

# Child Development

## 15 - 18 Months

My name is \_\_\_\_\_. The date is \_\_\_\_\_.

I weigh \_\_\_\_\_ pounds, and I am \_\_\_\_\_ inches long.

The circumference of my head is \_\_\_\_\_ inches.

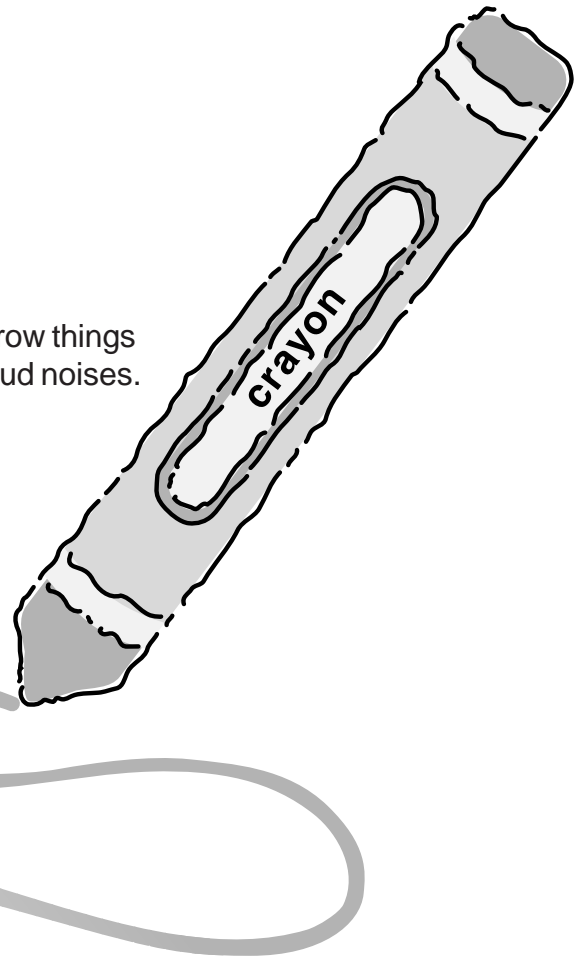
I am pretty mobile now, and I can walk, run, and climb. I like to throw things and chase after them. I also like to pound on things and make loud noises.

Scribbling with crayons, playing with push and pull toys, and stacking rings on a spindle are other activities I enjoy. I am learning to drink from a cup and use a spoon.

I can say "Mama" and "Dada" to mean my parents, and I can say a few other words too. I can imitate what other people say. Pretty soon I will be combining two words together to make "sentences." I understand the word "no" and I can understand a lot of other things too, much more than I can say.

*Please remember to:*

Use my car seat, rear-facing until I am two years old or outgrow the weight or height limits of my car seat. Keep pieces of hard food away – I can easily choke on nuts, chips, grapes, raisins, and hot dogs too. If you haven't already, discontinue use of my bottles and pacifiers; I do not need them anymore. Offer me healthy food choices: that way, even if I'm a picky eater, I will get enough nutrition. Teach me about discipline in a loving but firm, consistent way. I learn about rules and limit-setting much more easily with positive support than punishment. Brush my teeth twice a day and teach me how to do it, but watch me please. Only use toddler toothpaste, because I haven't learned to spit it out yet. Take me to the dentist for my first visit, if you haven't done that already.



# Toilet-Training Basics

## Definition

Your child is toilet-trained when, without any reminders, your child walks to the potty, undresses, urinates or has a bowel movement, and pulls up his pants. Some children will learn to control their bladders first; others will start with bowel control. Both kinds of control through the night normally happens several years later than daytime control. The gradual type of toilet training discussed here can usually be completed in two weeks to two months.

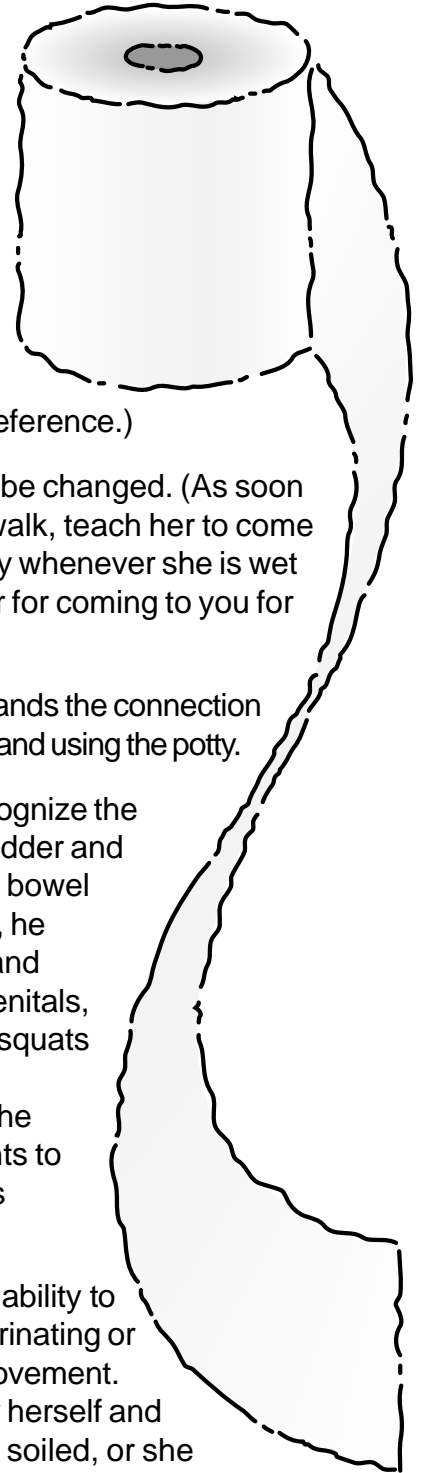
## Toilet-Training Readiness

Don't begin training until your child is clearly ready. Readiness doesn't just happen; it involves concepts and skills you can begin teaching your child at 12 months of age. Reading some of the special toilet-learning books to your child can help. Most children can be made ready for toilet training by 24 months of age and some even by 18 months. If you don't actively try to toilet train your child, by the time she is three years old, she will probably have trained herself, and this is a perfectly fine approach.

The following signs indicate that your child is ready:

- Your child understands what "pee," "poop," "dry," "wet," "clean," "messy," and "potty" mean. (Teach these words.)
- Your child understands what the potty is for. (Teach this by having your child watch parents, older siblings, and children near his age use the toilet correctly.)

- Your child prefers dry, clean diapers. (Change your child frequently to encourage this preference.)
- Your child likes to be changed. (As soon as she is able to walk, teach her to come to you immediately whenever she is wet or dirty. Praise her for coming to you for a change.)
- Your child understands the connection between dry pants and using the potty.
- Your child can recognize the feeling of a full bladder and the urge to have a bowel movement; that is, he paces, jumps up and down, holds his genitals, pulls at his pants, squats down, or tells you. (Clarify for him: "The poop [or pee] wants to come out. It needs your help.")
- Your child has the ability to briefly postpone urinating or having a bowel movement. She may go off by herself and come back wet or soiled, or she may wake up from naps dry.



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## Method for Toilet Training

The way to train your child is to offer encouragement and praise, be patient, and make the process fun. Avoid any pressure or punishment. Your child must feel in control of the process.

### Buy supplies.

- Potty chair (floor-level type). If your child's feet can reach the floor while he sits on the potty, he has leverage for pushing and a sense of security. He also can get on and off whenever he wants to.
- Stickers or stars for rewards.

**Make the potty chair one of your child's favorite possessions.** Several weeks before you plan to begin toilet training, take your child with you to buy a potty chair. Have your child help you put her name on it. Allow your child to decorate it or even paint it a different color. Then have your child sit on it as a chair. Have your child use it while watching TV, eating snacks, playing games, or looking at books. Keep it in the room in which your child usually plays. Only after your child clearly has good feelings toward the potty chair (after at least one week), proceed to actual toilet training.

**Encourage practice runs on the potty.** Do a practice run whenever your child gives a signal that looks promising, such as a certain facial expression, grunting, holding the genital area, pulling at his pants, pacing, squatting, squirming, or passing gas. Other good times are after naps or 20 minutes after meals. Say encouragingly, "The poop (or pee) wants to come out. Let's use the potty." Encourage your child to walk to the potty and sit there with his diapers or pants off. Your child can then be told, "Try to go pee-pee in the potty." If your child is reluctant to cooperate, he can be encouraged to sit on the potty by doing something fun – for example, you might read a story. If your child wants to get up after one minute

of encouragement, let him get up. Never force your child to sit there. Never physically hold your child there or strap him in. Even if your child seems to be enjoying it, end each session after five minutes unless something is happening.

**Praise or reward your child for cooperation or any success.** All cooperation with these practice sessions should be praised. For example, you might say, "You are sitting on the potty just like Mommy," or "You're trying real hard to put the pee-pee in the potty." If your child urinates into the potty, she can be rewarded with small presents or stickers, as well as praise and hugs. Although a sense of accomplishment is enough for some children, others need rewards to stay focused. Big rewards (such as going to the ice cream store) should be reserved for when your child walks over to the potty on her own and uses it, or when your child asks to go there with you and then uses it. Once your child uses the potty by herself two or more times, you can stop the practice runs. For the following week, continue to praise your child frequently for dryness and using the potty. (*Note: Practice runs and reminders should not be necessary for more than one or two months.*)

**Change your child after accidents.** Change your child as soon as it's convenient, and respond sympathetically. Say something like, "You wanted to go pee-pee in the potty, but you went pee-pee in your pants. I know that makes you sad. You like to be dry. You'll get better at this." If you feel a need to be critical, keep to mild verbal disapproval and use it rarely (for example, "Big boys don't go pee-pee in their pants," or mention the name of another child he likes who is trained); then change your child into a dry diaper or training pants in as pleasant and non-angry a way as possible. Never use physical punishment, yelling, or scolding. Using pressure or force can make a two year old child completely uncooperative. Do not keep your child in wet or messy pants for punishment.

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**Introduce training pants after your child starts using the potty.** Switch from diapers to training pants after your child is cooperative about sitting on the potty chair and passes about half of her urine and bowel movements there. She definitely needs training pants if she comes to you to help her take off her diaper so she can use the potty. Take your child with you to buy the underwear and make it a reward for her success. Buy loose-fitting ones that she can easily lower and pull up by herself. Once you start using training pants, use diapers only for naps and nighttime.

### Talk With Your Child's Doctor If:

- Your child won't sit on the potty or toilet.
- Your two-and-a-half year old child is negative about toilet training.
- You begin to use force or punishment.
- Your child is over three years old and not daytime toilet trained.
- The approach described here isn't working after two months.
- You have any other questions or concerns.

### Recommended Reading

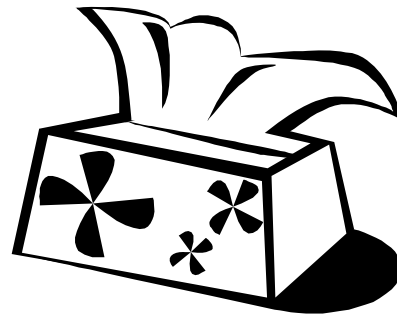
Joanna Cole: *The Parents' Book of Toilet Teaching*, Ballantine Books, N.Y., 1983.

Vicki Lansky: *Koko Bear's New Potty*, Bantam Books, N.Y., 1986.

Alison Mack: *Toilet Learning*, Little, Brown, Boston, 1978.

*Instructions for Pediatric Patients* by Barton D. Schmitt, M. D., Pediatrician. Adapted from *Your Child's Health*, Copyright © 1991 by Barton D. Schmitt, M.D.. Reprinted by permission of Bantam Books.

# The Common Cold in Children



## What is it?

The cold is by far the most common illness of infancy and childhood. Another name for the common cold is an upper respiratory infection (URI). On average, children get 10 colds per year, often back-to-back in the fall and winter.

## What causes it?

At last count, over 100 different viruses have been implicated and isolated as causes of the common cold. A cold is a viral infection that causes inflammation of the linings of the nose, throat, and larynx (voice box). This inflammation results in swelling of these linings and an outpouring of fluids and mucus.

## How do you catch it?

A baby or child does not catch a cold by going outside the house or by being in a draft or by a blanket falling off or by not being dressed warmly enough. Colds are contracted from someone else who has a cold. Colds are usually transmitted via "droplet spray," for example by coughing or sneezing. Colds are very contagious.

## What are the characteristics of a cold?

The main symptoms of a cold are runny nose and watery eyes. The nose may become plugged by the mucus; this can cause a baby to breathe noisily. Some of the fluid and mucus drains down the throat causing irritation and frequently

stimulating a cough. As an additional response to the infection, it is not unusual for the child to develop a low-grade fever. Sore throats are also common.

## How long does a cold last?

The average duration of a common cold is 7 to 10 days. The younger child may experience 6 to 10 colds a year. It is not unusual for several of these infections to occur almost one after another. The first year in school (daycare or kindergarten) is notorious in terms of the large number of colds acquired. This is due entirely to an increased exposure to other children with colds. Likewise, a large family means more exposure and consequently more colds. Exposure to colds in the early years is good for the immune system.

## Treatment:

There is no specific prevention, treatment or cure for the common cold. There is no solid scientific evidence demonstrating that high doses of vitamin C or zinc or any other supplement either prevent or cure the cold. Antibiotics do not help with cold symptoms or make colds get better faster, and often have severe and even life-threatening side effects. The best we can do is to help relieve the symptoms of the cold while allowing it to take its natural course, and to assure you that complications are not occurring.

- **Fever:** Fever is not a disease; it is simply a sign that there is an infection somewhere in the body. Fever itself is not dangerous; rather, it can be beneficial both in helping to eliminate the infecting organism and enabling us to follow the progress of the infection. Fever can be lowered (not eliminated) by appropriate doses of acetaminophen (Tylenol) or ibuprofen (Advil, Motrin), though ibuprofen cannot be given to babies under six months old. These medicines can keep the child comfortable, but when the medication wears off, the fever will return. It is important not to overdress the child with fever; lightweight clothing enables the skin to radiate some of the excess heat generated by the body.

- **Runny nose:** In the younger child up to nine months, most breathing occurs through the nose and not through the mouth; therefore, it is important to keep the nasal passages clear. Suctioning the fluids and mucous from the nose with a nasal syringe can be quite effective. Saline nose drops (such as Little Noses or Ocean®) can help lubricate the nasal passages and improve the efficiency of nasal suctioning. Oral decongestants are of limited value in relieving the symptoms of the common cold. The benefits are even less noticeable in younger children, and over the counter medications shouldn't be used without a physician's instruction in children less than six years old.

- **Cough:** Cough with the common cold usually results from drainage of the nasal mucus into the throat and also from the irritation this drainage may cause to the lining of the throat. Efforts directed at relieving the nasal congestion are most helpful in alleviating the cough. Medications are rarely of benefit and shouldn't be used without a physician's instruction in children less than six years old.

- **Fluids:** The child with a cold has an increased fluid requirement due to the URI and its accompanying fever. It's important to keep a sick child well hydrated. Water, tea, Pedialyte and juices are fine for this purpose, after six months of age.

- **Solid foods:** Appetite is frequently poor in response to the infection. Forced feedings of solids may result in vomiting and should be discouraged. As long as a sick child is staying well hydrated with fluids, not eating solids well for a few days while sick is not dangerous.

- **Environment:** Keeping the house cool will help to keep the child comfortable, and if the weather is permissible, the child can go outside without any danger. Increasing the humidity of the house also can be helpful and can be accomplished by using a cool-mist vaporizer or humidifier. This will soothe the inflamed tissues of the nose and throat and may help reduce the cough.

### *Possible complications:*

If the inflammation spreads beyond the nose and throat to the trachea (windpipe), lungs or ears, we are dealing with complications. Among the more common complications are pneumonia and ear infections. Clues to these secondary complications may be:

- 1) Fever over 102°F (39°C)
- 2) Painful crying or screaming
- 3) Excessive irritability
- 4) Severe continuous cough
- 5) Difficulty in breathing

Please call this office if you have any questions regarding the management of a cold or the appearance of any of the signs of complications.

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# INSTRUCTIONS FOR PARENTS OF Children with Gastroenteritis

Gastroenteritis (or the stomach flu) is an inflammation and irritation of the intestinal tract. It is usually caused by a virus. Occasionally, it may be caused by bacteria or parasites, but viral causes are by far the most common.

## Symptoms

The most common symptom is diarrhea. Vomiting may occur with or without diarrhea. Abdominal cramping is also common. Gastroenteritis itself is not dangerous. Most of the time the recovery is uneventful.

## Avoid Dehydration

The danger of dehydration exists with vomiting and diarrhea, especially in small children. If the child is losing fluid faster than it can be replaced, dehydration may result. The most reliable symptoms of dehydration are:

- 12 hours without urination,
- dry mouth, absence of saliva,
- sunken eyes,
- extreme inactivity, exhaustion, and/or
- sunken soft spot on top of the head of infants.

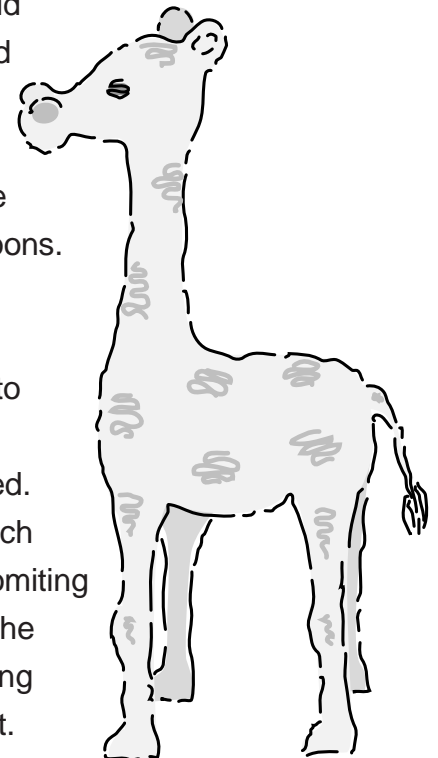
## Vomiting and Diarrhea

Viral illnesses do not respond to antibiotics; instead, they run their own course. Medications to relieve the symptoms of vomiting and diarrhea are rarely used in children because of serious side effects. Therefore, the treatment is primarily supportive. The purpose is to rest the

intestinal tract for a short period of time while still providing the necessary fluids and salts to prevent dehydration.

## Vomiting

If your child is vomiting, you should give nothing by mouth for at least half an hour to give the stomach a rest. After the period of rest, offer a small amount (one to two tablespoons) of clear liquid (follow the clear liquid diet below). Wait one-half hour. If no vomiting occurs, give another two tablespoons. Continue to slowly decrease the time between drinks and to slowly increase the amount of fluid offered. Avoid forcing too much fluid at one time. If vomiting starts again, repeat the above process starting with the stomach rest.





## Clear Liquid Diet (No Solids and No Milk)

**For breastfed infants:** Alternate breast-feeding with Pedialyte® to keep the infant hydrated until the vomiting ceases.

**For other infants:** Pedialyte®

**For older children:** Gatorade®, Clear Broth, Tea, flat Coke®, 7-up®, Ginger Ale or water

After there has been no vomiting for a few hours, give the older child a bland diet. Once they can tolerate bland foods without vomiting, if they desire regular foods, it's ok to try them. Infants who have not yet begun solids can now be given breastmilk or a soy-based formula until the stools are normal.

## Does My Child Need A BRAT Diet?

Foods that are high in fat and sugar will not be tolerated as well as complex carbohydrates, lean meats, yogurt, fruits, and vegetables.

We used to recommend the BRAT (bread, rice, applesauce, and toast) diet for diarrheal illnesses, but studies show that this is not necessary and reduces nutrition.

## Call Our Office

This sheet is not intended to substitute for our care, nor prevent telephone communication as needed. Any child with gastroenteritis who is under two years of age, or has fever over 102°F, headache, severe abdominal pain, or signs of dehydration should be brought to our attention **immediately**. Also call our office if:

- Vomiting or diarrhea increases in severity (not keeping any fluids down).
  - Vomiting continues after 24 hours on a clear liquid diet.
  - Diarrhea has not improved after four days.
  - The child starts to vomit blood or pass blood in the stools.
  - The child develops excessive irritability.
  - The child is not urinating as much, is not making at least 3 wet diapers per day, or is showing other signs of dehydration.
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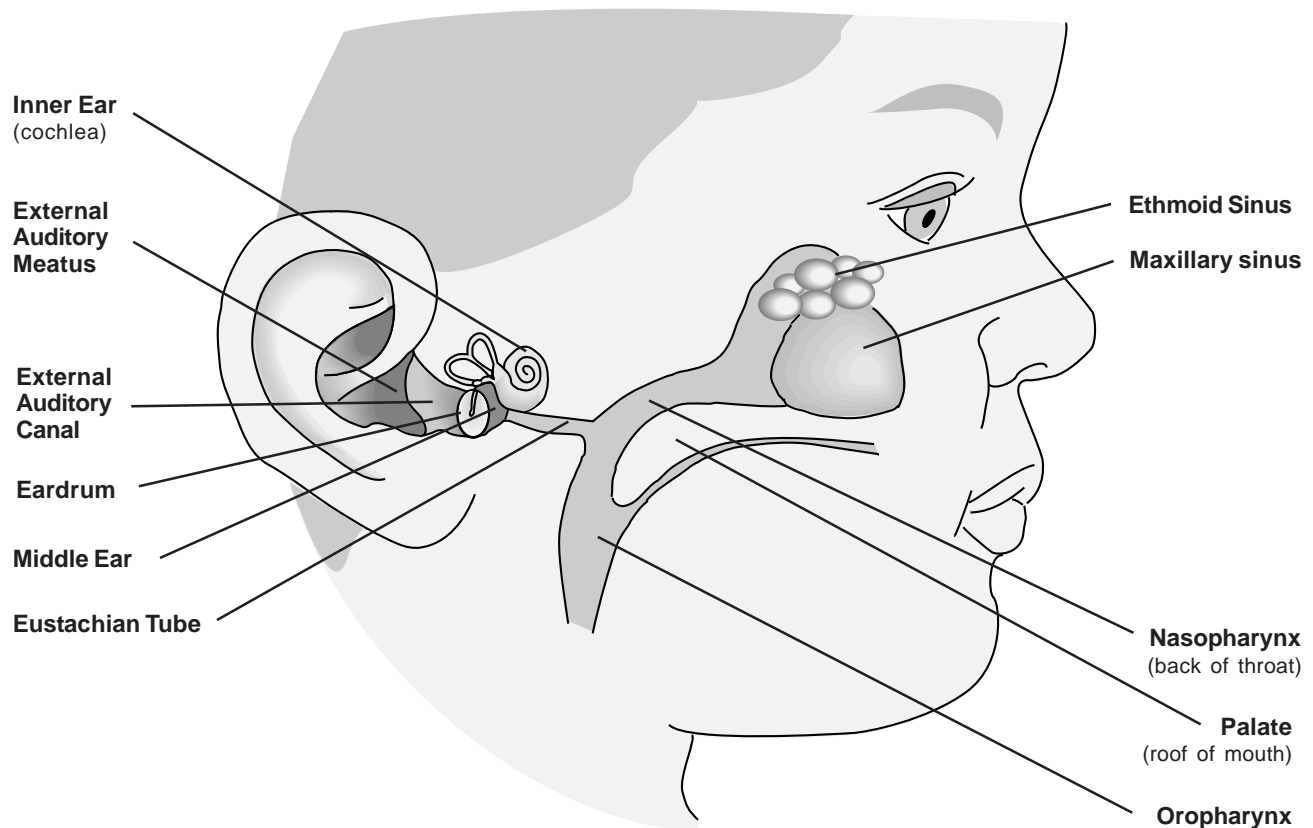


# Ear Infection

## Description

An ear infection is a bacterial infection of the middle ear (the space behind the eardrum). It usually is caused by a cold, occurring after the cold blocks off the eustachian tube (the passage connecting the middle ear to the back of the throat), which allows bacteria to grow in this space. The ear is painful because trapped, infected fluid puts pressure on the eardrum, causing it to bulge. Other symptoms are irritability, poor sleep, and fever.

Most children will have at least one ear infection, and over three quarters of these children will have repeated ear infections. In a few cases, the pressure in the middle ear causes the eardrum to rupture and drain. This small tear usually heals within one week.



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## Home Treatment

### Antibiotics

Your child may be treated with an antibiotic for 10 days. This medicine will kill the bacteria that are causing the ear infection. Even though your child will feel better in a few days, give the antibiotic until it is all gone or as instructed by your doctor. If your child does not feel better after a few days of antibiotics, contact your child's doctor.

### Pain Relief

- Acetaminophen (Tylenol®) or ibuprofen (Motrin, Advil) can be used to help with the earache or fever for a few days until the antibiotic takes effect.
- For severe pain, try elevating your child's head when sleeping.
- Placing a warm washcloth over the infected ear for a few minutes may help decrease the pain.

### Restrictions

Your child may go outside and does not need to cover his/her ears. Swimming is permitted as long as there is no perforation (tear) in the eardrum or drainage from the ear. Air travel or a trip to the mountains is safe – just have your child swallow fluids, suck on a pacifier, or chew during ascent and descent. Ear infections are not contagious.

## Ear Recheck

We generally schedule a return appointment in two to twelve weeks for children under 2 years old, or for certain children over 2 years old with language or learning problems or with frequent ear infections. We will look at the eardrum to be certain that the infection has cleared up and more treatment isn't needed.

### *Call Our Office Immediately If:*

- Your child develops a stiff neck.
- You feel your child is getting worse.
- There is blood or pus draining from the ear canal.
- The fever or pain is not gone after your child has taken the antibiotic for 48 hours.

Adapted from B.D. Schmitt, M.D., "Your Child's Health," Bantam Books. Copyright 1994 Clinical Reference Systems, Ltd.

# FEVER IN CHILDREN

## What Is Fever?

Fever is the body's normal response to infections and may be helpful in fighting them. When white blood cells attack germs, they release chemical signals which cause the brain to elevate the temperature. This elevation may help the body kill the germs faster. The usual fevers (100°F to 104°F) that all children get are not harmful. Most are due to viral illnesses; some are due to bacterial ones. Teething does not cause fever.

The symptoms and characteristics of fever include a rectal temperature over 100.4°F (38.0°C), oral temperature over 100°F (37.8°C), and axillary (armpit) temperature over 99°F (37.2°C). While the body's average temperature is 98.6°F (37°C), it fluctuates from a low of 97.6°F in the morning to a high of 100°F in the late afternoon. Mild elevations of temperature can be caused by exercise, excessive clothing, hot weather, or warm food or drink. If you suspect one of these causes, retake the temperature after 30 minutes.

## How Do You Take Temperatures?

Use digital, not mercury, thermometers because they are safer, faster, and more accurate. For children under five years of age, use axillary or rectal measurements. Most children four or five and older are ready for oral

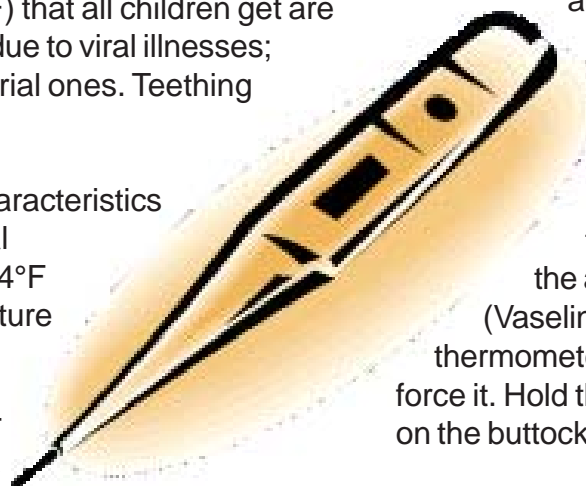
readings. Ear thermometers may be unreliable, especially in children under one year old. In young children, high ear thermometer readings should be confirmed by another method.

**Axillary:** Place the tip of the thermometer in a dry armpit, and close the armpit by holding the elbow against the chest. If you're uncertain about the result, check it with a rectal thermometer.

**Rectal:** Place your child stomach-down on your lap, or on his back on a changing table. Lubricate the end of the thermometer and the opening of the anus with petroleum jelly (Vaseline or KY Jelly). Carefully insert the thermometer about one inch, but never force it. Hold the child still and rest your hand on the buttocks to stabilize the thermometer.

**Oral:** Be sure your child has not recently taken a cold or hot drink. Place the tip of the thermometer underneath the tongue on either side, rather than at the front of the mouth. The child should hold it in place with the lips and fingers (not the teeth), keeping the mouth closed and breathing through the nose. If the nose is congested, take an axillary temperature.

You do not need to check your child's temperature if he is not sick, or many times a day when he is sick. Remember that the main purpose of temperature-taking is to determine if a fever is present, not to chart its every move.



## How Long Does Fever Last?

Most fevers associated with viral illness range between 101°F and 104°F and last for one to three days. In general, the height of the fever isn't related to the seriousness of the illness. What counts is how sick your child acts. With most infections, the level of fever bounces around for two or three days. Shivering or feeling cold indicates that the fever has peaked; sweating means it is coming down.

It is important to understand that there is no evidence that fever itself can be harmful unless the temperature exceeds 107°F. Fortunately, the brain's thermostat keeps nearly all untreated fevers below this level. A small number of young children may develop convulsions (seizures) with fever. While these are frightening, they do not appear to cause harm and are not usually a sign of more serious illness. Still, call your child's doctor if your child has a febrile seizure.

## When Should I Call?

If your child is under three months old, call us day or night if the rectal temperature is greater than 100.4°F. Beyond three months, call immediately if the fever is over 105°F, your child is crying inconsolably or whimpering, or cries if you touch or move him. Also call immediately if the child's neck is stiff, any purple spots are present on the skin, breathing is difficult and no better after you clear the nose, or a convulsion (seizure) has occurred. Call if burning or pain occurs with urination. Also call if your child is under two years of age and has a fever of 104°F or greater. Call if the fever has been present more than 72 hours, more than 24 hours without obvious cause, or has returned after going away for more than 24 hours.

## Which Medications Should I Use?

Check with our office before using medication for children under four months of age. Children of any

age can be given acetaminophen (Tylenol®, Tempra®, Liquiprin®, Panadol®) if the fever is causing discomfort. Acetaminophen will reduce the fever but usually not bring it down to normal and the fever may recur after the acetaminophen wears off. Liquid ibuprofen (Advil, Motrin®) may also help improve comfort and reduce the temperature in feverish children and can be given to infants six months or older. See chart that follows for dosing. If your child is sleeping, don't awaken him for medications, and do not use them for more than three days without consulting your pediatrician.

## Other Measures To Take:

Encourage, but don't force, extra fluids. Popsicles and iced drinks may help replace body fluids lost because of sweating. Keep clothing to a minimum because most heat is lost through the skin. Bundling up your child will cause a higher fever. Be especially careful of infants, who cannot undress themselves if they become overheated. If your child feels cold or is shivering, use a light blanket. Discourage vigorous activities because they produce additional heat. Normal play, however, is perfectly fine.

## A Word of Caution About Aspirin

The American Academy of Pediatrics and other health organizations have recommended that patients through 21 years of age not receive aspirin if they have chickenpox or influenza (any cold, cough, or sore throat symptoms). Several studies have linked aspirin to Reye's syndrome, a severe illness that resembles encephalitis. Many pediatricians have stopped using aspirin for fevers associated with any illness because it has the potential to be so dangerous.

# Medicines and Dosages to Reduce Pain and Fever

Choose the proper medicine, and measure the dose accurately.

1. Ask your healthcare provider or pharmacist which medicine is best for your child.
2. Give the dose based on your child’s weight. If you don’t know your child’s weight, give the dose based on your child’s age. Do not give more medicine than is recommended.
3. If you have questions about dosage amounts or any other concerns, call your healthcare provider.
4. Always use a proper measuring device. For example:
  - When giving acetaminophen liquid (e.g., Tylenol), use the device enclosed in the package. If you misplace the device, consult your healthcare provider or pharmacist for advice. Kitchen spoons are not accurate measures.
  - When giving ibuprofen liquid (e.g., Advil, Motrin), use the device enclosed in the package. Never use a kitchen spoon!

Take these two steps to avoid causing a serious medication overdose in your child.

1. Don’t give your child a larger amount of acetaminophen (e.g., Tylenol) or ibuprofen (e.g., Motrin, Advil) than is shown in the table below. Too much of any of these medicines can cause an overdose.
2. When you give your child acetaminophen or ibuprofen, don’t also give them over-the-counter (OTC) cough or cold medicines. This can also cause a medication overdose because cough and cold medicines often contain acetaminophen or ibuprofen. In fact, to be safe, don’t give OTC cough and cold medicines to your child unless you talk to your child’s healthcare provider first.



## Acetaminophen (Tylenol or another brand): How much to give?

Give every 4 to 6 hours, as needed, no more than 5 times in 24 hours (unless directed to do otherwise by your healthcare provider).

CHILD’S WEIGHT	CHILD’S AGE	OLD FORMULATIONS INFANTS’ DROPS 80 mg in each 0.8 mL or in each 1.0 mL	INFANTS’ NEW FORMULATION OR CHILDREN’S LIQUID 160 mg in each 5 mL (1 tsp) Kitchen spoons are not accurate measures.	CHILDREN’S CHEWABLES 80 mg in each tab	JUNIOR STRENGTH 160 mg in each tab
6–11 lbs (2.7–5 kg)	0–3 mos	Advised dose* _____	Advised dose* _____		
12–17 lbs (5.5–7.7 kg)	4–11 mos	Advised dose* _____	½ teaspoon or 2.5 mL		
18–23 lbs (8.2–10.5 kg)	12–23 mos	Advised dose* _____	¾ teaspoon or 3.75 mL		
24–35 lbs (10.9–15.9 kg)	2–3 yrs	1.6 mL (0.8 mL+0.8 mL)	1 teaspoon or 5 mL	2 tablets	
36–47 lbs (16.4–21.4 kg)	4–5 yrs		1½ teaspoon or 7.5 mL	3 tablets	
48–59 lbs (21.8–26.8 kg)	6–8 yrs		2 teaspoons or 10 mL	4 tablets	2 tablets
60–71 lbs (27.3–32.3 kg)	9–10 yrs		2½ teaspoons or 12.5 mL	5 tablets	2½ tablets
72–95 lbs (32.7–43.2 kg)	11 yrs		3 teaspoons or 15 mL	6 tablets	3 tablets

## Ibuprofen (Advil, Motrin, or another brand): How much to give?

Give every 6 to 8 hours, as needed, no more than 4 times in 24 hours (unless directed to do otherwise by your healthcare provider).

CHILD’S WEIGHT	CHILD’S AGE	INFANTS’ DROPS 50 mg in each 1.25 mL 	CHILDREN’S LIQUID  100 mg in each 5 mL (1 tsp) Kitchen spoons are not accurate measures.	OLD FORMULATION CHILDREN’S CHEWABLES 50 mg in each tab	CHILDREN’S CHEWABLES OR JUNIOR TABLETS 100 mg in each tab
less than 11 lbs (5 kg)	0–5 mos				
12–17 lbs (5.5–7.7 kg)	6–11 mos	1.25 mL	Advised dose* _____		
18–23 lbs (8.2–10.5 kg)	12–23 mos	1.875 mL	Advised dose* _____		
24–35 lbs (10.9–15.9 kg)	2–3 yrs		1 teaspoon or 5 mL	2 tablets	1 tablet
36–47 lbs (16.4–21.4 kg)	4–5 yrs		1½ teaspoon or 7.5 mL	3 tablets	1½ tablets
48–59 lbs (21.8–26.8 kg)	6–8 yrs		2 teaspoons or 10 mL	4 tablets	2 tablets
60–71 lbs (27.3–32.3 kg)	9–10 yrs		2½ teaspoons or 12.5 mL	5 tablets	2½ tablets
72–95 lbs (32.7–43.2 kg)	11 yrs		3 teaspoons or 15 mL	6 tablets	3 tablets

\* HEALTHCARE PROVIDER: PLEASE FILL IN THE ADVISED DOSE.

# DIPHTHERIA TETANUS & PERTUSSIS VACCINES

## WHAT YOU NEED TO KNOW

Many Vaccine Information Statements are available in Spanish and other languages. See [www.immunize.org/vis](http://www.immunize.org/vis).

### 1 Why get vaccinated?

**Diphtheria, tetanus, and pertussis are serious diseases caused by bacteria.** Diphtheria and pertussis are spread from person to person. Tetanus enters the body through cuts or wounds.

**DIPHTHERIA** causes a thick covering in the back of the throat.

- It can lead to breathing problems, paralysis, heart failure, and even death.

**TETANUS (Lockjaw)** causes painful tightening of the muscles, usually all over the body.

- It can lead to “locking” of the jaw so the victim cannot open his mouth or swallow. Tetanus leads to death in up to 2 out of 10 cases.

**PERTUSSIS (Whooping Cough)** causes coughing spells so bad that it is hard for infants to eat, drink, or breathe. These spells can last for weeks.

- It can lead to pneumonia, seizures (jerking and staring spells), brain damage, and death.

**Diphtheria, tetanus, and pertussis vaccine (DTaP) can help prevent these diseases.** Most children who are vaccinated with DTaP will be protected throughout childhood. Many more children would get these diseases if we stopped vaccinating.

DTaP is a safer version of an older vaccine called DTP. DTP is no longer used in the United States.

### 2 Who should get DTaP vaccine and when?

**Children** should get 5 doses of DTaP vaccine, one dose at each of the following ages:

- ✓ 2 months
- ✓ 4 months
- ✓ 6 months
- ✓ 15-18 months
- ✓ 4-6 years

DTaP may be given at the same time as other vaccines.

### 3

### Some children should not get DTaP vaccine or should wait

- Children with minor illnesses, such as a cold, may be vaccinated. But children who are moderately or severely ill should usually wait until they recover before getting DTaP vaccine.
- Any child who had a life-threatening allergic reaction after a dose of DTaP should not get another dose.
- Any child who suffered a brain or nervous system disease within 7 days after a dose of DTaP should not get another dose.
- Talk with your doctor if your child:
  - had a seizure or collapsed after a dose of DTaP,
  - cried non-stop for 3 hours or more after a dose of DTaP,
  - had a fever over 105°F after a dose of DTaP.

Ask your health care provider for more information. Some of these children should not get another dose of pertussis vaccine, but may get a vaccine without pertussis, called **DT**.

### 4

### Older children and adults

DTaP is not licensed for adolescents, adults, or children 7 years of age and older.

But older people still need protection. A vaccine called **Tdap** is similar to DTaP. A single dose of Tdap is recommended for people 11 through 64 years of age. Another vaccine, called **Td**, protects against tetanus and diphtheria, but not pertussis. It is recommended every 10 years. There are separate Vaccine Information Statements for these vaccines.

Diphtheria/Tetanus/Pertussis

5/17/2007

## 5 What are the risks from DTaP vaccine?

Getting diphtheria, tetanus, or pertussis disease is much riskier than getting DTaP vaccine.

However, a vaccine, like any medicine, is capable of causing serious problems, such as severe allergic reactions. The risk of DTaP vaccine causing serious harm, or death, is extremely small.

### Mild Problems (Common)

- Fever (up to about 1 child in 4)
- Redness or swelling where the shot was given (up to about 1 child in 4)
- Soreness or tenderness where the shot was given (up to about 1 child in 4)

These problems occur more often after the 4th and 5th doses of the DTaP series than after earlier doses. Sometimes the 4th or 5th dose of DTaP vaccine is followed by swelling of the entire arm or leg in which the shot was given, lasting 1-7 days (up to about 1 child in 30).

### Other mild problems include:

- Fussiness (up to about 1 child in 3)
- Tiredness or poor appetite (up to about 1 child in 10)
- Vomiting (up to about 1 child in 50)

These problems generally occur 1-3 days after the shot.

### Moderate Problems (Uncommon)

- Seizure (jerking or staring) (about 1 child out of 14,000)
- Non-stop crying, for 3 hours or more (up to about 1 child out of 1,000)
- High fever, over 105°F (about 1 child out of 16,000)

### Severe Problems (Very Rare)

- Serious allergic reaction (less than 1 out of a million doses)
- Several other severe problems have been reported after DTaP vaccine. These include:
  - Long-term seizures, coma, or lowered consciousness
  - Permanent brain damage.

These are so rare it is hard to tell if they are caused by the vaccine.

Controlling fever is especially important for children who have had seizures, for any reason. It is also important if another family member has had seizures. You can reduce fever and pain by giving your child an *aspirin-free* pain reliever when the shot is given, and for the next 24 hours, following the package instructions.

## 6 What if there is a moderate or severe reaction?

### What should I look for?

Any unusual conditions, such as a serious allergic reaction, high fever or unusual behavior. Serious allergic reactions are extremely rare with any vaccine. If one were to occur, it would most likely be within a few minutes to a few hours after the shot. Signs can include difficulty breathing, hoarseness or wheezing, hives, paleness, weakness, a fast heart beat or dizziness. If a high fever or seizure were to occur, it would usually be within a week after the shot.

### What should I do?

- **Call** a doctor, or get the person to a doctor right away.
- **Tell** your doctor what happened, the date and time it happened, and when the vaccination was given.
- **Ask** your doctor, nurse, or health department to report the reaction by filing a Vaccine Adverse Event Reporting System (VAERS) form.

Or you can file this report through the VAERS web site at [www.vaers.hhs.gov](http://www.vaers.hhs.gov), or by calling **1-800-822-7967**.

*VAERS does not provide medical advice*

## 7 The National Vaccine Injury Compensation Program

In the rare event that you or your child has a serious reaction to a vaccine, a federal program has been created to help pay for the care of those who have been harmed.

For details about the National Vaccine Injury Compensation Program, call **1-800-338-2382** or visit the program's website at [www.hrsa.gov/vaccinecompensation](http://www.hrsa.gov/vaccinecompensation).

## 8 How can I learn more?

- Ask your health care provider. They can give you the vaccine package insert or suggest other sources of information.
- Call your local or state health department's immunization program.
- Contact the Centers for Disease Control and Prevention (CDC):
  - Call **1-800-232-4636 (1-800-CDC-INFO)**
  - Visit the National Immunization Program's website at [www.cdc.gov/vaccines](http://www.cdc.gov/vaccines)



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Centers for Disease Control and Prevention



# Haemophilus Influenzae Type b (Hib) Vaccine

## WHAT YOU NEED TO KNOW

Many Vaccine Information Statements are available in Spanish and other languages. See [www.immunize.org/vis](http://www.immunize.org/vis).

### 1 What is Hib disease?

*Haemophilus influenzae* type b (Hib) disease is a serious disease caused by a bacteria. It usually strikes children under 5 years old.

Your child can get Hib disease by being around other children or adults who may have the bacteria and not know it. The germs spread from person to person. If the germs stay in the child's nose and throat, the child probably will not get sick. But sometimes the germs spread into the lungs or the bloodstream, and then Hib can cause serious problems.

Before Hib vaccine, Hib disease was the leading cause of bacterial meningitis among children under 5 years old in the United States. Meningitis is an infection of the brain and spinal cord coverings, which can lead to lasting brain damage and deafness. Hib disease can also cause:

- pneumonia
- severe swelling in the throat, making it hard to breathe
- infections of the blood, joints, bones, and covering of the heart
- death



Before Hib vaccine, about 20,000 children in the United States under 5 years old got severe Hib disease each year and nearly 1,000 people died.

#### **Hib vaccine can prevent Hib disease.**

Many more children would get Hib disease if we stopped vaccinating.

### 2 Who should get Hib vaccine and when?

**Children should get Hib vaccine at:**

- ✓ 2 months of age
- ✓ 4 months of age
- ✓ 6 months of age\*
- ✓ 12-15 months of age

\* Depending on what brand of Hib vaccine is used, your child might not need the dose at 6 months of age. Your doctor or nurse will tell you if this dose is needed.

If you miss a dose or get behind schedule, get the next dose as soon as you can. There is no need to start over.

Hib vaccine may be given at the same time as other vaccines.

#### **Older Children and Adults**

Children over 5 years old usually do not need Hib vaccine. But some older children or adults with special health conditions should get it. These conditions include sickle cell disease, HIV/AIDS, removal of the spleen, bone marrow transplant, or cancer treatment with drugs. Ask your doctor or nurse for details.

### 3 Some people should not get Hib vaccine or should wait

- People who have ever had a life-threatening allergic reaction to a previous dose of Hib vaccine should not get another dose.
- Children less than 6 weeks of age should not get Hib vaccine.
- People who are moderately or severely ill at the time the shot is scheduled should usually wait until they recover before getting Hib vaccine.

Ask your doctor or nurse for more information.

## 4

### What are the risks from Hib vaccine?

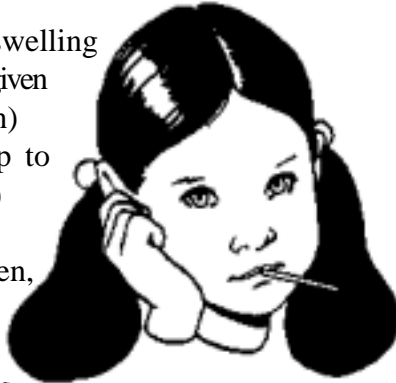
A vaccine, like any medicine, is capable of causing serious problems, such as severe allergic reactions. The risk of Hib vaccine causing serious harm or death is extremely small.

Most people who get Hib vaccine do not have any problems with it.

#### Mild Problems

- Redness, warmth, or swelling where the shot was given (up to 1/4 of children)
- Fever over 101°F (up to 1 out of 20 children)

If these problems happen, they usually start within a day of vaccination. They may last 2-3 days.



## 5

### What if there is a moderate or severe reaction?

#### What should I look for?

Any unusual condition, such as a serious allergic reaction, high fever or behavior changes. Signs of a serious allergic reaction can include difficulty breathing, hoarseness or wheezing, hives, paleness, weakness, a fast heart beat, or dizziness within a few minutes to a few hours after the shot.

#### What should I do?

- **Call** a doctor, or get the person to a doctor right away.
- **Tell** your doctor what happened, the date and time it happened, and when the vaccination was given.
- **Ask** your doctor, nurse, or health department to report the reaction by filing a Vaccine Adverse Event Reporting System (VAERS) form.

Or you can file this report through the VAERS web site at [www.vaers.hhs.gov](http://www.vaers.hhs.gov), or by calling 1-800-822-7967.

*VAERS does not provide medical advice*

## 6

### The National Vaccine Injury Compensation Program

In the rare event that you or your child has a serious reaction to a vaccine, a federal program has been created to help you pay for the care of those who have been harmed.

For details about the National Vaccine Injury Compensation Program, call **1-800-338-2382** or visit the program's website at [www.hrsa.gov/vaccinecompensation](http://www.hrsa.gov/vaccinecompensation)

## 7

### How can I learn more?

- Ask your doctor or nurse. They can give you the vaccine package insert or suggest other sources of information.
- Call your local or state health department's immunization program.
- Contact the Centers for Disease Control and Prevention (CDC):
  - Call **1-800-232-4636 (1-800-CDC-INFO)**
  - Visit the National Immunization Program's website at [www.cdc.gov/vaccines](http://www.cdc.gov/vaccines)



**U.S. Department of Health & Human Services**  
Centers for Disease Control and Prevention



# Pneumococcal Conjugate Vaccine

## What You Need to Know

Many Vaccine Information Statements are available in Spanish and other languages. See [www.immunize.org/vis](http://www.immunize.org/vis).  
Hojas de Información Sobre Vacunas están disponibles en Español y en muchos otros idiomas.  
Visite <http://www.immunize.org/vis>

Your doctor recommends that you, or your child, get a dose of PCV13 vaccine today.

### 1 Why get vaccinated?

Pneumococcal conjugate vaccine (called PCV13 or Prevnar 13) is recommended to protect infants and toddlers, and some older children and adults with certain health conditions, from **pneumococcal disease**.

Pneumococcal disease is caused by infection with *Streptococcus pneumoniae* bacteria. These bacteria can spread from person to person through close contact.

Pneumococcal disease can lead to severe health problems, including pneumonia, blood infections, and meningitis.

Meningitis is an infection of the covering of the brain. Pneumococcal meningitis is fairly rare (less than 1 case per 100,000 people each year), but it leads to other health problems, including deafness and brain damage. In children, it is fatal in about 1 case out of 10.

Children younger than two are at higher risk for serious disease than older children.

People with certain medical conditions, people over age 65, and cigarette smokers are also at higher risk.

Before vaccine, pneumococcal infections caused many problems each year in the United States in children younger than 5, including:

- more than 700 cases of meningitis,
- 13,000 blood infections,
- about 5 million ear infections, and
- about 200 deaths.

About 4,000 adults still die each year because

of pneumococcal infections.

Pneumococcal infections can be hard to treat because some strains are resistant to antibiotics. This makes **prevention through vaccination** even more important.

### 2 PCV13 Vaccine

There are more than 90 types of pneumococcal bacteria. PCV13 protects against 13 of them. These 13 strains cause most severe infections in children and about half of infections in adults.

PCV13 is routinely given to children at 2, 4, 6, and 12–15 months of age. Children in this age range are at greatest risk for serious diseases caused by pneumococcal infection.

PCV13 vaccine may also be recommended for some older children or adults. Your doctor can give you details.

A second type of pneumococcal vaccine, called PPSV23, may also be given to some children and adults, including anyone over age 65. There is a separate Vaccine Information Statement for this vaccine.

### 3 Precautions

Anyone who has ever had a life-threatening allergic reaction to a dose of this vaccine, to an earlier pneumococcal vaccine called PCV7 (or Prevnar), or to any vaccine containing diphtheria toxoid (for example, DTaP), should not get PCV13.

Anyone with a severe allergy to any component of PCV13 should not get the vaccine. Tell



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your doctor if the person being vaccinated has any severe allergies.

If the person scheduled for vaccination is sick, your doctor might decide to reschedule the shot on another day.

Your doctor can give you more information about any of these precautions.

#### 4 Risks

With any medicine, including vaccines, there is a chance of side effects. These are usually mild and go away on their own, but serious reactions are also possible.

Reported problems associated with PCV13 vary by dose and age, but generally:

- About half of children became drowsy after the shot, had a temporary loss of appetite, or had redness or tenderness where the shot was given.
- About 1 out of 3 had swelling where the shot was given.
- About 1 out of 3 had a mild fever, and about 1 in 20 had a higher fever (over 102.2°F).
- Up to about 8 out of 10 became fussy or irritable.

Adults receiving the vaccine have reported redness, pain, and swelling where the shot was given. Mild fever, fatigue, headache, chills, or muscle pain have also been reported.

Life-threatening allergic reactions from any vaccine are very rare.

#### 5 What if there is a serious reaction?

##### What should I look for?

- Look for anything that concerns you, such as signs of a severe allergic reaction, very high fever, or behavior changes.

Signs of a severe allergic reaction can include hives, swelling of the face and throat, difficulty breathing, a fast heart beat,

dizziness, and weakness. These would start a few minutes to a few hours after the vaccination.

##### What should I do?

- If you think it is a severe allergic reaction or other emergency that can't wait, get the person to the nearest hospital or call 9-1-1. Otherwise, call your doctor.
- Afterward, the reaction should be reported to the "Vaccine Adverse Event Reporting System" (VAERS). Your doctor might file this report, or you can do it yourself through the VAERS web site at [www.vaers.hhs.gov](http://www.vaers.hhs.gov), or by calling **1-800-822-7967**.

*VAERS is only for reporting reactions. They do not give medical advice.*

#### 6 The National Vaccine Injury Compensation Program

The National Vaccine Injury Compensation Program (VICP) was created in 1986.

Persons who believe they may have been injured by a vaccine can learn about the program and about filing a claim by calling **1-800-338-2382** or visiting the VICP website at [www.hrsa.gov/vaccinecompensation](http://www.hrsa.gov/vaccinecompensation).

#### 7 How can I learn more?

- Ask your doctor.
- Call your local or state health department.
- Contact the Centers for Disease Control and Prevention (CDC):
  - Call **1-800-232-4636 (1-800-CDC-INFO)**, or
  - Visit CDC's website at [www.cdc.gov/vaccines](http://www.cdc.gov/vaccines)

Vaccine Information Statement (Interim)

## PCV13 Vaccine

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# Hepatitis A Vaccine

## What You Need to Know

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Hojas de Información Sobre Vacunas están disponibles en Español y en muchos otros idiomas. Visite <http://www.immunize.org/vis>

### 1 What is hepatitis A?

Hepatitis A is a serious liver disease caused by the hepatitis A virus (HAV). HAV is found in the stool of people with hepatitis A.

It is usually spread by close personal contact and sometimes by eating food or drinking water containing HAV. A person who has hepatitis A can easily pass the disease to others within the same household.

Hepatitis A can cause:

- “flu-like” illness
- jaundice (yellow skin or eyes, dark urine)
- severe stomach pains and diarrhea (children)

People with hepatitis A often have to be hospitalized (up to about 1 person in 5).

Adults with hepatitis A are often too ill to work for up to a month.

Sometimes, people die as a result of hepatitis A (about 3-6 deaths per 1,000 cases).

Hepatitis A vaccine can prevent hepatitis A.

### 2 Who should get hepatitis A vaccine and when?

#### WHO?

*Some people should be routinely vaccinated with hepatitis A vaccine:*

- All children between their first and second birthdays (12 through 23 months of age).
- Anyone 1 year of age and older traveling to or working in countries with high or intermediate prevalence of hepatitis A, such as those located in Central or South America, Mexico, Asia (except Japan), Africa, and eastern Europe. For more information see [www.cdc.gov/travel](http://www.cdc.gov/travel).
- Children and adolescents 2 through 18 years of age who live in states or communities where routine vaccination has been implemented because of high disease incidence.
- Men who have sex with men.
- People who use street drugs.

- People with chronic liver disease.
- People who are treated with clotting factor concentrates.
- People who work with HAV-infected primates or who work with HAV in research laboratories.
- Members of households planning to adopt a child, or care for a newly arriving adopted child, from a country where hepatitis A is common.

*Other people might get hepatitis A vaccine in certain situations (ask your doctor for more details):*

- Unvaccinated children or adolescents in communities where outbreaks of hepatitis A are occurring.
- Unvaccinated people who have been exposed to hepatitis A virus.
- Anyone 1 year of age or older who wants protection from hepatitis A.

Hepatitis A vaccine is not licensed for children younger than 1 year of age.

#### WHEN?

**For children**, the first dose should be given at 12 through 23 months of age. Children who are not vaccinated by 2 years of age can be vaccinated at later visits.

**For others at risk**, the hepatitis A vaccine series may be started whenever a person wishes to be protected or is at risk of infection.

**For travelers**, it is best to start the vaccine series at least one month before traveling. (Some protection may still result if the vaccine is given on or closer to the travel date.)

Some people who cannot get the vaccine before traveling, or for whom the vaccine might not be effective, can get a shot called immune globulin (IG). IG gives immediate, temporary protection.

Two doses of the vaccine are needed for lasting protection. These doses should be given at least 6 months apart.

Hepatitis A vaccine may be given at the same time as other vaccines.



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**3****Some people should not get hepatitis A vaccine or should wait.**

- Anyone who has ever had a severe (life threatening) allergic reaction to a previous dose of hepatitis A vaccine should not get another dose.
- Anyone who has a severe (life threatening) allergy to any vaccine component should not get the vaccine. **Tell your doctor if you have any severe allergies,** including a severe allergy to latex. All hepatitis A vaccines contain alum, and some hepatitis A vaccines contain 2-phenoxyethanol.
- Anyone who is moderately or severely ill at the time the shot is scheduled should probably wait until they recover. Ask your doctor. People with a mild illness can usually get the vaccine.
- Tell your doctor if you are pregnant. Because hepatitis A vaccine is inactivated (killed), the risk to a pregnant woman or her unborn baby is believed to be very low. But your doctor can weigh any theoretical risk from the vaccine against the need for protection.

**4****What are the risks from hepatitis A vaccine?**

A vaccine, like any medicine, could possibly cause serious problems, such as severe allergic reactions. The risk of hepatitis A vaccine causing serious harm, or death, is extremely small.

Getting hepatitis A vaccine is much safer than getting the disease.

**Mild problems**

- soreness where the shot was given (*about 1 out of 2 adults, and up to 1 out of 6 children*)
- headache (*about 1 out of 6 adults and 1 out of 25 children*)
- loss of appetite (*about 1 out of 12 children*)
- tiredness (*about 1 out of 14 adults*)

If these problems occur, they usually last 1 or 2 days.

**Severe problems**

- serious allergic reaction, within a few minutes to a few hours after the shot (*very rare*).

**5****What if there is a moderate or severe reaction?****What should I look for?**

- Any unusual condition, such as a high fever or unusual behavior. Signs of a serious allergic reaction can include difficulty breathing, hoarseness or wheezing, hives, paleness, weakness, a fast heart beat or dizziness.

**What should I do?**

- **Call** a doctor, or get the person to a doctor right away.
- **Tell** your doctor what happened, the date and time it happened, and when the vaccination was given.
- **Ask** your doctor, nurse, or health department to report the reaction by filing a Vaccine Adverse Event Reporting System (VAERS) form. Or you can file this report through the VAERS web site at [www.vaers.hhs.gov](http://www.vaers.hhs.gov), or by calling **1-800-822-7967**.

*VAERS does not provide medical advice.*

**6****The National Vaccine Injury Compensation Program**

The National Vaccine Injury Compensation Program (VICP) was created in 1986.

Persons who believe they may have been injured by a vaccine can learn about the program and about filing a claim by calling **1-800-338-2382** or visiting the VICP website at [www.hrsa.gov/vaccinecompensation](http://www.hrsa.gov/vaccinecompensation).

**7****How can I learn more?**

- Ask your doctor. They can give you the vaccine package insert or suggest other sources of information.
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  - Call **1-800-232-4636 (1-800-CDC-INFO)** or
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Vaccine Information Statement (Interim)  
**Hepatitis A Vaccine**

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