CERTIFICATE ECDE

HEALTH AND NUTRITION & CARE SHORT NOTES

10 Common Childhood Illnesses and Their Treatments

All children deserve high-quality medical care. As a parent, it is important to be aware of the most up-to-date treatment guidelines so you can be sure your child is getting the best care possible.

The following information from the American Academy of Pediatrics (AAP) lists some of the most common childhood illnesses and their approved treatments. The treatments discussed here are based on scientific evidence and best practices. However, there may be reasons why your pediatrician has different recommendations for your child, especially if your child has an ongoing medical condition or allergy. Your pediatrician will discuss any variations in treatment with you. If you have any questions about appropriate care for your child, please discuss them with your pediatrician.

1. Sore Throat

- **Sore throats are common in children and can be painful**. However, a sore throat that is caused by a virus does not need antibiotics. In those cases, no specific medicine is required, and your child should get better in seven to ten days. In other cases, a sore throat could be caused by an infection called streptococcal (strep throat).

- **Strep cannot be accurately diagnosed by simply looking at the throat**. A lab test or in-office rapid strep test, which includes a quick swab of the throat, is necessary to confirm the diagnosis of strep. If positive for strep, your pediatrician will prescribe an antibiotic. It's very important that your child take the antibiotic for the full course, as prescribed, even if the symptoms get better or go away. Steroid medicines (such as prednisone) are not an appropriate treatment for most cases of sore throat.

- **Babies and toddlers rarely get it strep throat**, but they are more likely to become infected by streptococcus bacteria if they are in child care or if an older sibling has the illness. Although strep spreads mainly through coughs and sneezes, your child can also get it by touching a toy that an infected child has played with.

- *See The Difference between a Sore Throat, Strep & Tonsillitis and When a Sore Throat is a More Serious Infection.*

2. Ear Pain

- **Ear pain is common in children and can have many causes**—including ear infection (otitis media), swimmer's ear (infection of the skin in the ear canal), pressure from a cold or sinus infection, teeth pain radiating up the jaw to the ear, and others. . To tell the difference, your pediatrician will need to examine your child's ear. In fact, an in-office exam is still the best way for your pediatrician to make an accurate diagnosis. If your child's ear pain is accompanied by a high fever, involves both ears, or if your child has other signs of illness, your pediatrician may decide that an antibiotic is the best treatment.

- **Amoxicillin is the preferred antibiotic for middle ear infections**—except when there is an allergy to penicillin or chronic or recurrent infections.

- **Many true ear infections are caused by viruses and do not require antibiotics**. If your pediatrician suspects your child's ear infection may be from a virus, he or she will talk with you about the best ways to help relieve your child's ear pain until the virus runs its course.

- *See Ear Infection Information, Middle Ear Infections, and Your Child and Ear Infections.*

3. Urinary Tract Infection

- **Bladder infections, also called urinary tract infections or UTIs, occur when bacteria build up in the urinary tract**. A UTI can be found in children from infancy through the teen years and into adulthood. Symptoms of a UTI include pain or burning during urination, the need to urinate frequently or urgently, bedwetting or accidents by a child who knows to use the toilet, abdominal pain, or side or back pain.

- **Your child's doctor will need a urine sample to test for a UTI before determining treatment**. Your doctor may adjust the treatment depending on which bacteria is found in your child's urine.

- *See Detecting Urinary Tract Infections.*

4. Skin Infection

- **In most children with skin infections, a skin test (culture or swab) may be needed to determine the most-appropriate treatment**. Tell your doctor if your child has a history of MRSA, staph infection, or other resistant bacteria or if he or she has been exposed to other family members or contacts with resistant bacteria.

- *See Boils, Abscess & Cellulitis and Tips for Treating Viruses, Fungi & Parasites.*

5. Bronchitis

- **Chronic bronchitis is an infection of the larger, more central airways in the lungs and is more often seen in adults**. Often the word "bronchitis" is used to describe a chest virus and does not require antibiotics.

- *See Bronchitis (CDC.gov).*

6. Bronchiolitis

- **Bronchiolitis is common in infants and young children during the cold and flu season**. Your doctor may hear "wheezing" when your child breathes.

- **Bronchiolitis is most often caused by a virus, which does not require antibiotics**. Instead, most treatment recommendations are geared toward making your child comfortable with close monitoring for any difficulty in breathing, eating, or signs of dehydration. Medicines used for patients with asthma (such as albuterol or steroids) are not recommended for most infants and young children with bronchiolitis. Children who were born prematurely or have underlying health problems may need different treatment plans.

- *See Bronchiolitis and Treating Bronchiolitis in Infants.*

7. Pain

- **The best medicines for pain relief for children are acetaminophen or ibuprofen**. Talk to your pediatrician about how much to give your child, as it should be based on your child's weight.

- **Narcotic pain medications are not appropriate for children with common injuries or complaints such as sprained ankle, ear pain, or sore throats**. Codeine should never be used for children as it's been associated with severe respiratory problems and even death in children.

- *See Fever and Pain Medicine: How Much To Give Your Child.*

8. Common Cold

- **Colds are caused by viruses in the upper respiratory tract**. Many young children—especially those in child care—can get 6 to 8 colds per year. Symptoms of a cold (including runny nose, congestion, and cough) may last for up to ten days.

- **Green mucus in the nose does not automatically mean that antibiotics are needed; common colds never need antibiotics.** However, if a sinus infection is suspected, your doctor will carefully decide whether antibiotics are the best choice based on your child's symptoms and a physical exam.

- *See Children and Colds and Caring for Your Child's Cold or Flu.*

9. Bacterial Sinusitis

- **Bacterial sinusitis is caused by bacteria trapped in the sinuses.** Sinusitis is suspected when cold-like symptoms such as nasal discharge, daytime cough, or both last over ten days without improvement.

- **Antibiotics may be needed** if this condition is accompanied by thick yellow nasal discharge and a fever for at least 3 or 4 days in a row.

- *See The Difference Between Sinusitis and a Cold.*

10. Cough

- **Coughs are usually caused by viruses and do not often require antibiotics**.

- **Cough medicine is not recommended for children 4 years of age and younger, or for children 4 to 6 years of age unless advised by your doctor**. Studies have consistently shown that cough medicines do not work in the 4-years-and-younger age group and have the potential for serious side effects. Cough medicines with narcotics—such as codeine—should not be used in children.

Explaining HIV and AIDS

What is HIV?

Human immunodeficiency virus (HIV) is a virus that attacks immune cells called CD4 cells, which are a type of T cell.

These are white blood cells that move around the body, detecting faults and anomalies in cells as well as infections. When HIV targets and infiltrates these cells, it reduces the body's ability to combat other diseases. This increases the risk and impact of opportunistic infections and cancers.

However, a person can carry HIV without experiencing symptoms for a long time.

HIV is a lifelong infection. However, receiving treatment and managing the disease effectively can prevent HIV from reaching a severe level and reduce the risk of a person passing on the virus.

What is AIDS?

AIDS is the most advanced stage of HIV infection. Once HIV infection develops into AIDS, infections and cancer pose a greater risk.

Without treatment, HIV infection is likely to develop into AIDS as the immune system gradually wears down. However, advances in ART mean than an ever-decreasing number of people progress to this stage.

By the close of 2015, around 1,122,900 people were HIV-positive. To compare, figures from 2016 show that medical professionals diagnosed AIDS in an estimated 18,160 people.

Causes

People transmit HIV in bodily fluids, including:

- blood
- semen
- vaginal secretions
- anal fluids
- breast milk

In the United States, the main causes of this transfer of fluids are:

- anal or vaginal intercourse with a person who has HIV while not using a condom or PrEP, a preventive HIV medication for people at high risk of infection
- sharing equipment for injectable illicit drugs, hormones, and steroids with a person who has HIV

A woman living with HIV who is pregnant or has recently given birth might transfer the disease to her child during pregnancy, childbirth, or breastfeeding.

The risk of HIV transmitting through blood transfusions is extremely low in countries that have effective screening procedures in place for blood donations.

Undetectable = untransmittable

To transmit HIV, these fluids must contain enough of the virus. If a person has ‘undetectable’ HIV, they will not transmit HIV to another person, even if after a transfer of fluids.

Undetectable HIV is when the amount of HIV in the body is so low that a blood test cannot detect it. People may be able to achieve undetectable levels of HIV by closely following the prescribed course of treatment.

Confirming and regularly monitoring undetectable status using a blood test is important, as this does not mean that the person no longer has HIV. Undetectable HIV relies on the person adhering to their treatment, as well as the effectiveness of the treatment itself.

Progression to AIDS

The risk of HIV progressing to AIDS varies widely between individuals and depends on many factors, including:

- the age of the individual
- the body’s ability to defend against HIV
- access to high-quality, sanitary healthcare
- the presence of other infections
- the individual’s genetic inheritance resistance to certain strains of HIV
- drug-resistant strains of HIV

Symptoms

For the most part, infections by other bacteria, viruses, fungi, or parasites cause the more severe symptoms of HIV.

These conditions tend to progress further in people who live with HIV than in individuals with healthy immune systems. A correctly functioning immune system would protect the body against the more advanced effects of infections, and HIV disrupts this process.

Early symptoms of HIV infection

Sweats are an early sign of HIV, but many people do not know they have the disease for years.

Some people with HIV do not show symptoms until months or even years after contracting the virus.

However, around 80 percent of people may develop a set of flu-like symptoms known as acute retroviral syndrome around 2–6 weeks after the virus enters the body.

The early symptoms of HIV infection may include:

- fever
- chills
- joint pain
- muscle aches
- sore throat
- sweats. particularly at night
- enlarged glands
- a red rash
- tiredness
- weakness
- unintentional weight loss
- thrush

These symptoms might also result from the immune system fighting off many types of viruses.

However, people who experience several of these symptoms and know of any reason they might have been at risk of contracting HIV over the last 6 weeks should take a test.

Asymptomatic HIV

In many cases, after the symptoms of acute retroviral syndrome, symptoms might not occur for many years.

During this time, the virus continues to develop and cause immune system and organ damage. Without medication that prevents the replication of the virus, this slow process can continue for an average of around 10 years.

A person living with HIV often experiences no symptoms, feels well, and appears healthy.

Complying rigidly to a course of ART can disrupt this phase and suppress the virus completely. Taking effective antiretroviral medications for life can halt on-going damage to the immune system.

Late-stage HIV infection

Without medication, HIV weakens the ability to fight infection. The person becomes vulnerable to serious illnesses. This stage is known as AIDS or stage 3 HIV.

Symptoms of late-stage HIV infection may include:

- blurred vision
- diarrhea, which is usually persistent or chronic
- dry cough
- a fever of over 100 °F (37 °C) lasting for weeks
- night sweats
- permanent tiredness
- shortness of breath, or dyspnea
- swollen glands lasting for weeks

- unintentional weight loss
- white spots on the tongue or mouth

During late-stage HIV infection, the risk of developing a life-threatening illness increases greatly. A person with late-stage HIV can control, prevent and treat serious conditions by taking other medications alongside HIV treatment.

HIV and AIDS myths and facts

Many misconceptions circulate about HIV that are harmful and stigmatizing for people with the virus.

The following cannot transmit the virus:

- shaking hands
- hugging
- kissing
- sneezing
- touching unbroken skin
- using the same toilet
- sharing towels
- sharing cutlery
- mouth-to-mouth resuscitation or other forms of “casual contact”
- the saliva, tears, feces, and urine of a person with HIV

Diagnosis

The Centers for Disease Control and Prevention (CDC) estimates that about 1 in every 7 HIV-positive Americans is unaware of their HIV status.

Becoming aware of HIV status is vital for commencing treatment and preventing the development of more severe immune difficulties and subsequent infections.

HIV blood tests and results

A doctor can test for HIV using a specific blood test. A positive result means that they have detected HIV antibody in the bloodstream. The blood is re-tested before a positive result is given.

After potential exposure to the virus, early testing and diagnosis is crucial and greatly improves the chances of successful treatment. Home testing kits are also available.

HIV might take 3 – 6 months to show up in testing, and re-testing may be necessary for a definitive diagnosis. People at risk of infection within the last 6 months can have an immediate test. The test provider will normally recommend another test within a few weeks.

Treatment

Adhering to antiretroviral treatment can reduce HIV to an undetectable viral load.

No cure is currently available for HIV or AIDS.

However, treatments can stop the progression of the condition and allow most people living with HIV the opportunity to live a long and relatively healthy life.

Starting ART early in the progression of the virus is crucial. This improves quality of life, extends life expectancy, and reduces the risk of transmission, according to the WHO's guidelines from June 2013.

More effective and better-tolerated treatments have evolved that can improve general health and quality of life by taking as little as one pill per day.

A person living with HIV can reduce their viral load to such a degree that it is no longer detectable in a blood test. After assessing a number of large studies, the CDC concluded that individuals who have no detectable viral load

“have effectively no risk of sexually transmitting the virus to an HIV-negative partner.”

Medical professionals refer to this as undetectable = untransmittable (U=U).

Emergency HIV pills, or post-exposure prophylaxis

If an individual believes they have been exposed to the virus within the last 3 days, anti-HIV medications, called post-exposure prophylaxis (PEP), may be able to stop infection. Take PEP as soon as possible after potential contact with the virus.

PEP is a treatment lasting a total of 28 days, and physicians will continue to monitor for HIV after the completion of the treatment.

Antiretroviral drugs

The treatment of HIV involves antiretroviral medications that fight the HIV infection and slows down the spread of the virus in the body. People living with HIV generally take a combination of medications called highly active antiretroviral therapy (HAART) or combination antiretroviral therapy (cART).

There are a number of subgroups of antiretrovirals, such as:

Protease inhibitors

Protease is an enzyme that HIV needs to replicate. These medications bind to the enzyme and inhibit its action, preventing HIV from making copies of itself. These include:

- atazanavir/cobicistat (Evotaz)
- lopinavir/ritonavir (Kaletra)
- darunavir/cobicistat (Prezcobix)

Integrase inhibitors

HIV needs integrase, another enzyme, to infect T cells. This drug blocks integrase. These are often the first line of treatment due to their effectiveness and limited side effects for many people.

Integrase inhibitors include:

- elvitegravir (Vitekta)
- dolutegravir (Tivicay)
- raltegravir (Isentress)

Nucleoside/nucleotide reverse transcriptase inhibitors (NRTIs)

These drugs, also referred to as “nukes,” interfere with HIV as it tries to replicate.

This class of drugs includes:

- abacavir (Ziagen)
- lamivudine/zidovudine (Combivir)
- emtricitabine (Emtriva)
- tenofovir disproxil (Viread)

Non-nucleoside reverse transcriptase inhibitors (NNRTIs)

NNRTIs work in a similar way to NRTIs, making it more difficult for HIV to replicate.

Chemokine co-receptor antagonists

These drugs block HIV from entering cells. However, doctors in the U.S. do not often prescribe these because other drugs are more effective.

Entry inhibitors

Entry inhibitors prevent HIV from entering T cells. Without access to these cells, HIV cannot replicate. As with chemokine co-receptor antagonists, they are not common in the United States.

People will often use a combination of these drugs to suppress HIV.

A medical team will adapt the exact mix of drugs to each individual. HIV treatment is usually permanent, lifelong, and based on routine dosage. A person living with HIV must take pills on a regular schedule. Each class of ARVs has different side effects, but possible common side effects include:

- nausea

- fatigue
- diarrhea
- headache
- skin rashes

Complementary or alternative medicine

Although many people who have HIV try complementary, alternative, or herbal options, such as herbal remedies, no evidence confirms them to be effective. According to some limited studies, mineral or vitamin supplements may provide some benefits in overall health. It is important to discuss these options with a healthcare provider because some of these options, even vitamin supplements, may interact with ARVs.

Prevention

To prevent contracting HIV, healthcare professionals advise precautions related to the following.

Sex using a condom or PrEP: Having sex without a condom or other preventive measures, such as PrEP, can drastically increase the risk of transmitting HIV and other sexually transmitted infections (STIs).

Use condoms or PrEP during every sexual act with a person outside of a trusted relationship in which neither partner has HIV.

The U.S. Preventive Services Task Force advise in their 2019 guidelines that doctors should only consider PrEP for people with recent negative results from an HIV test. They advise that those with a high risk of HIV, who are suitable for PrEP, should take it once a day.

In the guidelines, the task force approves only one PrEP formation, which is a combination of tenofovir disoproxil fumarate and emtricitabine.

Drug injection and needle sharing: Intravenous drug use is a key factor for HIV transmission in developed countries. Sharing needles and other drug equipment can expose users to HIV and other viruses, such as hepatitis C. Certain social strategies, such as needle-exchange programs, can help to reduce the infections as a result of drug abuse. Recovering from a substance use disorder can improve health a quality of life for many reasons, but it can dramatically reduce potential exposure to HIV.

People using a needle to take medications should use a clean, unused, unshared needle.

Body fluid exposure: A person can limit their potential exposure to HIV by taking precautions to reduce the risk of exposure to contaminated blood. Healthcare workers should use gloves, masks, protective eyewear, shields, and gowns in situations where exposure to bodily fluids is a possibility. Frequently and thoroughly washing the skin immediately after coming into contact with blood or other bodily fluids can reduce the risk of infection. Healthcare works should follow a set of procedures known as universal precautions to prevent transmission.

Pregnancy: Certain antiretrovirals might harm an unborn fetus during pregnancy.

However, an effective, well-managed treatment plan can prevent mother-to-fetus HIV transmission. Delivery through caesarean section may be necessary.

Women who are pregnant but have HIV might also pass on the virus through their breast milk. However, regularly taking the correct regimen of medications greatly reduces the risk of transmitting the virus.

Discuss all options with a healthcare provider.

Education: Teaching people about known risk factors is vital to equip them with the tools to avoid exposure to HIV.

Living with HIV

A person with HIV can live a full and active life, as long as they adhere to treatment.

Due to the added risk of other infections and disease, people living with HIV must make lifestyle adjustments to accommodate their reduced immunity.

Adherence: Taking HIV medication as prescribed is absolutely essential to effective treatment. Missing even a few doses might jeopardize the treatment. Program a daily, methodical routine to fit the treatment plan around any existing lifestyle and schedule. Treatment plans will be different between people. People sometimes refer to “adherence” as “compliance”.

HIV medications can cause particularly severe side effects that often deter people from adherence. Learn more about the adverse effects of HIV medication by clicking here.

If side effects are becoming too severe, speak to your medical team rather than simply stopping medication. They can switch the regimen to a better-tolerated drug.

General health: Taking steps to avoid illness and other infections is key. People living with HIV should seek to improve overall health through regular exercise, a balanced, nutritious diet, and the cessation of any drugs, including tobacco.

Additional precautions: People living with AIDS should take extra precautions to prevent any exposure to infection, especially around animals. Avoid coming into contact with animal feces and pet litter.

Doctors also recommend the meticulous and regular washing of hands. Antiretrovirals reduce the need for these precautions.

Regular contact with doctors: HIV is a lifelong condition, so regular contact with a healthcare team is important for updating treatment in line with

advancing age and other conditions. The healthcare team will regular review and adjust treatment accordingly.

Psychological effects: Common misconceptions about AIDS and HIV are reducing as understanding of the disease increases.

However, stigma around the condition continues in many parts of the world. People living with HIV may feel excluded, persecuted, and isolated.

An HIV diagnosis can be very distressing, and feelings of anxiety or depression are common. If you feel anxious or have symptoms of depression, seek medical help immediately.

Takeaway

HIV is a misunderstood and potentially dangerous disease that reduces the effectiveness of the immune system in combatting other infections.

Advances in modern medicine person living with HIV can have a near-normal life expectancy and active lifestyle. A person receiving antiretroviral therapy must adhere strictly to their regime for the most effective results.

HIV transmits in bodily fluids, such as semen or vaginal secretions during sex, or blood. In the United States, HIV most frequently transmits through sexual intercourse without a condom or PrEP and sharing needles when injecting drugs.

However, if a person has a viral load that HIV tests cannot detect, they cannot transmit the virus to another person.

If HIV advances, for example in situations where a person is not aware of their HIV status or does not receive treatment, it can progress to a late stage known as AIDS.

AIDS can open the door to a range of infections known as opportunistic infections that pose a severe risk to health. Some are extreme or prolonged

presentations of infections that would normally resolve quickly in a person with healthy immune function.

Others might occur due to microbes that occur naturally in the environment and would not normally cause infection at all.

A person living with AIDS can revert the condition to HIV through adhering to treatment.