General Pediatric Clinic Booklet

Arkansas Children’s Hospital Campus
Please call 501-364-1202 for appointments

Normal Hours Mon-Fri • 8:30 a.m. – 4:00 p.m.
After-hours Mon-Fri • 5:00 p.m – 8:45 p.m.
Sat. & Sun. 9:00 a.m. – 7:45 p.m.
This booklet is provided to assist parents in the care of their children. It serves as a guideline for medical care, but should not replace your doctor’s advice or regular well child visits. Should problems arise, please feel free to contact one of the clinic staff who will be able to help with your questions.

**If you need to call our office, the following information will be helpful:**
1. Your child’s main symptoms and temperature (if your child is running fever).
2. Any chronic illness your child has such as asthma, diabetes, kidney disease or sickle cell anemia.
3. The names of any medication, including herbal or over the counter medications, your child is taking. It may be helpful to write this information down prior to calling.

Well child exams should be scheduled during routine office hours (8:30 a.m. – 4:00 p.m.). Problems that are longstanding or complex will also be evaluated only during routine office hours. This allows your doctor more time to spend with you and your child. Acute illnesses such as earaches or colds can be seen in afterhours clinic (Monday – Friday 5 p.m. to 8:45 p.m. and Saturday – Sunday 9 a.m. to 7:45 p.m.).

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Well-Child Care and Immunizations

Your child needs to be examined often during the first two years of life. This allows your child’s doctor to follow his or her growth and development closely. This also allows you to ask questions about your child. Preventative medicine is the best medicine.

Routine visits are scheduled at:
- 2-3 days after hospital discharge
- 1 month (if your doctor advises)
- 2 months
- 4 months
- 6 months
- 9 months
- 12 months
- 15 months
- 18 months
- 24 months
- Then yearly

An important part of these well-child exams is immunizing your child. Immunizations protect your child from disease that could make your child very ill or even prove to be fatal. Immunizations also help protect your child against Sudden Infant Death Syndrome (SIDS). Although there are rare side effects of some vaccines, the benefits of the vaccines far outweigh any risks. You will be given a pamphlet explaining the risks and benefits of each vaccine prior to your child being immunized. You should discuss any concerns or questions you have about the vaccines with your doctor.

The schedule for giving immunizations is somewhat variable. Our main goal is to immunize your child as quickly as possible. When possible, combination vaccines are used to decrease the number of injections your child will receive.

We vaccinate against many illnesses. Below is a list of what we will protect your child against.

**Vaccine Descriptions:**
- **HepB:** protects against hepatitis B
- **DtaP/Tdap:** a combined vaccine that protects against diphtheria, tetanus and pertussis (whooping cough)
- **Hib:** protects against Haemophilus influenza type b
- **PCV:** protects against pneumococcal disease
- **Polio:** protects against polio, the vaccine is also known as IPV
- **RV:** protects against infections caused by rotavirus
- **Influenza:** protects against influenza (flu)
- **MMR:** protects against measles, mumps, and rubella (German measles)
- **Varicella:** protects against varicella, also known as chickenpox
- **HepA:** protects against hepatitis A
- **MCV4:** protects against meningococcal meningitis
- **HPV:** protects against human papillomavirus that causes cervical cancer and genital warts.

*See Appendix for routine vaccine schedules.*
**Development**

One of the most important things about infant development is to realize that babies have unique personality traits and they develop at their own rate. You should remember that infants, even in the same family, achieve the same developmental milestones at different times.

During the first few months, a baby’s movements are mainly reflexive-jerky type movements. As their muscles strengthen, movements become more purposeful and reflexive movements decrease. By four months of age, babies seem to transfer from a totally dependent newborn to an active, smiling, cooing infant.

When your child comes for a well-baby checkup, your doctor will ask you questions about your baby’s development. If your doctor is concerned that your child is not developing normally, then special testing and/or therapy can be initiated. If your baby was premature, your doctor will adjust your child’s age to correlate with this prematurity. This will help your child’s doctor determine if his developmental skills and growth is normal for a child born early.

The most important thing you can do to enhance your child’s development is to enjoy your child. All babies enjoy being held, talked to and smiled at. Also, it is never too early to read to your child. If you have any questions about your child’s development, call to schedule an appointment with your child’s doctor to discuss these concerns.

*See appendix for chart of normal developmental milestones.*

**Newborn Care**

When you take your baby home from the hospital, it is a time of joy and uncertainty. It is important to remember that it is your baby. You will receive a lot of advice from many experienced people who mean well. It is up to you, with the help of your baby’s doctor, to decide what the best choices are for your child. Use this booklet when problems arise, but don’t hesitate to call us for advice. This book is not a substitute for your doctor’s advice.

**Travel with Baby**

When your child leaves the hospital, his/her first ride should be in an approved rear facing car seat. It is never safe to hold a child while riding in a car. If you need help selecting a proper seat for your child, please call the clinic during office hours, 501-364-1202. To schedule an appointment to have a car seat fitting, contact the Injury Prevention Center at 501-364-3400. Please refer to the MOTOR VEHICLE SAFETY SECTION for further detail on selecting an appropriate car seat for your child.

**Jaundice**

Jaundice, a yellow coloring of the skin, is common in the first few days of life. It may require close monitoring by your baby’s doctor. It would be beneficial to have your baby’s discharge records from the hospital when you bring your child in to see your doctor.
**Umbilical Cord**
The umbilical cord (the baby’s navel) remains attached for several days to a month. Alcohol should be applied to the base of the cord at each diaper change until it comes off. Once the cord falls off, it may ooze blood for a few days. Usually this stops when pressure is applied with a clean gauze or cloth. Call for an appointment if the area around the navel becomes red, hot, swollen or oozes pus from the area. We need to see the child to make sure there is no infection.

**Colic and Crying**
Colic is a word that has been used over the years to describe an excessive amount of fussing or crying in very young infants. How much crying it takes to be considered colic or what causes the crying is unknown. There are many varying opinions among pediatricians, not to mention parents and grandparents. The word colic itself means acute episode of abdominal or colon pains. No one has ever really proven that these babies suffer abdominal pains, or pain of any type for that matter.

Several things that could be probable factors include:
- Swallowed air or gas
- Parental anxiety
- Improper feeding techniques

Although any of these may cause an infant to cry, none can be said to be completely responsible for what we call colic.

A very good study was conducted that observed normal healthy babies to determine how much they cried. At 2 weeks of age, these infants averaged about 1 and 1/2 hours of crying a day. By 6 weeks, this increased to almost 3 hours per day. After that peak age, normal crying slowly decreased. So you can see, all babies are awake and cry every day and we consider that normal.

Although babies cry when they are hungry or when they are in pain, much of their crying is part of a normally developing, immature nervous system. Crying, after all his or her basic needs are met, will not hurt your child.

If your child is crying, you should first make sure to offer him/her a bottle if he/she ate more than 2 hours ago. Then burp your child after eating and check to make sure the diaper is dry. After that you may wish to hold and rock your baby; you may also try swaddling your child in a blanket while you are holding him. Your infant may not want to be held and may prefer to be laid down in their crib. The most important thing is that you not let this normal crying upset you to the point that you yell at, shake or hit your baby. It is okay to put your baby down in a safe place and take a 5-10 minute break. Visit www.cryingplan.com to learn more about preparing for infant crying.

Although we can explain much of what the fussing babies have, severe or prolonged crying in an infant can be sign of other more serious illnesses and your physician should then be consulted. There still remain a small percentage of babies (35%) who cry more than we consider normal, and yet no real cause can be found.
Tips to help these infants include:

- Proper feeding and burping techniques
  
  Movement – dancing, car rides, swinging

  Noise – white noise maker, vacuum cleaner running, washing machine or dryer running

  Temperature – is your child too warm or too cool

Changing your child’s formula is NOT recommended unless you consult with your child’s doctor first.

**Bathing of the Infant**

Tub baths may be done in baby bathtubs after the cord falls off and the area is well healed. Until then, sponge bathing may be done. The bath water should be lukewarm, not hot. The temperature on your hot water heater should be set at 120 degrees or less to prevent accidental scalding. A mild soap, such as Dove or baby soap is recommended. Only use plain water in the diaper area to avoid irritation. It is not necessary to scrub the skin with a cloth; gentle wipes with a soft cloth are all that are needed. Never leave a baby unsupervised at any time during bath. Infants and small children can drown in as little as 1-2 inches of water.

**Circumcision**

Boys who are circumcised may have petroleum gauze applied to the penis for a few days. Others will have a plastic ring that stays in place for up to 10 days. The doctor who did the circumcision will instruct you on proper care of your son’s penis.

Boys who are not circumcised should have their foreskin retracted ONLY AS FAR AS IT WILL GO WITHOUT FORCE to clean the penis. The foreskin may not go all the way back until the child is 4-5 years old.

**Breast Buds**

All children can have small lumps in their breast after birth that may last several months. These are normal and require no treatment. A small amount of white discharge from the nipple for the first few days of life is normal as well. If the area becomes red, swollen or hot, call for an appointment.

**Diapers**

Any brand of diapers may be used. It is important to change your baby fairly quickly after urinating or stooling to prevent diaper rashes. Powder is not recommended because infants can breathe it into their lungs, causing breathing problems.

**Stools**

The baby’s first stools are usually dark and thick. These will transition over several days. Breastfed babies often have frequent loose stools, sometimes with every feed. Stools may vary in color from bright yellow to green. Formula fed babies may have more formed stools. Babies may stool several times a day or may go several days between stools. Most babies will strain and turn red when passing a stool and many babies will pass gas frequently. This is usually normal. If your baby's stool seems abnormal, please call for advice (see constipation section as well).
Rashes (Newborn and Infantile Skin Rashes)
There are several very common rashes that affect infants outside the diaper area.

- **Milia** are tiny white bumps over the cheeks and nose. They resolve on their own in 1-2 months.

- **Toxic erythema** is a nonserious rash. This rash begins around 2-5 days of life and resolves by 7-10 days. The rash begins as a tiny red flat area and progresses to raised reddish bumps with a blister in the center. The spots are found all over the body and will resolve on their own.

- **Birthmarks**, also known as “strawberries, angel kisses or stork bites,” are usually found a few days to weeks after birth. Most will shrink and fade with time. A doctor needs to check birth marks around the eye, ear, nose, mouth or anus.

- **Cradle Cap** (seborrhea) appears after 2 weeks of age. It is a greasy, white yellow scale like rash on the scalp. Red bumps on the forehead and cheeks that look like pimple may also appear. This is caused by hormonal changes in the latter stages of pregnancy. To treat, simple use an antidandruff shampoo like Selsum Blue every other day for a week. Gently but firmly scrub the scalp with the shampoo to help remove the scales. AVOID LOTIONS, OILS, VASELINE or anything greasy on these areas.

- **Neonatal acne** appears around one month of age as reddish bumps or pimples on the cheeks and forehead. No treatment is needed other than avoidance of greasy products and keeping the face clean with plain water.

Keeping the skin clean and dry, using as little soap as possible and avoiding over-use of baby lotions, powders and oils is the most important thing to do to help these rashes heal. These products are not of any benefit to your child’s skin and can cause more irritation if applied to these rashes.

**Diaper Rash**
At one time or another, all babies will experience a diaper rash. It can range from a minor rash that is only red and irritated, to a severe rash that can be irritated enough to cause a small amount of bleeding.

**Causes of diaper rashes include:**
- Prolonged exposure to stool or urine
- Use of antibiotics
- Diapers and/or wipes that are scented (if your child is sensitive to the perfume)

**To prevent diaper rash, we suggest the following measures:**
- Prompt diaper changes, especially when stool is present
- Use only wet washcloths/paper towels to clean baby’s bottom.
  Limit the use of commercial wipes to when you will be away from home.
- Apply Vaseline, Desitin or zinc oxide ointment to your child’s bottom when putting on the nighttime diaper.
If a rash does appear:
Apply Vaseline, Desitin or zinc oxide after EVERY diaper change. Use washcloths to clean baby’s bottom after every stool. Pat the skin dry; do not rub.

Call our office if the rash is still present after 3 days, if the rash develops while the child is on antibiotics or if blisters or crusting sores develop.

Safety during sleep
The American Academy of Pediatrics recommends that infants be placed on their back to sleep. Several studies show that this may lessen the risk of suffocation and Sudden Infant Death Syndrome (SIDS). The side position is no longer recommended. Pillows, bumper pads, stuffed toys and loose bedding should be removed from the crib. The crib mattress should be firm and the crib sheet should be well fitting. Do not overdress or over bundle your child as overheating has been linked to SIDS, as well. Your baby should also sleep in his own crib/bassinet. Sleeping with your child in a bed, or on a couch or chair, increases the risk of SIDS and suffocation. If you have any questions about your child’s sleeping position or environment, feel free to discuss them with your child’s doctor.

Neonatal Eye Problems
Infants commonly have a blocked tear duct which causes watery discharge or matting of the eye. This usually clears up by 4-6 months, but massaging the tear duct may help it open quicker. This can be done by pressing firmly but gently with the index finger between the nose and the inner corner of the eye 2-3 times a day. If redness or discharge is present, call for an appointment for your child to be seen.

Feedings
Feeding is a very important bonding time for you and your baby. Breastfeeding is the ideal form of feeding due to the benefits it gives both mother and child; however, there are infant formulas which are an alternative to breast milk.

Breastfeeding should be initiated as soon after birth as possible. Milk production increases and mothers experience the “let down” reflex at around 2-5 days following delivery, but the baby receives important antibodies and fluid, called colostrum, prior to this let down.

Breast-fed babies will need to be fed more frequently than formula-fed babies. They will usually nurse every 2-3 hours. Newborns infants should not go without nursing for longer than a 4 hour period, even at night. If your child seems sleepy while feeding, try burping him or undressing him to help wake him up.

The usual routine for nursing includes 10 minutes on the first breast and as long as the infant desires on the other breast, up to 20 minutes total. Always start on the opposite breast from the last feeding. This allows for adequate emptying of both breasts. If you have any questions about breastfeeding your child, call our office and ask to speak to a lactation nurse. You may also call the Arkansas Breastfeeding Helpline at 1-800-445-6175 or visit their website at www.healthy.arkansas.gov/breastfeeding.
Once breastfeeding is well established, usually between 2-4 weeks of age, you may want to begin introducing your baby to a bottle if mother is planning on returning to work. You can use expressed breast milk (preferably) or formula for the bottle. This will make the transition to returning to work and the baby beginning day care more smoothly. Start with one bottle a day, but not the first or last feeding of the day. Slowly work up to the required number of bottles your child will need to take. This can be done over a couple of weeks. Be patient with yourself and your baby. You may need to recruit help when introducing your child to the bottle in the beginning. Your child associates mother with breastfeeding, but baby may take a bottle from dad or grandma without any problems.

If you choose to pump your excess breast milk to use in bottles, proper storage is essential. There are several products that are available to store breast milk in the freezer and refrigerator. Do not use regular plastic storage bags to store breast milk.

See appendix for the CDC’s recommendations for storage of breast milk.

If you are unable to breast feed or choose not to breast feed, you will need an infant formula to feed your child. There are several brands and forms of formula available for purchase. The most common kinds are cow’s milk or soy based. They are available in ready to feed liquid, concentrated liquid, and powder form. If you decide to use formula, your child’s doctor can help you pick the formula that is best for him or her. Please be sure to mix the formula according to the directions on the can and use the scoop that is provided to measure the powder formula. Bottles should be boiled prior to the first use, but afterwards may be washed by hand in hot, soapy water and allowed to air dry, or may be washed in the dishwasher. Do not heat your child’s bottles in the microwave; the milk can get too hot and may scald the baby. Instead try warming the bottle in a container of hot water.

Babies will usually take 2-3 ounces per feed every three hours initially. As your baby gets older he or she will take more at each feeding but will go longer between feeding, too. By 2 months of age, most babies take between 26 and 32 ounces of formula a day. Always hold your baby while he or she is taking a bottle, DO NOT PROP THE BOTTLE. This is an important bonding time for you and your child.

Avoid making one large bottle and allowing your child to drink from it for 2 or more feeds. The natural bacteria in your child’s saliva can mix in the bottle and cause contamination, especially if the bottle is left out at room temperature for more than 1 hour. Only mix what you think your child will take at that feed; you can always make more if your child wants more. This is also a cost saving measure since formula can be expensive, particularly if you are throwing away 2 or more ounces at each feeding.

Changing formula should be discussed with your child’s doctor. Based on your reasons for wanting to change, your child’s doctor can help you select the best formula for your child. Be sure to write down any symptoms your child is experiencing and bring this list with you to your child’s appointment.
Water
No matter if your baby is formula or breast-fed; this will provide all the nutrition your baby will need for the first 4-6 months of life. She/he does not need additional water, even in the hot summer months. Formula and breast milk both provide all the water your baby needs. In fact, extra water can be harmful to your baby.

Solids
Cereal may be started between 4 and 6 months of age. Your child should be able to sit up in a semi-upright position and eat from a spoon. Do not use infant feeders or mix the cereal in the bottle. Foods are introduced to provide your baby with new textures and tastes. When introducing foods, you need to start one new food at a time, waiting 3-5 days before introducing another. This allows time to make sure your child is not allergic to the food offered. If your child does not take to a new food with the first offering, don’t give up. It can take several introductions (greater than 8) for a child to begin “liking” a new food.

Vegetables and fruits may be introduced after cereal, usually around 6 months of age. Meats, strained or mashed, may be introduced after 7 months. You may introduce a cup and some finger foods like crackers between 6 to 9 months when your baby can sit well on their own.

Around one year of age, your baby may take food from the table with care being given to mash it if needed. Formula may be stopped and whole milk started when your baby turns one year old. You need to avoid foods such as popcorn, peanuts, raisins, hard candy, whole grapes, nuts, meat sticks, hot dogs and chewing gum. They are a choking hazard to your child.

If you have not done so, begin weaning your child off the bottle at one year of age. Do not put juice in the bottle; offer it in a cup. Your child only needs 4-6 ounces of juice per day. Excessive amounts of juice can decrease the appetite as much as soda or junk food.

During the toddler years, your child may become more “finicky” about certain foods. He or she may play with food during mealtime or they may take only one full meal a day. It is important to be patient and provide praise for good behavior, as this is a normal stage in development.

Spitting Up
Most infants spit up at some time during feeding. This is usually not significant. This can usually be decreased by more frequent burping and not bouncing your baby after feedings. You should also make sure that you are not overfeeding your baby. His or her stomach is only the size of his fist.

If your infant is spitting up more than a little or if your baby is having forceful vomiting, you should call for an appointment. Most causes are not serious, but there are some simple things that can be done to stop this process.

Hiccups/Sneezing
Hiccups are very common in the first 2 months of life. Babies have a tendency to hiccups after feedings. Nothing works consistently to relieve the hiccups. They are harmless and will go away on their own.
Most babies sneeze several times a day. It helps them clear their nose, since they are unable to blow their nose like an older child or adult. It does not mean your child is sick or has a cold.

Common Pediatric Illnesses

Fever
Fever should be viewed as the body’s way of fighting infection. It is generally not dangerous to the child, as children handle even high fevers of 104-105°F degrees rather well. The main reason we treat fever is to make the child more comfortable. A child is considered to have a fever when his/her body temperature goes above 100.4 degrees rectally or 99.5 orally. Tympanic (ear) temperatures are not accurate on babies under 6 months of age. Axillary (under arm) temperatures are often inaccurate and should only be used if a child is old enough to refuse a rectal thermometer and too young to do an oral thermometer. Forehead fever tape is inaccurate and should not be used. Glass and digital thermometers are acceptable, and tympanic thermometers are okay for children over 6 months of age. Tympanic temperatures may need to be confirmed by other means if the reading is questionable.

Steps to doing a rectal temperature:
• Place child over your lap.
• Turn on the thermometer.
• Lubricate the tip of the thermometer with a small amount of Vaseline and insert the thermometer into the rectum no more than 1/2 to 1 inch.
• Hold the thermometer in place by placing your entire hand over the buttocks and having the thermometer stick up between your index and middle fingers.

Steps to taking an oral temperature:
• Make sure the child has not eaten or drank anything in the past 10 minutes.
• Turn on the thermometer.
• Place tip of thermometer under tongue, as far back as possible.

The time required to measure the temperature varies with the type of thermometer you use. Please refer to the instructions provided with your thermometer for this information.

Steps to taking an axillary temperature:
• Make sure the arm pit is clean, dry and free of clothing.
• Turn on the thermometer.
• Place thermometer in the center of arm pit and lower arm to side.

The time required to measure the temperature varies with the type of thermometer you use. Please refer to the instructions provided with your thermometer for this information.
We recommend that you give your child acetaminophen or ibuprofen (for children over 6 months of age), not aspirin, for fever control. Please refer to dosing chart in back of book for the proper dose based on your child’s weight. You should also remove heavy clothes and blankets. These layers retain heat and prevent your child’s body from cooling down.

After the medicine is given, it will take at least one hour for the temperature to begin to fall. Even then it will probably not return completely to normal. Do not let this disturb you. Fever is beneficial in fighting whatever germ is making your child sick.

Please follow these guidelines when deciding to bring your child into the office for evaluation of fever. Your child should be seen if he/she:

• Is 12 weeks or under and has a rectal temp of 100.4 or higher.
• Continues to have a fever for longer than 72 hours.
• Seems unusually fussy, lethargic or has a poor appetite.
• Develops a rash.
• Develops a fever while on antibiotics.
• Has a fever greater than 104 degrees.

Colds
The common cold is caused by up to 200 different viruses and is the most common respiratory illness seen by pediatricians. The average child may have 6 or more colds a year. Infants in the first year of life may have as many as one cold a month.

Symptoms include fever, nasal congestion, runny nose, cough, red eyes, swollen lymph nodes and sometimes a headache. The symptoms are usually worse on the second to third day of the illness. Most colds last 5-7 days.

There is no medication to make the cold go away quicker. Because it is caused by a virus, antibiotics DO NOT work. The main goal is to treat the symptoms. This includes rest and medicine to treat the fever. For infants less than 2 years old and older children who cannot blow their nose yet, saline drops with the use of a nasal syringe for suctioning the nose are the most important thing. It is important to do this before feeding and before sleep. A cool mist humidifier may be beneficial. Do not use over-the-counter medications without talking to your child’s doctor first. They do not help the child get over the cold any faster but can cause unwanted side effects. The use of topical decongestants (such as Afrin or Neo-Synephrine) should only be used for 3-4 days if your child’s doctor prescribes them for your child.

Cough
Cough is a response of the respiratory system to various stimuli, such as large amounts of secretions, a foreign body, inhaled dust or strong fumes/scents. It may be in association with conditions such as asthma, drainage from the upper airways, as well as infectious states like viral or bacterial pneumonia.

The cough is an important reflex especially in the younger child, for it is the way to clear the airway of secretions. Because of this, it is best to not suppress the cough of a child under 2 years of age.
Characteristics of cough to consider:
• Is the cough loose or productive?
• Is it barking or croupy?
• When does it occur—morning, night, or with exercise?
• Is it relieved by sleep?

Over-the-counter (OTC) cough medications should not be used for children under age 4. Seek medical advice for treatment of this age group. For all other children OTC cough medications are not recommended as they do not help.

If the cough is persistent (last more than 3 weeks) or is associated with wheezing, fever and chills you should make an appointment with your child’s doctor.

Conjunctivitis (Pink Eye)
Pink eye is nothing more than irritation, inflammation or infection of the lining of the eye. It can be caused by many things. Sometimes dust or pollen is blown into the eye, and at other times it may be an infection with a virus or bacteria. Pink eye caused by a virus usually last 4-7 days.

Treatment for viral infections is warm water rinses to eyes every 1-2 hours. Use a fresh, wet cotton ball each time you clean the eye.

If your child has yellow discharge, call and speak to the nurse. She can help determine if your child needs an appointment or not. If your child’s eyelids are red and swollen or if your child has fever, call for an appointment.

Ear Infections
Ear infections are very common in children, especially those under 2 years of age.

An ear infection may be suspected in your child if he:
1. Has fever for 2 or more days, especially when he has a cold.
2. Has foul smelling material present in the ear canal.
3. Complains of ear pain or acts like the ear hurts.
4. Has a poor appetite and is not sleeping well.

If you think your child has an ear infection, you need to call for an appointment.

Some children will be more likely to have ear infections than others. Factors leading to this can include:
• Children who drink bottles lying flat, especially in the bed
• Children who are exposed to cigarette smoke
• Children who attend daycare
• Children who have abnormalities of the face, such as cleft lip or palate

If your child has an ear infection, he/she will be placed on an antibiotic for a period of time. Your child will need to take the entire course of medication even if he feels better in a few days. Acetaminophen or ibuprofen (for children 6 months and older) may be given along with the antibiotics to relieve any ear pain that is present.

If your child has recurrent ear infections (more than 3 ear infections in 6 months) talk to his/her pediatrician about your options to help take care of this problem.
Most sore throats are caused by viruses and are part of a cold. A mild sore throat without fever can be treated with warm salt water gargles, acetaminophen, and throat lozenges. If your child develops difficulty swallowing due to a sore throat, he should be seen by his doctor.

About 10% of sore throats are caused by strep bacteria. Children with strep throat need a 10-day course of antibiotics or a one-time injection of antibiotics. They are not contagious after 24 hours of antibiotics. You will need to get your child a new toothbrush after 2 full days of medicine.

If one child in the family has had a positive test for strep and other children develop symptoms within 7 days, call your child’s doctor. Often strep contacts can be treated over the phone.

**Vomiting/Diarrhea**

Gastroenteritis means infection of the gastrointestinal tract, or the stomach and bowels. Bacteria or viruses can infect a baby or child’s intestines and lead to vomiting and diarrhea. Sometimes the vomiting/diarrhea are very mild, or they can occur frequently in large amounts. It is very important to keep a close watch on your child when vomiting or diarrhea occurs. A baby/child can lose a large amount of fluid from his body in a short time. If that fluid is not replaced by the child drinking, dehydration can occur. Usually vomiting and diarrhea are usually not so severe and can be treated at home.

**Diarrhea**

Diarrhea means that the stool is more frequent and more watery than normal. If a child has 1-2 more stools a day than normal but is taking fluids well, there is no need to worry. If your child has diarrhea and/or blood is seen in the stool, your child’s doctor should be notified.

Children with diarrhea need more fluid than usual in order to replace fluid being lost in the stools. We recommend you continue giving your child formula or breast milk if he is under one year of age and is not vomiting. If he refuses formula or breast milk or needs additional fluid, electrolyte solutions such as Pedialyte should be given. These are available in grocery stores and drug stores. Fruit juice and soft drinks should be avoided. The high sugar content in these drinks can make diarrhea worse. Electrolyte solutions should not be used for more than 24 hours without consulting with your child’s doctor.

For children who are taking solids, encourage starchy foods. This can include dried cereals, oatmeal, bread, crackers, noodles, mashed potatoes, rice, etc. Give unlimited amounts of water but avoid fruit juice and soft drinks. The high sugar content in these drinks can make diarrhea worse. Milk is fine in moderate amounts. This limited diet should only be used for 1-2 days.

If in 24-48 hours the diarrhea has not become less frequent, your child’s doctor should be notified. Do not give your child medication to stop the diarrhea unless directed by his doctor. These medications can be harmful to children.

Diarrhea is very contagious. Hand-washing after diaper changes or using the toilet
is very important. This is the best way to keep everyone else in the family from getting diarrhea.

**Vomiting**

Vomiting may develop before diarrhea occurs with some viral infections. If your child has vomiting and diarrhea at the same time or vomiting alone for more than 24 hours, it could be that your child has a more severe case of gastroenteritis than usual. You should call and speak to a nurse. We will assess your child for dehydration and determine if it is safe to continue the treatment you have already started.

We will ask you some specific questions related to dehydration:
1. How is your child behaving?
2. How is his/her color?
3. Are his/her eyes sunken?
4. Is his/her mouth dry or wet with saliva?
5. How many wet diapers have you changed recently, or when did your child last urinate?
6. Are there tears present when he/she cries?

We will be able to tell by your answers to the questions whether we need to see your child in our office.

We can sometimes give your child medication to stop the vomiting, but only after being examined by a doctor. This is to make sure your child really just has gastroenteritis. Vomiting can happen for many reasons, some quite serious.

If your child is vomiting, he/she should be placed on clear liquids for 12-24 hours. In the infant and toddler, electrolyte solutions such as Pedialyte or breastmilk should be used. Juices and colas should be avoided. Small, frequent amounts of fluid are better than large volumes. 1-2 teaspoons should be given every 5 minutes for 4 hours. The amount can be doubled after 4 hours if your child has not vomited. For breast fed infants, nursing for 4-5 minutes every 20-30 minutes is beneficial. Again, increase the amount as tolerated.

In older children, Gatorade and clear beverages may be used. Small, frequent amounts of fluid are better than large volumes. 1-2 ounces should be given every 15 minutes for 4 hours. The amount can be doubled after 4 hours if your child has not vomited. Increase the amount as tolerated by your child.

If your child continues to vomit clear liquids, call for an appointment.

After 12-24 hours, you should be able to advance your child’s diet. Infants should be started back on their regular formula. Sometimes diluting the formula to half strength for the first 1-2 feeds is helpful. Do this by adding 4 ounces of water for every scoop of powder used. For older children, a bland, starchy diet can be started and advanced.

If vomiting returns after advancing his/her diet, call for an appointment.
Lumps, Lymph Nodes or Kernels

It is perfectly normal to have small lymph glands or lymph nodes (kernels) in the neck and other areas of the body. These will often become more prominent when the child has a cold. As long as they are small, moveable and nontender, they are rarely of consequence. If they are rapidly enlarging, tender, red or if the child has fever accompanying them, call for an appointment. When lymph nodes become enlarged with a cold, they often remain enlarged for several weeks. This is normal. If they are getting progressively larger, your child should be examined. Some lymph nodes become prominent but stay the same size, and usually these are of no consequence either. If there are any questions or concerns, schedule your child an appointment.

Newborn babies will often have lumps on their cheeks and face. These are areas where the fat becomes compressed during delivery, causing a knot to form. These usually will resolve in 2-4 weeks. As long as they are not red and tender, they are fine.

Stomach Ache

Abdominal (stomach) pain is one of the most common complaints of childhood. In most cases, abdominal pain does not have a serious cause. Abdominal pain can be due to constipation, infections (viral or bacterial), stress, urinary tract infections, appendicitis and many other causes.

The other symptoms associated with the abdominal pain are helpful in making the correct diagnosis. If your child has a stomach ache associated with fever, pain with urination, persistent vomiting (especially without diarrhea) or if the pain is severe, he should be seen by his doctor.

Constipation

There is often confusion about the true definition of constipation. Constipation is having hard stools that are difficult to pass. Just because a child goes one or more days without a stool does not necessarily mean that he is constipated.

Constipation in Infants

It is normal for a baby to grunt, strain or turn red when having a bowel movement. This occurs because most babies are lying flat while having a bowel movement. These behaviors help them pass the bowel movement. Also, exclusively breastfed infants over 1 month of age may have infrequent stools and this is normal because the breast milk is completely absorbed in the child’s GI tract. These infants will have large stools every 4-7 days that are soft and passed without pain or crying.

If your baby has thick, pasty or hard stools, then he may be constipated. Treatment of constipation is fairly easy. For infants over 1 month of age, juice may be used to soften the stool. 100% pear, prune or apple juice is the best to treat constipation. Give up to 1 ounce 1-2 times a day. Do not dilute the juice. The natural sugars in the juice are what treat the constipation so diluted juice is not effective.

Do not use suppositories or enemas unless directed by your child’s doctor or a nurse recommends it.

If your child is under 1 month of age, acts like he is in pain or is vomiting, or the use of juice does not help, make your child an appointment to be seen.
**Constipation in Older Children**

Most constipation in older children is related to lack of fluid and fiber in the diet as well as bad bowel habits. This can get worse over time so it is good to begin treatment early.

This includes:
1. Encourage 100% fruit juice (no more than 4-6 oz./day) and water.
2. Limit excessive intake of milk products
3. Use whole wheat bread, bran cereal, fresh fruits and vegetables, popcorn and any other foods high in fiber.
4. Bulk laxatives such as Metamucil or Citrucel may help. 2 teaspoons in 4-6 ounces of water or juice a day, followed by 4-6 ounces of plain water. Exlax chewable laxatives may also help. For children 3-6 years old give 1 tablet 1-2 times a day. For children 6-12 years old give 1 tablet 1-4 times a day. Do not give strong oral laxatives without asking your child’s doctor first. These can cause cramps and some can become habit forming.
5. If these measures fail, your child needs to be seen by a doctor; call for an appointment.

**Kidney – Urinary Problems**

Any symptom which is suspicious for a urinary tract infection, including urinary frequency or urgency, pain with urination, new onset daytime/nighttime wetting or foul smelling urine, warrant a clinic visit.

Children, especially girls, often develop urinary symptoms due to irritation of the bladder. The most common cause of this is using bubble bath, dishwashing liquid or other soapy substances in the bath water. These can cause irritation both internally and externally.

To prevent this, wash the genital area with plain water. Do not use bubble bath or other liquid soaps in the bath water, and limit bath time to less than 15 minutes. Also teaching your daughter to wipe from front to back and wearing loose cotton underpants is beneficial.

**Nosebleeds**

Nosebleeds can be caused by dryness of the nasal lining or trauma to the nose. Picking the nose is a common cause of nosebleeds. Cold and allergies are common causes of nosebleeds in children and adolescents.

To stop an active nosebleed, have the child sit up with his head tilted forward and carefully pinch the sides of the nose together. Hold continuous pressure for 10 minutes. Have your child spit out any blood that enters his mouth. When the bleeding stops, do not remove any blood clots from the nostril, or the bleeding can start again. Applying an ice pack may be beneficial as well.

To prevent recurrent nosebleeds it is helpful to place a small amount of Vaseline inside the nose. The fingernails should be kept trimmed close. A cool mist humidifier used when sleeping, especially when the heat is on in the winter, may decrease the dryness of the nose and thereby decrease nosebleeds.
If the bleeding does not stop easily or occurs frequently, your child should be evaluated. Please call for an appointment.

**Rashes**

- **Poison Ivy (contact dermatitis)**

Poison ivy is a rash that looks like bunches of blisters that may appear in lines and is very itchy. It is caused by coming in contact with the oils or sap from the plant, not by touching the rash of someone else who has poison ivy. If your child comes in contact with poison ivy or any other irritant, it is important to wash the area thoroughly with soap and water as soon as possible. This includes shoes and clothes the patient wore to the woods.

Oral Benadryl can be helpful in controlling the itching. Cool compresses, cool baths or Avenno oatmeal baths may also help soothe the skin. Topical hydrocortisone 1% which is available over the counter will decrease the itching and inflammation. Your child’s nails should be trimmed to avoid secondary infection that occurs with scratching.

If your child has poison ivy on the face, a widespread rash or if the rash looks infected, you should call the office to schedule an appointment for your child.

- **Eczema (atopic dermatitis)**

Eczema is a condition that causes the skin to be sensitive and dry. The dryness of the skin causes it to itch and a rash may develop. In infants the rash may be generalized while in older children it tend to be primarily in the “creases” of the body such as the neck, behind the knees and in the bend of the arms. Eczema often occurs in families who have a history of allergy, asthma and hay fever.

The treatment involves keeping the skin moisturized. A mild soap such as Dove, Ivory, or Cetaphil, should be used. Baby baths and “bubble” baths are not recommended. Bathing should be as infrequent as possible and in lukewarm (not hot) water. Children should not spend an extended time playing in the tub.

The skin should be well moisturized after bathing. Vaseline, Eucerin, or Nivea Cream are good choices. Remove excess water by patting but not rubbing the skin with a towel. Apply moisturizer to still damp skin. 1% hydrocortisone cream can be used on areas that itch or have a rash.

Use all fragrance free products on children with eczema. This includes body and laundry soaps and any lotions. Sometimes exposure to certain foods or things in the environment may make eczema worse. If your child’s dry sensitive skin continues to be a problem despite taking the above measures, schedule your child an appointment.

- **Viral Rashes**

Some viral infections will cause the child to break out in a rash. This is usually a generalized red rash which is not raised and can be found all over the body. This might occur following a cold, fever or diarrhea. The child can be observed at home if he is not bothered by the rash. The rash might go away on its own in a few days. If the rash spreads rapidly and child becomes sicker seek medical advice.
• **Roseola**
Roseola is an illness caused by a virus. The child typically runs a high fever for 2-4 days and then breaks out in a rash. The rash is mainly on the face, back and chest with very few bumps on the arms and legs. By the time the child breaks out, the fever is gone. The rash lasts for 1-2 days and then disappears. If your child has had fever and is fussy for a day or two then breaks out and the fever goes away, there is no cause for concern, as long as your child is acting, feeding and resting normally.

• **Chicken Pox**
Chicken Pox is a common viral infection of childhood. After an incubation period of 7-21 days, your child will break out with a rash that starts as small red bumps and then progresses to blisters. These blisters rupture and form a scab or crust. The rash typically begins on the chest or back and then spread to the arm, legs and face. Children usually will have fever for several days and may have other cold symptoms. The rash is usually very itchy.

Chicken pox is very contagious. A child is contagious for 1-2 days before the rash breaks out until all of the lesions are crusted over. This usually takes 7-9 days.

Chicken pox usually has no major complications. The most common complication is a secondary infection of the lesions that includes redness and drainage. A much more serious complication is encephalitis or inflammation of the brain. Signs of encephalitis are stiff neck, vomiting and lethargy. If any of these symptoms occur, you should call your child’s doctor right away.

*Treatment of Chicken Pox*
The treatment is designed to relieve itching:
1. Keep the child cool – heat causes more itching.
2. Cool baths with a small amount of baking soda or Aveeno.
3. Oral Benadryl for children over 2 years old. See dosing chart in back of book. Do not use topical Benadryl products because they can irritate the rash.
4. Acetaminophen can be used for discomfort or fever. Aspirin should not be used.
5. Keep nails trimmed short and minimize scratching. This helps prevent secondary infections.

If your child has a problem with his/her immune system, is on immunosuppressant drugs, or is on steroid-type drugs for asthma or kidney problems, call your child’s doctor immediately if you think he has chicken pox.

There is now a vaccine to prevent chicken pox. The first dose is typically given at 1 year of age. The second dose is given between 4 and 6 years of age. If your child is older and has only had 1 dose, he will need a second dose at some time.

• **Rashes with Fever**
If your child has a fever and a rash at the same time call to schedule an appointment for your child. If your child has a rash that is purple or bruise-like, a rash with fever or a rash after a tick bite, he/she needs to be seen right away.
• **Hives and Allergic Rashes**
  This type of rash is raised, red and itches. The lesions are often large and may come and go over a short period of time. The lesions often last for several days. The rash may be associated with swelling of the hands and feet. This rash is usually not dangerous but can be very uncomfortable. Hives can be caused by many things which your child may have eaten or come in contact with. Hives also can be associated with infections or antibiotics. If your child is on antibiotics, you should stop the medication and call our office. Otherwise, we often do not ever know the cause of the hives. If your child has recurrent hives, an appointment should be made and an attempt will be made to identify the causative agent. Oral Benadryl will help the itching. Please refer to the back of this book for appropriate weight based dosing.

• **Rash While on Medication**
  If your child develops any type of rash while on medication, the medication should be stopped and the doctor should be notified.

### Common Pediatric Problems/Concerns

**Sleep Problems**

Many parents want to know why their older baby doesn’t sleep through the night. Often it is the behavior of the parents that is responsible for the child’s night-time awakening.

Children, during the first year of life, awaken 4-5 times each night. Most children can put themselves back to sleep without their parent’s help. Children who have not mastered this will cry for their parents. Often the parents will take the child out of the crib and rock him back to sleep. This prevents the child from learning to put himself back to sleep. This is a vicious cycle that will make for exhausted parents and children.

Babies do not care whether it is daylight or dark. They will get as much sleep as they need whether mother does or not. Try to adjust the baby’s sleeping pattern to that of the rest of the family. Babies’ sleep needs vary tremendously. If a child does not sleep much in the daytime, don’t worry.

If your child is sleeping more during the day and staying up at night several things may be tried to decrease the amount of daytime sleeping. This will help increase the amount of time spent sleeping at night.

1. Spend some time playing with him when he is ready to go to sleep.
2. Wake him early from his naps.
3. A bath is a useful eye opener.

It is also helpful to keep your house bright and noisy during the day and dark and quiet at night. Decrease the stimuli your child receives at night time awakenings. Keep the lights low, minimize talking or singing to your child and excessive cuddling. Your child will eventually get the hang of it.

Most babies do not sleep through the night until 3-4 months of age.
From birth to two months of age, most babies awaken two times during the night to feed. Between two and three months, most babies only wake up one time during the night to feed. By four months of age, most babies can sleep more than eight hours straight without needing to feed. Only premature infants and newborn infants need to be awakened to feed at night.

We recommend the following steps to promote healthy sleep habits:
1. A bedtime routine, even in young children, is helpful. Cater this routine to your child and do this every night before bed. This will get your child ready to go to sleep.
2. Put your child into bed drowsy, but awake.
3. If your child is four months of age or older, he/she does not need nighttime feedings. If he/she awakens and cries, offer a pacifier but do not pick him/her up and do not feed your baby. Never let your baby have a bottle in the bed.
4. After the first few weeks of life, you can transition your infant from his bassinet to his own crib in his own room (if he is not already sleeping there). Putting your baby in your bed is not only unsafe for your child, but will lead to sleep problems for you and your child.
5. Keep the room dark. Uses of room darkening shades/curtains may be beneficial.
6. When your baby is older, eliminate long, frequent daytime naps.

Prevention of sleep problems is much easier than curing them one they develop. Once bad habits occur, converting your child to a normal pattern of sleep requires patience and diligence on your part. If you institute the measures above, your child will most likely go through a short period of crying at bedtime or during the night. If your child’s crying is persistent, we recommend that you check on your child every 10 minutes to reassure him (as well as yourself). You should tell him to go to sleep but you should not turn on the light, pick him up or feed him. Most children will develop a normal sleep pattern within a few nights. If you have any questions or concerns, consult your child’s doctor and they can help you resolve any issues.

**Teeth and Teething**

All new babies start drooling, gnawing on things and chewing their fists when they are about 3-4 months old. Chewing on things is a part of normal development and does not mean your child is cutting teeth. The drooling is due to the salivary glands developing and production of excess saliva. Most children do not cut teeth until at least 6 months of age and many do not get their first tooth until much later. Teething usually does not cause significant pain or fever over 100.

Avoid topical teething gels, as these can increase your child’s risk of choking. If your child is irritable and you feel you need to give them something, you can use acetaminophen or ibuprofen (for infant 6 months and older). Please refer to dosing chart in back of book for the proper dose based on your child’s weight. You may also try teething rings or a cold washcloth.

**Dental Care**

Strong healthy teeth are an important part of every child’s well-being. It is never too early to start good dental habits that will help your child’s teeth last a lifetime. The first set of teeth that erupt are called primary teeth. They usually start coming
in at around 6-9 months, but don’t worry if they are earlier or later than this. This set of teeth helps in development of speech and incorporation of solids food in the diet. Although these teeth will fall out to make room for the secondary teeth, it is still important to care for them. If cavities develop, it can lead to needless pain and dental procedures for your child.

Since fluoride was put into some water supplies, the number of children with cavities has decreased. If your water does not have fluoride, you can still get the benefit of fluoride by giving your child fluoride drops daily. You can talk to your doctor about getting a prescription for the proper dose of fluoride.

Once your child’s first teeth have erupted, you can clean them off once a day with a soft piece of gauze or cloth. This will get your child used to brushing once a day. We recommend starting this by the time the molars (jaw teeth) erupt. Brushing with plain water (no toothpaste) is recommended until the child is old enough rinse and spit after brushing. Supervise your child’s brushing, making sure he/she is cleaning all the teeth.

Good dietary habits are important in keeping a child’s teeth healthy. Avoiding overuse of juice and sugary snacks in between meals, like candy or soft drinks, definitely helps prevent cavities. Also you may have heard of milk bottle or nursing cavities. This is where the baby’s front teeth develop severe cavities. This is the result of putting a baby to bed nightly with a bottle of formula or juice. The liquid coats the front teeth and allows the bacteria that cause cavities to multiply. A baby should not be put to bed with a bottle at all; a pacifier is a good substitute.

The first trip to the dentist should occur around 2-3 years of age. Take your child sooner if specific problems arise.

Young children explore the world with their mouths, and it is important to keep sharp, pointed or otherwise harmful objects away from them. This helps prevent injury to their mouth or teeth.

If an injury to a baby tooth occurs and the tooth is knocked out, place it in a cup of milk and call us or your child’s dentist. Usually baby teeth are not replaced but the milk will preserve the tooth if it is able to be replaced.

If a permanent tooth is knocked out, rinse your child’s mouth and the tooth with tap water. Do not touch the root of the tooth. If you can replace it in the socket, do so and hold it in place until the dentist sees your child. If you cannot replace the tooth, place it in a container of milk or water. Call us if you cannot get into your child’s dentist immediately.

We are often asked about thumb sucking and its effect on teeth. We do not worry about this until age 4 or so. Only when permanent teeth start coming in are they affected.

**Toilet Training**

Parents need to know that there is no “magic age” by which children should be toilet trained. This depends on the development of the muscles and nerves to the
bowel and bladder. Children are most often ready for training around their second birthday. Girls are usually ready to be trained a little earlier than boys.

The most important thing about toilet training is not to lose patience or become discouraged. The more stressful training becomes for the child and family, the longer it will take.

Your doctor can help you decide if your baby is ready to be trained. When your baby begins to wake up from naps or in the morning with a dry diaper, he may have the bladder control to begin training. Training for bowel movements is usually harder and takes longer than training for urine.

Here are some basic rules to keep training from being stressful for everyone:
1. Do not begin when there is a lot of tension or change (moving, a new baby at home, visitors, illness, etc.)
2. Buy a potty chair that lets the child’s feet sit on the floor.
3. Encourage him to sit on the chair once a day, with clothes on. Stay in the room and talk to him, but let him leave when he is ready.
4. After a while sit the child on the chair after he/she has had a bowel movement in the diaper. Undo the diaper and put the stool into the potty. Explain to your child what the potty is for.
5. Most importantly, encourage him whenever he does something right, such as sitting on the chair by himself or telling you when he needs to go. Be sure to hug and praise but do not scold or punish. Punishing a child for not potty training quickly can make it take longer.
6. Introduce training pants after your child starts using the potty.

**Bedwetting**

The child who “wets the bed” is often thought to be “bad” or “stubborn” or “have weak kidneys.” This is not true. Most children with this problem have inherited small bladders. Also, they may not awaken to the sensation or “feel” of a full bladder.

Despite what you hear from other parents, up to 40% of children will continue to wet the bed at age 3. Many children are much older than this before they achieve full night time dryness. Up to 10% of all 6 year olds will wet the bed. Often, one of the parents has a history of wetting the bed as a child, too.

You should never punish or humiliate a child for bedwetting. Remember, this is something your child cannot control. There are some things you can do to help decrease your child’s bedwetting:
1. Limit fluids 2 hours before bedtime.
2. Avoid beverages containing caffeine.
3. Have your child empty his bladder right before going to bed.
4. Praise your child when he/she stays dry all night long.

Children who have not achieved full bladder control by age 6 should be seen by their doctor to discuss this issue. There are some treatment options for these older children.
Children who have been dry in the past and develop bedwetting should be seen by their doctor.

**Discipline**
There are many schools of thought on the subject of discipline.

The most important issue in dealing with discipline is consistency. This should start early in infancy and continue through adolescence. Everyone is willing to give suggestions on how to discipline your child. Grandparents are usually the most eager to help. However, you must raise your child the way you feel fits, along with the guidance from your child’s doctor. You will make mistakes, as we all do, but it is important that your child respects you and knows that you will always have their best interest at heart.

Researchers have consistently found that positive reinforcement is much more effective than negative reinforcement (i.e. spanking). Praising a child when he does what he is supposed to goes much further than punishment when he is wrong. Temper tantrums are common in toddlers. Toddlers are not able to use their voices to express their frustration with what is happening like an older child or adult. Instead, temper tantrums allow them an outlet for this penned up frustration. If your child has temper tantrums, you should ignore the behavior. You will not be able to stop the tantrum by talking to the child and this will only reinforce the behavior.

Here are some general guidelines when setting rules for your child:
1. Begin redirection of behaviors after 1 year of age. Before this, simply move your child away and give him something else to do.
2. Have clear rules (“Don’t push your brother.”).
3. State the expected behavior.
4. Ignore unimportant behavior (don’t expect perfection).
5. Use rules that are fair for your child’s age. If you have multiple children, rules will need to be altered to fit specific children; do not have one rule for everyone.
6. All caregivers (parents, grandparents, daycare workers, etc.) should be as consistent as possible or the child will become confused about what behavior is appropriate.

Around 18 months of age the time out technique can begin to be used. You should discuss this with your child’s doctor. If you have any concerns with your child’s behavior or have any questions please call your child’s doctor to discuss these matters.

**Lice**
If your child has head lice, you should get Nix cream rinse from your local pharmacy. It is available over the counter. You should apply the medication to your child’s dry hair and add just enough water to make lather. Leave the medication on for 20 minutes (the directions on the package say 10 minutes). Afterwards, rinse your child’s hair and let it air dry. Nix will kill the eggs which are contained in the nit (a small white capsule attached to the hair near the root.) 8 hours after treating your child for head lice, you can begin picking the nits out of your child’s hair. A mixture of 1/2 vinegar and 1/2 water can be used to soak the hair for 30
minutes prior to beginning picking the nits. This will help loosen the nits from the hair and make removal a little bit easier. You do not need to shave your child’s head or any other drastic measures to remove the lice from your child’s hair.

You should wash all combs, brushes, hats, linens and all other objects that may have come in contact with your child’s hair. Combs and brushes should be soaked for 1 hour in hot water with anti-lice shampoo in it. Wash all linens and clothes the child has had contact with in the past 3 days in hot water (140 degrees). For all other objects that cannot be washed, place in an airtight container or bag and store for two weeks.

Some head lice have become resistant to lice medications. You can use 100% real mayonnaise. Do not use low fat or fat free mayonnaise. Apply the mayonnaise to your child’s hair and cover with a shower cap. Leave it in for 8 hours or overnight. Then wash your child’s hair. Remove as many nits as possible after treating your child. Repeat the mayonnaise treatment in 1 week.

Safety and Injury

After the first few weeks of life, unintentional injuries are the leading cause of death until age 45. These include suffocation, motor vehicle crashes (cars, trucks, ATV’s, motorcycles and pedestrians), burns, drowning, poisoning, suicides and firearms. As you would guess from the nature of these, most of these occur in young people. By learning appropriate safety measures and anticipating your child’s normal development you can help guard against many of these injuries. Some of the most important steps you can take are:

1. Never transport your child in a vehicle without first restraining your child in his/her car seat or seat belt, whichever is appropriate for your child. Please refer to the “Travel with Baby” section for details.

2. Keep your hot water thermostat set at 120 degrees or lower to prevent accidental scalding.

3. Never allow your child to ride in the back of a pickup, on a tractor, motorcycle or as a passenger on an ATV. If your child operates an ATV, make sure that it is age and size appropriate for your child and he wears an approve helmet while on the ATV.

4. Be sure your child is properly fitted for his/her bicycle and understands bicycle safety. He should also have a properly fitted helmet to wear while biking, skating or skate boarding.

5. If possible, guns should not be allowed in homes where children are present. If guns are present, they should be unloaded and locked up.

6. Never allow children access to any type of fireworks.

7. Insure that when bathing, young children are always supervised by an adult. A child can drown in only a few inches of water. Empty pails, buckets and child-size pools after using. Close the lid completely on the toilet after each use.
8. Be well versed in water safety including swimming, boating and water skiing.

9. Never smoke while holding a child. Better yet, never smoke a cigarette/cigar in your home or car, even when children are not present.

10. Be sure pot handles are turned towards the wall/back of stove while cooking.

11. Keep all medications in child resistant containers and locked up out of reach. When giving your child medication, be sure you understand the instructions. Always measure medicine in a tool designed for that purpose.

12. Be aware of which cleaning materials, plants and cosmetics are poisonous and insure that children have no access to them. Please refer to the “Poison” section for more information.

13. Install smoke alarms in your home, including one for each sleeping area. Conduct periodic “fire drills” with your family. Also recommended are carbon monoxide alarms, especially if gas stoves, heaters or furnaces are in use.

14. Choose toys without pointed or sharp objects and those which do not have small objects which could come off and become a choking hazard.

15. If younger than 3 years, never allow your child to eat popcorn, peanuts, small hard candy, hot dogs or chewing gum. Don’t allow your child to eat while walking.

16. Understand your child’s development so that you can anticipate any misadventures that may occur the first time your child is able to crawl, climb, open cabinets and walk.

17. Talk with other caregivers, such as babysitters and grandparents, about these safety issues.

Motor Vehicle Safety: Keep Your Child Safe in the Car
Motor vehicle crashes are the number one cause of death for children in Arkansas. It’s important to choose and properly install the correct car seat. You never know when or if a crash may occur. It only takes a moment to protect your child from being hurt or killed.

Four Steps to Child Passenger Safety
• **Rear-Facing**
  Children should ride rear-facing until they are 2 years of age or until they reach the upper weight and height limit of their car seat. The American Academy of Pediatrics says to keep your child rear-facing as long as possible to keep them safer. Check your car seat. Some seats can stay rear-facing up to 35 pounds.

• **Forward-Facing with Harness**
  Children should ride in a forward-facing seat with a harness until they outgrow it (usually around 4 years of age and about 40 pounds).
• **Booster Seat**
Children should sit in a booster seat until they are 4’9” tall and/or weigh 80 pounds (around 8 years old) or until the adult seat belt fits correctly over the shoulder while the child is seated upright without slouching to bend his or her knees over the seat’s edge.

• **Seat Belt for LIFE!**
Children should ride in the back seat until they are 13 years old. If adults buckle up, they are much more likely to buckle up their child. Set an example of safe driving and riding by buckling up on every trip!

Please consult your vehicle and car seat owner’s manual for proper installation instructions of your child’s car seat. The weight and height limits for your child’s car seat can be found there as well as on the actual car seat.

**Poisoning**
Prevent poisoning by limiting the access your child has to common household poisons. Poisons include medications, beauty products, cleaning products and others. Keep these items out of children’s reach, preferably in a locked cabinet. It is also important to give medication to your children correctly. Talk with a pharmacist or doctor to learn about prescription and over-the-counter medication safety. If your child swallows any unusual substance, you should call the ACH Emergency Room at 364-1185 or Poison Control at 1-800-222-1222 immediately. If your child starts having breathing problems, seizures or loss of consciousness call 911 immediately.

**Burns**
Burns that are severe enough to cause blistering, breaks in the skin or charring should be evaluated by your doctor or at the emergency room. All electrical burns should be evaluated immediately. Burns that affect the hands, face or genitals are more serious than burns in other locations and need immediate treatment.

Burns that cause only redness of the skin are usually minor and require only local care. The following steps may be taken at home immediately after the burn to minimize further burn and to begin treatment:

1. Hold the burned area under cool water for 5 minutes.

2. Acetaminophen or Ibuprofen can be used for pain.

3. Antibiotic ointment such as Neosporin can be applied to the area and cover it with a clean dressing. If your child has extensive burns, a clean sheet can be used to protect the skin en route to the hospital.

4. If there is a break in the skin, a tetanus booster will be needed if it has not been given in the past 5 years.

**Head Injury**
Most head injuries in children are relatively minor. You should observe your child for the following signs and symptoms after an injury to the head and report them to your child’s doctor as instructed:
1. Your child is unresponsive following a head injury.
2. Your child loses consciousness, even for a short period of time.
3. Your child has a seizure after a head trauma.
4. Double vision or any vision problems.
5. Unequal pupils or weakness in an arm or leg.
7. Vomiting is common. If your child vomits more than twice, call his doctor.
8. Drowsiness is common. Allowing your child to sleep is fine; just make sure he is able to be aroused every 2-3 hours. If he is difficult to awaken, go to the emergency room.
9. Headaches are common. If the pain becomes increasingly severe after using acetaminophen, call your child’s doctor.
10. A “goose egg” on the head is usually fine unless it is very large. Call your child’s doctor with any concerns.

The first 6 symptoms require immediate attention. Call 911 and have your child taken to the nearest emergency room.

Children who sustain or are suspected of a mild traumatic brain injury (concussion) during sports should be removed from play and evaluated by a medical professional before returning to play or other activities.

Bites

- **Dog/Domestic Animals**
  Any animal bite that breaks the skin requires two types of management. The first is local wound care.

  1. Clean the wound with soap and water.
  2. Apply an antibiotic ointment such as Neosporin.
  3. Call your doctor if the wound is large or if the child was bitten by a cat or dog.
     Call your doctor if a small wound becomes red, has drainage or if your child develops fever.

  The second part of management involves preventing rabies.

- **Known animals**
  1. If the animal is well known and has been vaccinated, the animal should be kept up for 10 days and observed. If the animal does not become sick, then your child does not need the rabies vaccine.

  2. If the animal dies before the observation period is up, call to schedule an appointment for your child. Call your local department of health for disposition of the animal. Do not destroy the animal or dispose of the body until your child is seen by a doctor.

- **Strange/sick/missing animals**
  Call your child’s doctor immediately. It is important that your child is current with tetanus immunization. After an animal bite your child needs a tetanus immunization if he/she has not had one for 5 years or if he/she is not current on his/her vaccinations.
• **Stray or Wild animals**
Your child’s physician should be called immediately with any of these bites. Also contact your local animal control office.

• **Human bites**
Human bites should be cleaned thoroughly and an antibiotic ointment applied. If the wound becomes red or develops drainage, the child should be seen by his doctor. It is important that your child is current with his tetanus immunization. After a human bite your child needs a tetanus immunization if he has not had one for 5 years or if he is not current on his vaccinations.

• **Insect bites/stings**
Most insect bites are not dangerous unless your child is severely allergic to a particular type of insect. If your child develops wheezing, difficulty breathing or difficulty swallowing, call 911 and go to the nearest emergency room.

If the stinger is present, remove it with a scraping motion. Do not squeeze the stinger or you could squeeze more of the venom in to your child’s skin. Place a cool cloth on the bite to reduce the swelling. Acetaminophen may be used for pain and oral Benadryl and 1% hydrocortisone cream can be used for itching. Please refer to the back of this book for appropriate weight based dosing.

• **Tick Bites**
If your child is going to be in a tick infested area, such as a field or wooded area, prevention of tick bites is your main goal. This can be done by having your child wear long pants and socks. After returning from this type of environment, check your child for ticks. It is also good practice to check your child for ticks every day during the warmer months. Illnesses that are caused by ticks can be prevented if the tick is removed during the first 24 hours of attachment.

If your child has had a tick bite and develops fever and/or a rash, call to schedule an appointment for your child to be evaluated.

**Cigarette Smoke**
Not only are cigarettes a health hazard for adults, they are a serious health problem for children exposed to second-hand smoke. It has been proven in numerous studies that exposure to cigarette smoke leads to a markedly increased incidence of ear infections, colds, coughing, congestion and wheezing in children. Exposure to cigarette smoke is also linked to Sudden Infant Death Syndrome.

It is best to stop smoking for your child’s health. It is possible stop smoking if you get help. For more information contact Stamp out Smoking (SOS) at 1-800-QUIT-NOW (1-800-784-8669).

You should never smoke in the car or in your home, even when your children are not present. The effects of the cigarette smoke remains even when you are not smoking. Also, it is a law in Arkansas that adults may not smoke in vehicles occupied by children less than 6 years of age.
### Important Phone Numbers

- **Arkansas Children’s Hospital**: (501) 364-1100
- **Poison Control**: 1-800-222-1222
- **Arkansas Breastfeeding Hotline**: 1-800-445-6175
- **Injury Prevention Center (car seat resource)**: (501) 364-3400
- **Community Outreach (car seat resource)**: (501) 364-KIDS (5437)
- **Arkansas Department of Health**: (501) 661-2000

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### Medication Dosages

#### Acetaminophen (Tylenol)

<table>
<thead>
<tr>
<th>Weight (lbs)</th>
<th>Dose</th>
<th>Liquid (160 mg/5 ml)</th>
<th>Children’s Tablet (80 mg)</th>
<th>Jr Tablet (160 mg)</th>
<th>Adult Tablet (325 mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-14</td>
<td>40 mg</td>
<td>1.25 ml</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-21</td>
<td>80 mg</td>
<td>2.5 ml</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22-27</td>
<td>120 mg</td>
<td>3.75 ml</td>
<td>1 tablet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28-41</td>
<td>160 mg</td>
<td>5 ml</td>
<td>2 tablets</td>
<td>1 tablet</td>
<td></td>
</tr>
<tr>
<td>42-55</td>
<td>240 mg</td>
<td>7.5 ml</td>
<td>3 tablets</td>
<td>1 1/2 tablets</td>
<td></td>
</tr>
<tr>
<td>56-83</td>
<td>325 mg</td>
<td>10 ml</td>
<td>4 tablets</td>
<td>2 tablets</td>
<td>1 tablet</td>
</tr>
<tr>
<td>84-111</td>
<td>485 mg</td>
<td>15 ml</td>
<td>6 tablets</td>
<td>3 tablets</td>
<td>1 1/2 tablets</td>
</tr>
<tr>
<td>112+</td>
<td>650 mg</td>
<td>20 ml</td>
<td>8 tablets</td>
<td>4 tablets</td>
<td>2 tablets</td>
</tr>
</tbody>
</table>

*Adult Dose-1000 mg maximum

#### Ibuprofen (Advil or Motrin) *Do not use in children under 6 months of age*

<table>
<thead>
<tr>
<th>Weight (lbs)</th>
<th>Dose</th>
<th>Infant Drops (50mg/1 dropper)</th>
<th>Liquid (100 mg/5 ml)</th>
<th>Children’s Tablet (50 mg)</th>
<th>Adult Tablet (200 mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 12 lbs</td>
<td>50 mg</td>
<td>1 dropper</td>
<td>2.5 ml</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13-18</td>
<td>75 mg</td>
<td>1 1/2 droppers</td>
<td>3.75 ml</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19-23</td>
<td>100 mg</td>
<td>2 droppers</td>
<td>5 ml</td>
<td>2 tablets</td>
<td></td>
</tr>
<tr>
<td>24-35</td>
<td>150 mg</td>
<td>3 droppers</td>
<td>7.5 ml</td>
<td>3 tablets</td>
<td></td>
</tr>
<tr>
<td>36-47</td>
<td>200 mg</td>
<td>4 droppers</td>
<td>10 ml</td>
<td>4 tablets</td>
<td>1 tablet</td>
</tr>
<tr>
<td>48-59</td>
<td>250 mg</td>
<td>6 droppers</td>
<td>12.5 ml</td>
<td>5 tablets</td>
<td>1 tablet</td>
</tr>
<tr>
<td>60-71</td>
<td>300 mg</td>
<td>8 droppers</td>
<td>15 ml</td>
<td>6 tablets</td>
<td>1 1/2 tablets</td>
</tr>
<tr>
<td>72-96</td>
<td>400 mg</td>
<td>10 droppers</td>
<td>20 ml</td>
<td>8 tablets</td>
<td>2 tablets</td>
</tr>
</tbody>
</table>

*Adult Dose- 400 mg maximum

#### Diphenhydramine (Benadryl) *Do not use in children under 2 years of age*

<table>
<thead>
<tr>
<th>Weight (lbs)</th>
<th>Dose</th>
<th>Liquid (12.5 mg/5 ml)</th>
<th>Chewable Tablets (12.5 mg)</th>
<th>Capsules (25 mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>22-32</td>
<td>10 mg</td>
<td>3.5 ml</td>
<td>1 tablet</td>
<td></td>
</tr>
<tr>
<td>33-43</td>
<td>15 mg</td>
<td>6 ml</td>
<td>1 tablet</td>
<td></td>
</tr>
<tr>
<td>44-54</td>
<td>20 mg</td>
<td>8 ml</td>
<td>1 1/2 tablets</td>
<td></td>
</tr>
<tr>
<td>55-109</td>
<td>25 mg</td>
<td>10 ml</td>
<td>2 tablets</td>
<td>1 tablet</td>
</tr>
<tr>
<td>110+</td>
<td>50 mg</td>
<td>20 ml</td>
<td>4 tablets</td>
<td>2 tablets</td>
</tr>
</tbody>
</table>

*Adult Dose- 50 mg maximum*
<table>
<thead>
<tr>
<th>Age</th>
<th>Physical Development</th>
<th>Social and Emotional Development</th>
<th>Intellectual Development</th>
<th>Language Development</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>At Birth</strong></td>
<td>Lies in fetal position with knees tucked up. Unable to raise head. Head falls backwards if pulled to sit. Reacts to sudden sound. Closes eye to bright light. Opens eye when held in an upright position.</td>
<td>Bonds with mother. Smiles at mother.</td>
<td>Beginning to develop concepts e.g. becomes aware of physical sensations such as hunger. Explores using his senses. Makes eye contact and cries to indicate need.</td>
<td>Cries vigorously. Responds to high-pitched tones by moving his/her limbs.</td>
</tr>
<tr>
<td><strong>3 Months</strong></td>
<td>Pelvis is flat when lying down. Lower back is still weak. Back and neck firm when held sitting. Grasps objects placed in hands. Turns head around to have a look at objects. Establishes eye contact.</td>
<td>Squeals with pleasure appropriately. Reacts with pleasure to familiar routines. Discriminates smile.</td>
<td>Takes increasing interest in his/her surroundings. Shows interest in playthings. Understands cause and effect (e.g. if you tie one end of a ribbon to a toe and the other to a mobile, he/she will learn to move the mobile).</td>
<td>Attentive to sounds made by your voice. Indicates needs with differentiated cries. Beginning to vocalize. Smiles in response to speech.</td>
</tr>
<tr>
<td><strong>6 Months</strong></td>
<td>Can lift head and shoulders. Sits up with support. Enjoys standing and jumping. Transfers objects from one hand to the other. Pulls self up to sit and sits erect with supports. Rolls over prone to supine. Well established visual sense.</td>
<td>Responds to different: tones from mother. May show 'stranger shyness'. Takes objects to mouth.</td>
<td>Finds feet interesting. Understands objects and knows what to expect of them. Understands 'up' and 'down' and makes appropriate gestures, such as raising his/her arms to be picked up.</td>
<td>Makes double syllable sounds such as 'mama' and 'dada'. Laughs in play. Screams with annoyance.</td>
</tr>
<tr>
<td><strong>9 Months</strong></td>
<td>Sits unsupported. Grasps with thumb and index</td>
<td>Apprehensive about strangers. Imitates hand-</td>
<td>Shows interest in picture books. Watches</td>
<td>Babbles tunefully. Vocalises to</td>
</tr>
<tr>
<td>Age</td>
<td>Physical Development</td>
<td>Social and Emotional Development</td>
<td>Intellectual Development</td>
<td>Language Development</td>
</tr>
<tr>
<td>----------</td>
<td>------------------------------------------------------------------------------------</td>
<td>----------------------------------</td>
<td>-----------------------------------------------------------------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Age</td>
<td>Physical Development</td>
<td>Social and Emotional Development</td>
<td>Intellectual Development</td>
<td>Language Development</td>
</tr>
<tr>
<td>------</td>
<td>----------------------------------------------------</td>
<td>----------------------------------------------------------------</td>
<td>----------------------------------------------------------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>without using hands. Builds tower of six cubes.</td>
<td>spoon feeds and drinks from cup. Is aware of physical needs.</td>
<td>details in pictures. Uses own name to refer to self.</td>
<td>two hundred words, and accumulates new words very</td>
</tr>
<tr>
<td></td>
<td>Able to run. Walks up and down stairs 2 feet</td>
<td>Dry by day.</td>
<td></td>
<td>rapidly.</td>
</tr>
<tr>
<td></td>
<td>per step. Builds tower of 6 cubes. Turns</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>picture book pages one at a time.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>tricycle. Goes up stairs 1 foot per step and</td>
<td>comparisons. Tries very hard to please. Uses spoon and fork.</td>
<td>person with a head. Can sort objects into simple categories.</td>
<td>Talks to himself when playing.</td>
</tr>
<tr>
<td></td>
<td>downstairs 2 feet per step. Copies a circle.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Imitates cross and draws man on request.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Builds tower of 9 cubes. Has good pencil control.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Can cut paper with scissors. Can thread large</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>beads on a string.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>increases. Goes down stairs one foot per step.</td>
<td>Dresses and undresses with assistance. Attends to own toilet</td>
<td>height. Draw recognizable house.</td>
<td>correct grammar most of the time. Enjoy counting up to</td>
</tr>
<tr>
<td></td>
<td>Imitates gate with cubes. Copies a cross. Can turn</td>
<td>needs. Developing a sense of humour. Wants to be independent.</td>
<td></td>
<td>twenty by repetition.</td>
</tr>
<tr>
<td></td>
<td>sharp corners when running. Builds a tower of 10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>cubes.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Years</td>
<td>Skips. Has well-developed ball skills. Can walk</td>
<td>Chooses own friends. Dresses and undresses alone. Shows caring</td>
<td>Writes name. Draws a detailed person. Matches most colors. Understands</td>
<td>Fluent speech with few infantile substitutions in</td>
</tr>
<tr>
<td></td>
<td>on along a thin line.</td>
<td>attitudes towards others. Copes well with</td>
<td>numbers.</td>
<td>speech. Talks about the past, present and</td>
</tr>
<tr>
<td></td>
<td>Skips on both feet and hops. Draws a man and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Years</td>
<td>copies</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Child Development Milestone Chart (continued)

<table>
<thead>
<tr>
<th>Age</th>
<th>Physical Development</th>
<th>Social and Emotional Development</th>
<th>Intellectual Development</th>
<th>Language Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 Years</td>
<td>a triangle. Gives age. Can copy an adult's writing. Colors pictures carefully. Builds steps with three to four cubes.</td>
<td>personal needs.</td>
<td>future with a good sense of time.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Learns to skip with rcpe. Copies a diamond. Knows right from left and number of fingers. Ties shoe laces.</td>
<td>stubborn and demanding. Eager for fresh experiences. May be quarrelsome with friends.</td>
<td>draws with precision and detail. Developing reading skills well. May write independently.</td>
<td>fluent speech. Can pronounce majority of the sounds of his own language. Talks fluently and with confidence.</td>
</tr>
</tbody>
</table>

### Storage Duration of Fresh Human Milk for Use with Healthy Full Term Infants

<table>
<thead>
<tr>
<th>Location</th>
<th>Temperature</th>
<th>Duration</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Countertop, table</td>
<td>Room temperature (up to 77°F or 25°C)</td>
<td>6-8 hours</td>
<td>Containers should be covered and kept as cool as possible; covering the container with a cool towel may keep milk cooler.</td>
</tr>
<tr>
<td>Insulated cooler bag</td>
<td>5-39°F or -15-4°C</td>
<td>24 hours</td>
<td>Keep ice packs in contact with milk containers at all times, limit opening cooler bag.</td>
</tr>
<tr>
<td>Refrigerator</td>
<td>39°F or 4°C</td>
<td>5 days</td>
<td>Store milk in the back of the main body of the refrigerator.</td>
</tr>
</tbody>
</table>

**Freezer**

<table>
<thead>
<tr>
<th>Location</th>
<th>Temperature</th>
<th>Duration</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freezer compartment of a refrigerator</td>
<td>5°F or -15°C</td>
<td>2 weeks</td>
<td>Store milk toward the back of the freezer, where temperature is most constant. Milk stored for longer durations in the ranges listed is safe, but some of the lipids in the milk undergo degradation resulting in lower quality.</td>
</tr>
<tr>
<td>Freezer compartment of refrigerator with separate doors</td>
<td>0°F or -18°C</td>
<td>3-6 months</td>
<td></td>
</tr>
<tr>
<td>Chest or upright deep freezer</td>
<td>-4°F or -20°C</td>
<td>6-12 months</td>
<td></td>
</tr>
</tbody>
</table>

# 2012 Recommended Immunizations for Children from Birth Through 6 Years Old

<table>
<thead>
<tr>
<th>Age (Years)</th>
<th>HepB</th>
<th>RV</th>
<th>DTaP</th>
<th>Hib</th>
<th>PCV</th>
<th>IPV</th>
<th>HepA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth</td>
<td>HepB</td>
<td>RV</td>
<td>DTaP</td>
<td>Hib</td>
<td>PCV</td>
<td>IPV</td>
<td>HepA</td>
</tr>
<tr>
<td>1 month</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 months</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 months</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 months</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 months</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 months</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 months</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19–23 months</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2–3 years</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4–6 years</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Shaded boxes indicate the vaccine can be given during shown age range.

**FOOTNOTES**

† Children 2 years old and older with certain medical conditions may need a dose of pneumococcal vaccine (PPSV) and meningococcal vaccine (MCV4). See vaccine-specific recommendations at [http://www.cdc.gov/vaccines/pubs/ACIP-list.htm](http://www.cdc.gov/vaccines/pubs/ACIP-list.htm).

* Two doses given at least four weeks apart are recommended for children aged 6 months through 8 years of age who are getting a flu vaccine for the first time.

9 Two doses of HepA vaccine are needed for lasting protection. The first dose of HepA vaccine should be given between 12 months and 23 months of age. The second dose should be given 6 to 18 months later. HepA vaccination may be given to any child 12 months and older to protect against HepA. Children and adolescents who did not receive the HepA vaccine and are at high-risk, should be vaccinated against HepA.

For more information, call toll free 1-800-CDC-INFO (1-800-232-4636) or visit [http://www.cdc.gov/vaccines](http://www.cdc.gov/vaccines)
<table>
<thead>
<tr>
<th>Disease</th>
<th>Vaccine</th>
<th>Disease spread by</th>
<th>Disease symptoms</th>
<th>Disease complications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chickenpox</td>
<td>Varicella vaccine protects against chickenpox.</td>
<td>Air, direct contact</td>
<td>Rash, tiredness, headache, fever</td>
<td>Infected blisters, bleeding disorders, encephalitis (brain swelling), pneumonia (infection in the lungs)</td>
</tr>
<tr>
<td>Diphtheria</td>
<td>DTaP* vaccine protects against diphtheria.</td>
<td>Air, direct contact</td>
<td>Sore throat, mild fever, weakness, swollen glands in neck</td>
<td>Swelling of the heart muscle, heart failure, coma, paralysis, death</td>
</tr>
<tr>
<td>Hib</td>
<td>Hib vaccine protects against <em>Haemophilus influenzae</em> type b.</td>
<td>Air, direct contact</td>
<td>May be no symptoms unless bacteria enter the blood</td>
<td>Meningitis (infection of the covering around the brain and spinal cord), mental retardation, epiglottitis (life-threatening infection that can block the windpipe and lead to serious breathing problems) and pneumonia (infection in the lungs), death</td>
</tr>
<tr>
<td>HepA</td>
<td>HepA vaccine protects against hepatitis A.</td>
<td>Personal contact, contaminated food or water</td>
<td>May be no symptoms, fever, stomach pain, loss of appetite, fatigue, vomiting, jaundice (yellowing of skin and eyes), dark urine</td>
<td>Liver failure</td>
</tr>
<tr>
<td>HepB</td>
<td>HepB vaccine protects against hepatitis B.</td>
<td>Contact with blood or body fluids</td>
<td>May be no symptoms, fever, headache, weakness, vomiting, jaundice (yellowing of skin and eyes), joint pain</td>
<td>Chronic liver infection, liver failure, liver cancer</td>
</tr>
<tr>
<td>Flu</td>
<td>Flu vaccine protects against influenza.</td>
<td>Air, direct contact</td>
<td>Fever, muscle pain, sore throat, cough, extreme fatigue</td>
<td>Pneumonia (infection in the lungs)</td>
</tr>
<tr>
<td>Measles</td>
<td>MMR** vaccine protects against measles.</td>
<td>Air, direct contact</td>
<td>Rash, fever, cough, runny nose, pinkeye</td>
<td>Encephalitis (brain swelling), pneumonia (infection in the lungs), death</td>
</tr>
<tr>
<td>Mumps</td>
<td>MMR** vaccine protects against mumps.</td>
<td>Air, direct contact</td>
<td>Swollen salivary glands (under the jaw), fever, headache, tiredness, muscle pain</td>
<td>Meningitis (infection of the covering around the brain and spinal cord), encephalitis (brain swelling), inflammation of testicles or ovaries, deafness</td>
</tr>
<tr>
<td>Pertussis</td>
<td>DTaP* vaccine protects against pertussis (whooping cough).</td>
<td>Air, direct contact</td>
<td>Severe cough, runny nose, apnea (a pause in breathing in infants)</td>
<td>Pneumonia (infection in the lungs), death</td>
</tr>
<tr>
<td>Polio</td>
<td>IPV vaccine protects against polio.</td>
<td>Through the mouth</td>
<td>May be no symptoms, sore throat, fever, nausea, headache</td>
<td>Paralysis, death</td>
</tr>
<tr>
<td>Pneumococcal</td>
<td>PCV vaccine protects against pneumococcus.</td>
<td>Air, direct contact</td>
<td>May be no symptoms, pneumonia (infection in the lungs)</td>
<td>Bacteremia (blood infection), meningitis (infection of the covering around the brain and spinal cord), death</td>
</tr>
<tr>
<td>Rotavirus</td>
<td>RV vaccine protects against rotavirus.</td>
<td>Through the mouth</td>
<td>Diarrhea, fever, vomiting</td>
<td>Severe diarrhea, dehydration</td>
</tr>
<tr>
<td>Rubella</td>
<td>MMR** vaccine protects against rubella.</td>
<td>Air, direct contact</td>
<td>Children infected with rubella virus sometimes have a rash, fever, and swollen lymph nodes.</td>
<td>Very serious in pregnant women—can lead to miscarriage, stillbirth, premature delivery, and birth defects</td>
</tr>
<tr>
<td>Tetanus</td>
<td>DTaP* vaccine protects against tetanus.</td>
<td>Exposure through cuts in skin</td>
<td>Stiffness in neck and abdominal muscles, difficulty swallowing, muscle spasms, fever</td>
<td>Broken bones, breathing difficulty, death</td>
</tr>
</tbody>
</table>

* DTaP is a combination vaccine that protects against diphtheria, tetanus, and pertussis.
** MMR is a combination vaccine that protects against measles, mumps, and rubella.
# 2012 Recommended Immunizations for Children from 7 Through 18 Years Old

<table>
<thead>
<tr>
<th>7-10 YEARS</th>
<th>11-12 YEARS</th>
<th>13-18 YEARS</th>
</tr>
</thead>
<tbody>
<tr>
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<td><strong>11-12 YEARS</strong></td>
<td><strong>13-18 YEARS</strong></td>
</tr>
<tr>
<td><strong>Tdap</strong></td>
<td><strong>Tdap</strong></td>
<td><strong>HPV</strong></td>
</tr>
<tr>
<td>Tetanus, Diphtheria, Pertussis (Tdap) Vaccine</td>
<td>Human Papillomavirus (HPV) Vaccine (3 Doses)</td>
<td>HPV</td>
</tr>
<tr>
<td><strong>MCV4</strong></td>
<td><strong>Meningococcal Conjugate Vaccine (MCV4) Dose</strong></td>
<td><strong>MCV4 Dose</strong></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Influenza (Yearly)</strong></td>
<td><strong>Pneumococcal Vaccine</strong></td>
<td><strong>Booster at age 16 years</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hepatitis A (HepA) Vaccine Series</strong></td>
<td><strong>Hepatitis B (HepB) Vaccine Series</strong></td>
<td><strong>Inactivated Polio Vaccine (IPV) Series</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Measles, Mumps, Rubella (MMR) Vaccine Series</strong></td>
<td><strong>Varicella Vaccine Series</strong></td>
<td></td>
</tr>
</tbody>
</table>

**FOOTNOTES**

1. Tdap vaccine is combination vaccine that is recommended at age 11 or 12 to protect against tetanus, diphtheria and pertussis. If your child has not received any or all of the DTaP vaccine series, or if you don’t know if your child has received these shots, your child needs a single dose of Tdap when they are 7-10 years old. Talk to your child’s health care provider to find out if they need additional catch-up vaccines.

2. All 11 or 12 year olds — both girls and boys — should receive 3 doses of HPV vaccine to protect against HPV-related disease. Either HPV vaccine (Cervarix® or Gardasil®) can be given to girls and young women; only one HPV vaccine (Gardasil®) can be given to boys and young men.

3. Meningococcal conjugate vaccine (MCV) is recommended at age 11 or 12. A booster shot is recommended at age 16. Teens who received MCV for the first time at age 13 through 15 years will need a one-time booster dose between the ages of 16 and 18 years. If your teenager missed getting the vaccine altogether, ask their health care provider about getting it now, especially if your teenager is about to move into a college dorm or military barracks.

4. Everyone 6 months of age and older—including preteens and teens—should get a flu vaccine every year. Children under the age of 9 years may require more than one dose. Talk to your child’s health care provider to find out if they need more than one dose.

5. A single dose of Pneumococcal Conjugate Vaccine (PCV13) is recommended for children who are 6-18 years old with certain medical conditions that place them at high risk. Talk to your healthcare provider about pneumococcal vaccine and what factors may place your child at high risk for pneumococcal disease.

6. Hepatitis A vaccination is recommended for older children with certain medical conditions that place them at high risk. HepA vaccine is licensed, safe, and effective for all children of all ages. Even if your child is not at high risk, you may decide you want your child protected against HepA. Talk to your healthcare provider about HepA vaccine and what factors may place your child at high risk for HepA.

For more information, call toll free 1-800-CDC-INFO (1-800-232-4636) or visit [http://www.cdc.gov/vaccines/teens](http://www.cdc.gov/vaccines/teens)
Vaccine-Preventable Diseases and the Vaccines that Prevent Them

**Diphtheria** (Can be prevented by Tdap vaccine)
Diphtheria is a very contagious bacterial disease that affects the respiratory system, including the lungs. Diphtheria bacteria can be passed from person to person by direct contact with droplets from an infected person’s cough or sneeze. When people are infected, the diphtheria bacteria produce a toxin (poison) in the body that causes inflammation around the brain and spinal cord, local sores, swollen glands, and swelling of the neck. Effects from this toxin can also lead to swelling of the heart muscle and, in some cases, heart failure. In severe cases, the illness can cause coma, paralysis, and even death.

**Hepatitis A** (Can be prevented by HepA vaccine)
Hepatitis A is an infection caused by the Hepatitis A virus. The virus is spread primarily through the fecal-oral route. In other words, the virus is taken in by mouth from contact with objects, food, or drinks contaminated by the feces (stool) of an infected person. Symptoms include fatigue, loss of appetite, nausea, abdominal discomfort, dark urine, and jaundice (yellowing of the skin and eyes). An infected person may have no symptoms, may have mild illness for a week or two, or may have severe illness for several months that requires hospitalization. In the U.S., about 100 people a year die from hepatitis A.

**Hepatitis B** (Can be prevented by HepB vaccine)
Hepatitis B is an infection of the liver caused by the Hepatitis B virus. The virus spreads through exchange of body fluids, for example, from sharing personal items, such as razors or during sex. Hepatitis B causes a flu-like illness with loss of appetite, nausea, vomiting, rashes, joint pain, and jaundice. The virus stays in the liver of some people for the rest of their lives and can result in severe liver diseases, including fatal cancer.

**Human Papillomavirus (Can be prevented by HPV vaccine)**
Human papillomavirus is a common virus. HPV is most common in people aged 15 to 24 years and early adulthood. People can get HPV infection even if they have no symptoms, and the major cause of cervical cancer in women and genital warts in women and men. The strains of HPV that cause cervical cancer and genital warts are spread during sex.

**Influenza** (Can be prevented by annual flu vaccine)
Influenza is a highly contagious viral infection of the nose, throat, and lungs. The virus spreads easily through droplets when an infected person coughs or sneezes and can cause mild to severe illness. Typical symptoms include a sudden high fever, chills, a dry cough, headache, runny nose, sore throat, and muscle and joint pain. Extreme fatigue can last from several days to weeks. Influenza may lead to hospitalization or even death, even among previously healthy children.

**Measles** (Can be prevented by MMR vaccine)
Measles is one of the most contagious viral diseases. Measles virus is spread by direct contact with the airborne respiratory droplets of an infected person. Measles is so contagious that just being in the same room after a person who has measles has already left can result in infection. Symptoms usually include a rash, fever, cough, and red, watery eyes. Fever can persist, rash can last for up to a week, and coughing can last up to 10 days. Measles can also cause pneumonia, seizures, brain damage, or death.

**Meningococcal Disease** (Can be prevented by MCV vaccine)
Meningococcal disease is a disease that is caused by bacteria and is a leading cause of bacterial meningitis (infection of the brain and spinal cord) in children. The bacteria are spread through the exchange of nose and throat droplets, such as when coughing, sneezing, or kissing. Symptoms include nausea, vomiting, sensitivity to light, confusion, and sleepiness. Meningococcal disease also causes blood infections. About one of every ten people who get the disease dies from it. Survivors of meningococcal disease may lose their arms or legs, become deaf, have problems with their nervous systems, become developmentally disabled, or suffer seizures or strokes.

**Mumps** (Can be prevented by MMR vaccine)
Mumps is an infectious disease caused by the mumps virus, which is spread in the air by a cough or sneeze from an infected person. A child can also get infected with mumps by coming in contact with a contaminated object, like a toy. The mumps virus causes fever, headaches, painful swelling of the salivary glands under the jaw, fever, muscle aches, tiredness, and loss of appetite. Severe complications for children who get mumps are uncommon, but can include meningitis (infection of the covering of the brain and spinal cord), encephalitis (inflammation of the brain), permanent hearing loss, or swelling of the testes, which rarely can lead to sterility in men.

**Pertussis** (Whooping cough) (Can be prevented by Tdap vaccine)
Pertussis is caused by bacteria spread through direct contact with respiratory droplets when an infected person coughs or sneezes. In the beginning, symptoms of pertussis are similar to the common cold, including runny nose, sneezing, and cough. After 1-2 weeks, pertussis can cause spells of violent coughing and choking, making it hard to breathe, drink, or eat. This cough can last for 6 to 10 weeks. Pertussis is serious for babies, who can get pneumonia, have seizures, become brain damaged, or even die. About two-thirds of children under 1 year of age who get pertussis must be hospitalized.

**Pneumococcal Disease** (Can be prevented by Pneumococcal vaccine)
Pneumonia is an infection of the lungs that can be caused by the bacteria called pneumococcus. These bacteria can cause other types of infections too, such as ear infections, sinus infections, meningitis (infection of the covering around the brain and spinal cord), bacteremia, and sepsis (bloodstream infection). Sinus and ear infections are usually mild and are more severe in children than in adults. Pneumococcal disease can be fatal or result in long-term problems, like brain damage, hearing loss, or limb loss. Pneumococcal disease spreads when people cough or sneeze. Many people have the bacteria in their nose or throat at one time or another without being ill—this is known as being a carrier.

**Polio** (Can be prevented by IPV vaccine)
Polio is caused by a virus that lives in an infected person’s throat and intestines. It spreads through contact with the feces (stool) of an infected person and through droplets from a sneeze or cough. Symptoms typically include sudden fever, sore throat, headache, muscle weakness, and pain. In about 1% of cases, polio can cause paralysis. Among those who are paralyzed, up to 9 in 100 children may die because they become unable to breathe.

**Rubella** (German Measles) (Can be prevented by MMR vaccine)
Rubella is caused by a virus that is spread through coughing and sneezing. In children rubella usually causes a mild illness with fever, swollen glands, and a rash that lasts about 3 days. Rubella rarely causes serious illness or complications in children, but can be very serious to a baby in the womb. If a pregnant woman is infected, the result to the baby can be devastating, including miscarriage, serious heart defects, mental retardation and loss of hearing and eye sight.

**Tetanus** (Lockjaw) (Can be prevented by Tdap vaccine)
Tetanus is caused by bacteria found in soil. The bacteria enter the body through a wound, such as a deep cut. When people are infected, the bacteria produce a toxin (poison) in the body that causes serious, painful spasms and stiffness of all muscles in the body. This can lead to “locking” of the jaw so a person cannot open their mouth, swallow, or breathe. Complete recovery from tetanus can take months. Three of ten people who get tetanus die from the disease.

**Varicella** (Chickenpox) (Can be prevented by varicella vaccine)
Chickenpox is caused by the varicella zoster virus. Chickenpox is very contagious and spreads very easily from infected people. The virus can be spread from either a cough, sneeze. It can also spread from the blisters on the skin, either by touching them or by breathing in these viral particles. Typical symptoms of chickenpox include a itchy rash with blisters, tiredness, headache and fever. Chickenpox is usually mild, but it can lead to severe skin infections, pneumonia, encephalitis (brain swelling), or even death.
Notes