouth. May appear in the throat as well.

DIAGNOSIS
Biopsy.

TREATMENT
Ganciclovir, foscarnet.

PREVENTION
None.

Dry Mouth

SYMPTOMS
Ongoing dryness of the mouth.

AFFECTED AREAS
In the mouth and throat.

DIAGNOSIS
Observations of reduced saliva flow, examination of one's medication regimen.

TREATMENT
Artificial saliva, chewing sugarless gum, drinking plenty of liquids.

PREVENTION
It's hard to anticipate bouts of dry mouth, but most treatments will work for prevention too.

Gingivitis, Periodontitis

SYMPTOMS
Inflammation of the gums, swelling, bleeding, bad breath, breaks in the seal between the gums and teeth.

AFFECTED AREAS
The gums and teeth.

DIAGNOSIS
The presence of typical signs/symptoms.

TREATMENT
A thorough professional cleaning, chlorhexidine rinse.

PREVENTION
Follow the guidelines for good oral health; particularly thorough brushing, flossing and regular dental visits.

Hairy Leukoplakia

SYMPTOMS
White streaky, *hairy* patches that can't be scraped off. Otherwise, none.

AFFECTED AREAS
Usually sides of the tongue. May appear in other parts of the mouth.

DIAGNOSIS
Biopsy.

TREATMENT
None. Severe cases: high dose acyclovir.

PREVENTION
None.

Herpes Simplex

SYMPTOMS
The formation of sores or small blister-like *bubbles*; pain, discomfort.

AFFECTED AREAS
Primary HSV: lip and gums. *Recurrent HSV:* lip, *hard* parts of the mouth like the roof and the back of the tongue.

DIAGNOSIS
A history of herpes, the presence of typical physical signs/symptoms.

TREATMENT
Acyclovir.

PREVENTION
Acyclovir may be used in the presence of frequent recurrence.

Herpes Zoster

SYMPTOMS
The formation of sores and small blister-like *bubbles*.

AFFECTED AREAS
Anywhere in the mouth.

DIAGNOSIS
Biopsy.

TREATMENT
Famciclovir or acyclovir.

PREVENTION
None.

Histoplasmosis

SYMPTOMS
Cough, fever, fatigue.

AFFECTED AREAS
All over the mouth.

DIAGNOSIS
Biopsy, culture.

TREATMENT
Amphotericin B, itraconazole.

PREVENTION
None.

Human Papillomavirus

SYMPTOMS
The formation of warts that are cauliflower-like, spiky or slightly raised with a flat surface.

AFFECTED AREAS
The inner lining of the mouth.

DIAGNOSIS
Biopsy.

TREATMENT
The only treatment available is the surgical or laser removal of the warts.

PREVENTION
None.

oral conditions at a glance

Kaposi's Sarcoma

SYMPTOMS
Red or purple patches or swellings either raised or flat; may become painful.

AFFECTED AREAS
Commonly on the roof of the mouth. May also appear on the gums, tongue and back of the throat.

DIAGNOSIS
Biopsy.

TREATMENT
Small lesions: vinblastine, surgical removal, radiation, carbon dioxide laser. *Large lesions:* radiation. Treating KS with systemic chemotherapy should be help reduce or eliminate oral lesions as well.

PREVENTION
None.

LGE, or Linear Gingivitis Erythema

SYMPTOMS
Profound red banding along the teeth.

AFFECTED AREAS
Where the teeth and gums meet.

DIAGNOSIS
The presence of typical signs/symptoms.

TREATMENT
Thorough professional cleaning, chlorhexidine rinse.

PREVENTION
Follow the guidelines for good oral health; particularly thorough brushing, flossing and regular dental visits.

Lymphoma

SYMPTOMS
Lesions include firm masses and persistent sores. May simply show up as a small lump.

AFFECTED AREAS
In the mouth, near the tonsils.

DIAGNOSIS
Biopsy.

TREATMENT
Chemotherapy.

PREVENTION
None.

Mycobacterium avium complex

SYMPTOMS
Oral lesions occur as sores.

AFFECTED AREAS
Sores appear on the roof of the mouth.

DIAGNOSIS
Culture, secondary tests that may indicate MAC.

TREATMENT
Numerous options include: clarithromycin, azithromycin plus ethambutol, rifabutin, rifampin, ciprofloxacin, amikacin, etc. Some drugs, particularly clarithromycin, may interact with common anti-HIV meds. Talk to your doctor or pharmacist about possible drug interactions.

PREVENTION
Avoid exposure to MAC organisms, like boil drinking water, don't eat raw foods, etc.

NS, or Necrotizing Stomatitis

SYMPTOMS
Some symptoms of NUP may exist, but characterized mostly by large sores.

AFFECTED AREAS
Sores will form on the roof of the mouth and gums. Other symptoms appear in the gums and teeth.

DIAGNOSIS
The presence of typical signs/symptoms.

TREATMENT
Thorough professional cleaning, chlorhexidine rinse, antibiotic therapy with metronidazole.

PREVENTION
Follow the guidelines for good oral health; particularly thorough brushing, flossing and regular dental visits.

NUP, or Necrotizing Ulcerative Periodontitis

SYMPTOMS
Pain, spontaneous bleeding of the gums, rapid destruction of gum tissue and supporting bone; tooth loss in advanced cases.

AFFECTED AREAS
The gums and teeth.

DIAGNOSIS
The presence of typical signs/symptoms.

TREATMENT
Thorough professional cleaning, chlorhexidine rinse.

PREVENTION
Follow the guidelines for good oral health; particularly thorough brushing, flossing and regular dental visits.

Oral Candidiasis

SYMPTOMS
Pain, loss of taste, distortion of taste, burning, discomfort.

AFFECTED AREAS
All over the mouth, possibly the throat, sometimes the corners of the lips.

DIAGNOSIS
Biopsy, culture.

TREATMENT
Systemic: fluconazole, ketoconazole, itraconazole *Topical:* nystatin, miconazole.

PREVENTION
Mouth rinses (chlorhexidine), nystatin, miconazole.

Tuberculosis

SYMPTOMS
The formation of sores.

AFFECTED AREAS
On the tongue.

DIAGNOSIS
Prior diagnosis of a TB lung infection plus biopsy of the oral sore.

TREATMENT
Systemic antibiotics intended to treat TB throughout the body.

PREVENTION
For individuals who may have been exposed to or are at risk to get TB, isoniazid is usually used.

viral infections

Mouth conditions caused by viruses can be painful and are rarely fully cleared from a person's body. There is, however, effective therapy that can treat current conditions and suppress future outbreaks.

Herpes simplex

Herpes simplex virus (HSV) Type 1, which causes blisters on the lips, is fairly common in the general population and even more so in people living with HIV. In addition to sores on the lips, HSV-1 can appear inside the mouth, as "bubbles" on the gums and in the mouth, often in firmer tissue, like the roof of the mouth. Herpes sometimes appears on the back or sides of the tongue or cheeks. Herpes sores can occur with fever, pain and loss of appetite. They can either be small and almost painless or they can be troublesome, extensive and persistent. Often, they're left untreated because they clear up after a relatively short period of time. Sores that are slow to heal can be treated with 1,000–1,600mg Zovirax (acyclovir) daily for seven to ten days. For more information, read the publication, *Herpes: Oral and Genital*, available from Project Inform at 1-800-822-7422 or *www.projectinform.org*.

Herpes zoster

Herpes zoster (*Vericella zoster* virus, or VZV) is a reactivation of the same virus that causes chicken pox. Outbreaks produce sores on the skin or in the mouth. The sores begin as "bubbles" and then break and crust over. Oral lesions also begin as "bubbles", but they later burst to form ulcers or open sores. Treatment should be started as soon as possible and involves using 500mg oral Famvir (famciclovir) every eight hours for seven days or 800mg oral acyclovir five times a day for 7–10 days.

Hairy leukoplakia

Oral hairy leukoplakia (OHL), believed to be caused by the same virus (Epstein-Barr virus) that causes mononucleosis (mono), is one of the most common HIV-related oral conditions. It's not dangerous and can occur very early in HIV disease. It may, however, point to an increasing risk of other, more serious illnesses.

Symptoms include white patches on the sides of the tongue or walls of the mouth. They look corrugated, or folded, with hair-like particles along the folds. OHL is rarely (if ever) painful and while annoying (people complain about its appearance and texture), it's not serious.

Hairy leukoplakia can be treated with 2.5–3mg acyclovir once a day for 2–3 weeks. It has also been reported that Cytovene (ganciclovir), Retin-A (tretinoin) and Podocon-25 (podophyllin) can be effective. For those interested in alternative therapies, propolis tincture (a product of bees) has shown some favorable results when applied directly to the lesions. Unfortunately, all these treatments must be taken continuously because lesions return when treatment is stopped. There's some evidence that acyclovir may suppress breakouts, but other evidence suggest that it's ineffective in treating this condition.

Cytomegalovirus

Cytomegalovirus (CMV) mostly occurs in people with late-stage disease, and only very rarely does it manifest in the mouth. Some dentists, however, report that they find CMV in ulcers on the inner lining of the mouth in people with CMV disease. These sores can be widespread and have been seen on the gums, cheeks and roof of the mouth. Since oral CMV ulcers can look like other ulcers, a biopsy may be necessary to identify it in the mouth. When ganciclovir (in the vein, followed by oral drug) is used to treat CMV disease, the oral ulcers recede.

Human papillomavirus

Human papillomavirus (HPV) is the same virus that causes genital and anal warts. In people living with HIV, HPV lesions can begin to appear on the skin and inner lining of the mouth. In the mouth, they look like typical warts: cauliflower-like, "spiky" or slightly raised with a flat surface. It's not currently thought that oral warts can become cancerous. Surgical or laser removal is the most effective way to treat them. However, recurrence is common, so removal should probably be reserved for lesions that interfere with overall appearance or normal activities like chewing, swallowing or talking. Be aware that if you have HPV, safe oral sexual practices are necessary to prevent passing it on to your partner.

fungal infections

Oral candidiasis

Also known as *thrush*, oral candidiasis is perhaps the most common oral condition in people with HIV. A healthy immune system can suppress the overgrowth of this fungus, but even a mildly compromised system may not keep the fungus in check. Most outbreaks occur when the CD4+ cell count falls below 400. But other factors may cause candidiasis, such as prolonged stress, depression and using antibiotics.

A trained dental professional can identify and distinguish the most common types of candidiasis that effect people with HIV. Symptoms may include red patches, white patches and clefts or grooves. They may or may not cause minor pain. For more information, read Project Inform's publication, *Oral Candidiasis*, available at 1-800-822-7422 or *www.projectinform.org*.

Oral candidiasis may be treated with antifungal medicine given throughout the body (systemically) or applied directly to lesions. In mild cases, it's treated directly for at least two weeks. Typical medications include Mycelex (clotrimazole) troches, Fungizone Oral Suspension (oral amphotericin B) and Nilstat (nystatin). Nystatin contains a lot of sugar, so if you use it, rinse afterwards with a fluoride (alcohol-free) mouthwash to remove the sugar. Excess sugar can help fungus and bacteria to grow.

More severe forms of candidiasis, such as esophageal candidiasis, may require systemic drugs, including ketoconazole, itraconazole and fluconazole (Diflucan). Treatment usually lasts two weeks or longer, as necessary. All of these drugs interact with commonly used anti-HIV drugs, particularly protease inhibitors. Changing your dietary and nutrition may also help.

In all cases, the full course of therapy should be completed even when obvious symptoms disappear beforehand. This will help prevent recurrences, though not 100% of the time. If outbreaks recur, ongoing preventive therapy may be useful.

Treatment may be started even before the first outbreak (preventive therapy, also called prophylaxis), but there's some controversy over its effectiveness. The main concern is that the fungus may grow resistant to drugs used for preventive therapy, making these drugs ineffective if or when treatment is needed. For more information on treating and preventing candidiasis, read Project Inform's publication, *Oral Candidiasis*, *Vaginal Candidiasis* or *Systemic Candidiasis* available at 1-800-822-7422 or *www.projectinform.org*.

Histoplasmosis

Histoplasmosis is a fungus common in the US, mostly in the valleys of the Mississippi, Tennessee, Missouri, Ohio and St. Lawrence rivers. Most infections either go unnoticed or cause mild problems, so the diagnosis can be difficult. Symptoms include cough, fever and general fatigue. Sometimes histoplasmosis can occur with mouth sores. People with very compromised immune systems are more likely to get this disease. There's no specific treatment for just the mouth sores; histoplasmosis is treated as a general infection. HIV-positive people with this condition require lifelong treatment with low doses of itraconazole because of the extremely high rate of recurrence.

other oral conditions of hiv disease

The two most common conditions that may not be caused by an infection include dry mouth and small round mouth sores, called aphthous ulcers.

Dry mouth (xerostomia)

Dry mouth, or *xerostomia*, is a common condition in HIV disease that may have a variety of causes. HIV disease itself may cause dry mouth because HIV-related salivary disease causes swollen salivary glands (glands in the mouth that produce saliva, or spit). That, in turn, reduces the amount of saliva in the mouth. A dry mouth is also a side effect of some anti-HIV drugs and other medicines like antihistamines and antidepressants. Allergies and infections may also cause dry mouth.

Though it may not seem serious, leaving dry mouth untreated may lead to problems. Without enough saliva, food can build up in the mouth, between the teeth and gums and promote tooth decay, periodontal disease and candidiasis. Furthermore, a lower flow of saliva can cause high acid levels to persist long after eating. This can wear out the enamel on the teeth leaving them more susceptible to cavities and other problems. It is common for people with dry mouth to undergo a large number of cavities, so it's important to visit your dentist regularly if you have dry mouth.

Fortunately, dry mouth is fairly simple to overcome and treat. One easy way is to chew sugarless gum, which stimulates more saliva. Sucking on sugar-free lemon drops, crushed ice or lozenges can produce similar effects. Drinking plenty of liquids at or between meals is a great idea, as is rinsing your mouth often with warm salt water or mouthwash (preferably alcohol-free). Avoid sugar since it can make your mouth even drier and promote the growth of fungus.

Some prescription drugs may help lessen dry mouth. In particular, artificial saliva is available and some people may benefit from pilocarpine therapy designed to stimulate the salivary glands. Herbs like demulcents, chickenweed and slippery elm may also help combat dry mouth, though it's unclear if these herbs interact with commonly used anti-HIV therapies.

Aphthous ulcers

Aphthous means "little round", so aphthous ulcers are little round sores in the mouth. They tend to form on "soft" tissue in the mouth, like the inside of the cheeks, on the sides of the tongue or into the throat. These ulcers can develop in HIV-negative people, but people living with HIV may suffer from more severe and prolonged ulcers. They may be a side effect of certain anti-HIV therapies, though even people not taking anti-HIV medicines may have them.

The sores are usually very painful when touched or when food or liquids pass over them. They can even be so severe that a person may avoid eating or drinking altogether. A typical ulcer has a red halo and is covered by a grayish layer or membrane. They're generally mistaken for herpes sores, and what causes them is still not known. Sometimes aphthous ulcers resolve without treatment. However, apthous ulcers that are small (minor) can rapidly become very large (major). So if you're HIV-positive, treatment for these lesions should be considered.

Treatment can involve using steroids applied directly on the ulcers. A mixture of Lidex (fluocinonide) and Orobase, one of Cormax or Temovate (clobetasol) and Orobase, or a Decadron (dexamethasone) elixir is effective. An experimental therapy, thalidomide, has been very effective in treating aphthous ulcers in studies, though it is not without side effects. Side effects may include fatigue, pain and tingling in the hands and feet (peripheral neuropathy) and rarely, low neutrophil counts (neutropenia). (Note: thalidomide should NOT be used by pregnant women or women who are planning to become pregnant while on therapy. It can cause serious birth defects if used even once during the first trimester of pregnancy.)

Commentary

A February 1999 study revealed an overall decline in the rate of the most common oral lesions in people living with HIV. But it also showed an increase in the number of cases of oral warts and linked this increase to protease inhibitor use. Another study showed that people using anti-HIV therapy and optimal prevention for infections were less likely to get candidiasis in their throats. This suggests that stopping HIV from destroying the immune system can help the body to control this fungal infection.

Planning a course of action for dental care and treatment is important for people living with HIV. Your dentist is a partner in helping you develop this plan, there to provide you with information about your options, potential risks and benefits, and recommendations. Optimally, any course of treatment should be made together—with you, your doctor and your dentist working together.

Other recommended resources include www.HIVdent.org, a nonprofit website dedicated to assuring high quality oral health services for people living with HIV. *HIVdent.org* has a collection of easy-to-read materials on a variety of oral health and general HIV topics. The National Institute of Dental Research (*www.nidcr.nih.gov*) has information on studies and links to information on potential sites that deliver dental care.

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Concerns for HIV-positive people considering or who currently have dentures

People who have already experienced extensive tooth loss from gum disease are encouraged to consider dentures, partials or "bridges." A healthy diet is important in maintaining good general health. And since unwanted weight loss (wasting syndrome) and malnutrition are fairly common and serious problems for people with HIV, anything that gets in the way of eating should be addressed. Therefore, dentures and bridges can be very important for people unable to eat properly. Also, dentures may help restore speech, appearance and self-esteem that may be affected because of tooth loss.

For those considering or currently using dentures, the following are things to consider:

- **Optimally, dentures should be easy to insert and remove and comfortable enough to wear regularly.**
- **They should be designed to not interfere with other oral conditions such that they avoid contact with painful sores.**
- **Dentures or partials aren't a substitute for good oral health. You still need to take care of your mouth even if you've lost some teeth!**
- **Dentures and partials need to be cleaned as thoroughly and as often as natural teeth.**
- **Consult you dentist about any special needs or problems you have or are concerned about.**