All For Kids Pediatric Clinic

established in 1983

Statement of Philosophy

Our name symbolizes the practice philosophy of our clinic and our commitment to the children and young adults who make up our practice. Our very existence as a clinic is to serve the physical, emotional and spiritual needs of our patients and their families.

We believe that children are a gift from God and are the future of our nation and society. As such, they deserve to be reared in the best possible environment and supported by Pediatricians committed to ensuring their optimal health and well-being. It is our desire to form a partnership with you and your family to achieve this goal. We want to encourage you to ask questions, to be involved and to participate in your child's healthcare. Our goal is to make our office a welcoming and comfortable place to bring your child with concerns about him or her.

You and your child are the most important people in our practice, so anytime we can do something to make your visit a little more pleasant, please let us know.

INTRODUCTION

We are glad that you have chosen us to provide your family with pediatric health care. We welcome you as our patient. We have prepared this handbook to provide you with information on the policies and procedures of our clinic and to provide information on common pediatric health problems. In the general information section, our procedures and policies are outlined for you. These are designed to enable us to provide quality and consistent pediatric care. Please read this section carefully because it tells you important things such as how to reach us, what you should do in an emergency, what our regular office hours are, how to make appointments, which doctor you will see, etc.

The remainder of the handbook provides information on general pediatric health care and common pediatric health problems. Questions such as "what is fever," "what fever is too high," "how do I treat vomiting and diarrhea, colic, etc." are covered in this handbook. When a problem arises in your child, **please consult this handbook first.** If you have further questions or if the handbook directs you to call, then feel free to call the office.

This handbook was written and compiled from various sources including medical textbooks, medical journals, product information sheets, other pediatric handbooks from various pediatric practices over the United States, disease specific guidelines from professional organizations, and from the professional experience of our physicians. The handbook was first written in 1990 by Dr. Jerry Byrum and Dr. Barry Gillespie with the editorial help of all of our physicians. This is the ninth edition of the handbook, September, 2010.

GENERAL INFORMATION

OFFICE LOCATION AND HOURS: Our office address and hours are as follows:

OFFICE ADDRESS	HOURS
All For Kids Pediatric Clinic	8 a.m. until 5:00 p.m., Monday through Friday
904 Autumn Road, Suite 100	(By appointment until 4:30 pm)
Little Rock, Arkansas 72211	8 a.m. until 11:30 a.m., Saturday
(501) 224-KIDS (5437)	(Walk in basis until 11:30 am)
Website: www.afkpeds.org	

We are open 8 a.m. until 11:30 a.m. on Saturday for sick visits. Routine examinations and

rechecks are not done on Saturdays, as this time is reserved for children with acute illnesses.

Our offices will be closed on the following holidays: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day. We will, be available during these times by telephone for any emergencies. In addition, the After-Hours Pediatric Clinic at Baptist Medical Center will be open on all holidays. Please see the section under after hours consultation to obtain information on how to access the After-hours Pediatric Clinic.

APPOINTMENTS: Patients in our clinic are seen by appointment only Monday through Friday. Appointments are made for a particular hour and day by calling the office during regular office hours. You may schedule an appointment with the physician of your choice. There are certain times, however, when a particular physician may be unavailable for an office visit because of our hospital rounding schedule, a full clinic schedule, continuing medical education courses, vacations, etc. For this reason, it is a good idea to become acquainted with more than just one physician in our practice.

In order to insure that we can see our patients who become ill on any particular day, we intentionally do not pre-schedule all of our appointments for any day. We call the appointments that we hold until the beginning of each day "sick visits". "Sick visit" appointments which are held unscheduled for all of our physicians, become available at 8:00 am each morning. It is important to understand that these appointments are for the use of our children who become ill. "Sick visit" appointments are designed to be "problem focused" and are brief by design. Discussions regarding well child issues, and long term management of complex or chronic problems during "sick visit" appointments will only be done if our schedule allows for this. We will be happy to schedule check up appointments and complex or chronic problem appointments to discuss these issues.

In order to provide you with quality pediatric care and to minimize your waiting time, we have adopted the following appointment policies. Children with significant illnesses or who have emergencies will be seen on the same day that the appointment is requested. Children with emergencies will be given priority over children with less urgent problems. Requests for "same day" appointments for minor illnesses and checkups cannot be assured and will be made if those appointments are available. Requests for appointments for ill children made late in the day may be referred to the After Hours Pediatric Clinic. Routine checkup appointments and follow-up appointments should be scheduled well in advance to ensure convenience.

We make every effort to stay on schedule so that you will not have long waiting times in our office. Sometimes, however, emergencies or the care of a particularly sick patient may slow us down. We will try to notify you if this happens and we appreciate your understanding. If

you are delayed or must cancel an appointment, please let us know this as soon as possible so that another child may have that time slot. This information also helps us to stay on schedule. If you are 20 minutes late, our physicians reserve the right to reschedule you appointment.

Your cooperation in three areas of appointment-making will help us to stay on schedule and minimize your waiting. We appreciate your help.

1. If your child has a complex problem (school failure, behavior problems, attention deficit disorder, cerebral palsy, asthma, etc.), or if this is your child's first visit to our clinic, please indicate this to our receptionist when making your appointment so that we will know to schedule extra time. Appointments for the long term management of complex or chronic problems should be scheduled in advance. In addition, please communicate the type of problem that we will be discussing so that we know how to prepare for your visit.
2. If you have more than one child that needs to be seen, please indicate this when making the appointment so that adequate time can be scheduled for each child. Requests for examination and treatment of children without an appointment on an uncompensated basis, is not only unfair financially, but delays us resulting in prolonged waiting times for our other patients with appointments. In addition, not having your child's chart available to document the visit and not having access to the medical record while making decisions, creates additional problems and risks for your child. For these reasons, please do not ask us to examine and treat children without an appointment, but rather make appointments for all children who need to be seen. If you realize that more than one child will need an appointment when you arrive at our office, please immediately notify the receptionist with this information. We will accommodate those requests if at all possible.
3. Please make an appointment for all visits to our office. Occasionally, a child's condition demands such immediate attention that there is not time to phone ahead to make an appointment and an urgent trip to our office is appropriate. Examples of these types of conditions are extreme breathing difficulty, seizures, poisonings, etc. Patients who "walk-in" to our clinic without an appointment for more routine complaints however, delay us unnecessarily resulting in prolonged waiting times for our patients with appointments. In order to be fair to all of our patients our clinic has adopted the following policy: patients who "walk in" to our office without an appointment will be seen by the doctor that day if possible, but only as our schedule allows, usually at the end of an appointment session . With your cooperation in these three areas of appointment making, we can keep waiting times to a minimum.

We are often asked when does a patient outgrow our practice and need to be referred to a physician who treats adults. We generally refer when the young adult turns 21 years old, gets married or has a baby. We do make exceptions to this policy on an individual basis and see

our young adult patients for a longer period of time. We want you to be aware that we definitely do treat young adult patients. We designate a waiting room for our young adult patients to make them feel more comfortable about their visit to our office. In addition, we stay current on issues regarding management of problems that face young adult patients. Please see the section on accident prevention and health supervision that follows in this handbook for a discussion of this topic.

EMERGENCIES: In case of extreme emergency in which there is an immediate need for a physician to sustain life, we recommend taking your child to the nearest emergency room or calling 911. A physician is on duty 24 hours a day at each of the emergency rooms in the Pulaski County area. We should be notified of your arrival. If your emergency is not life threatening but warrants urgent attention, please refer to the section on telephone consultation below.

AFTER-HOURS CONSULTATION: An important part of our service to our patients is 24 hour availability because significant illnesses and injuries can occur at anytime. We rotate after hours call responsibilities to provide continuous call coverage for our patients at all times. We do appreciate however, receiving only calls pertaining to emergency and urgent medical problems which cannot wait until our regular office hours. Because we do not have access to your child's chart after hours, it is important that you know your child's medical history including the names of any medical conditions, the names of medications prescribed along with the names of any medication allergies. Please refer to the section on telephone consultation which follows for information on how to contact us by telephone after hours.
If your child develops medical problems after our regular office hours at night and on weekends, we generally recommend the After Hours Pediatric Clinic at Baptist Health Medical Center in Little Rock for our pediatric patients. Private practice pediatricians including us at All For Kids, provide pediatric care at the clinic. If an after-hours problem arises with your child, consult the appropriate section of this handbook. If you still have questions after consulting the handbook or if the handbook directs you to call, then place a call to our answering service. We will help you determine if a referral to the After-Hours clinic is advised.

TELEPHONE CONSULTATION: For telephone advice concerning minor problems such as colds and constipation which cannot be resolved after reading the appropriate section of this handbook, for phone follow up of an illness which has been evaluated in our office, and for follow up advice such as laboratory test results, please call during regular office hours. Calling during our regular office hours enables us to have access to your child's chart so that better medical decisions can be made. A trained pediatric nurse returns patient phone calls

during this time.

When you call our office, be specific about the problem or question that you desire to have addressed. In discussing your child's health problem with either our nurse or physician, the following information is helpful:

- length of illness
- main symptoms
- medications with dose currently being taken
- medication allergies
- significant past and current medical problems
- your child's weight and age
- your child's temperature, if they have a fever (see section on fever in this book)
- the phone number of a pharmacy that is open.

In calling our office for advice, please be aware that as a general rule, we do not practice medicine by telephone without a proper evaluation. We find that many parents expect us to come to a diagnosis and prescribe treatment for their child over the phone, based on information we receive during the phone conversation. The most common requests we get for this involve colds, ear aches, sore throats, fever, and rashes. Because coming to a correct diagnosis not only involves obtaining historical facts about the illness, but also performing a physical examination and sometimes obtaining laboratory tests and X-rays, it is impossible to gather all the necessary information by telephone to obtain a correct diagnosis. To treat a child without a correct diagnosis is dangerous for your child. Because of this, we do not treat children based on information obtained from phone calls alone. For instance, we do not generally prescribe antibiotics over the phone. For these reasons, if your child is ill and needs medical treatment, there is no need to speak with our physician or nurse by telephone. This will only delay obtaining the appointment that your child needs and may result in your being referred to the After Hours Pediatric Clinic because of the time needed to return your phone call. You should make an appointment directly with the receptionist.

If your child is mildly ill and you still have questions after reading the appropriate section of this handbook as to how to treat your child, or if you have questions if an appointment is needed for a particular problem, a phone call is appropriate to discuss the situation. There are a few situations in which we call out prescriptions based on phone conversations, such as treatment of thrush and diaper rash. These situations are all covered in this handbook. Please read the section of the handbook that deals with your child's problem for instructions. During office hours, if you have an emergency, tell the receptionist this. She will notify the nurse or physician. We do want you to know what constitutes an emergency however.

Problems such as severe breathing difficulty, poisonings, seizures, unconsciousness, uncontrolled bleeding, bone fractures and other like problems which pose an immediate threat to life and limb, are all emergencies. Emergencies such as these require immediate treatment. You may want to come directly to the office, go to the emergency room or call 911 should these happen. Problems such as fever and vomiting, while being medical problems which are concerning, are not emergencies, but are problems which are covered in this handbook. Non-emergency calls that need to be answered by the physician are usually returned during the noon hour and after 5 p.m., unless our schedule allows us to return them earlier.

Telephone calls made to our office after our regular office hours should be limited to emergency and urgent medical problems which cannot wait until the office is open. Please be aware that we do not have access to your child's chart after our regular hours of operation. Because of this fact, in making medical decisions regarding your child, very important information may not be available to us after hours. Please refer to the paragraphs above on the information we need when you call. If your child becomes ill after hours, you should **consult this handbook prior to calling for advice.** Instructions on how to handle the most common pediatric illnesses are covered here. If, after consulting this handbook, you still have questions or if the handbook directs you to call, then place a call to our after-hours telephone number 663-8400, The Pulaski County Medical Exchange. After-hours calls are first answered by our answering service. The calls are then referred to a trained, pediatric nurse who will call you back. The nurse will advise you on how to manage your child's problem. If after a reasonable amount of time, we have not called you back (1-2 hours), you should call our answering service to determine the cause for the delay. If you have an emergency which requires immediate assistance, take your child to the nearest emergency room or call 911.

HOSPITAL SERVICE: Our physicians are on the professional staff of Baptist Medical Center, St. Vincent Infirmary, and Arkansas Children's Hospital. Should your child need hospitalization, the most appropriate hospital will be chosen in consultation with you for your child.

LABORATORY RESULTS: The simplest and most effective way of communicating laboratory testing results to our patients and parents is to have the parent call our office after a specified amount of time. At the time a test is done on your child, we will inform you as to when you should call for results. Of course, if an abnormal result of a laboratory test is obtained on your child, we will immediately try to contact you with that result.

PRESCRIPTION REFILLS: Prescription refills are a part of the management of chronic medical problems which come up on a regular basis in our practice. For example, preventative asthma medications generally are refilled on a monthly basis as are medications to treat problems

such as seizures, attention deficit disorder and gastro-esophageal reflux. The problem that prescription refills presents to us, is that the disorders that require daily medicines also require follow-up visits with medical decision-making (see section that follows). This medical decision-making is best done in person during an office visit when you have the undivided attention of your doctor. For instance, the dose of seizure medications must be adjusted upward as the child grows according to blood levels that we obtain from the child who is using this medication. Because of this we have developed the following office policy toward prescription refills. When a child is placed on a daily medicine, a certain number of refills will be indicated on the prescription. When those refills are exhausted, we intend for you to bring your child into the office for a follow-up visit prior to authorizing the next refill of the medication. Most medications used to treat attention deficit disorder cannot be refilled. Because of this, please give our office a one-week notice to refill these prescriptions. Due to the seriousness of these drugs, other physicians in the group do not prescribe Concerta or Adderall for the other physician's patients.

FOLLOW-UP VISITS: Follow-up visits are another very important aspect of our practice. Certain serious illnesses such as blood infections and pneumonia, require daily follow-up visits until the problem is resolved. Other illnesses, such as ear infections, require follow-up visits usually two to three weeks after the infection to ensure that the problem has properly resolved. Chronic illnesses such as seizure disorders, asthma and attention deficit disorder require periodic follow-up visits to adjust daily medications and monitor disease progression. Follow-up visits are extremely important to ensure that further treatment is not needed. It is your responsibility to keep follow-up appointments as recommended by our office. Failure to keep your follow-up appointment may result in significant health effects in your child. Please be aware that we do charge for follow-up visits.

The two most common conditions that we treat with medications that need to be refilled are asthma and attention deficit disorder. Both of the these conditions should have follow up visits at least every six months.

CHECKUP VISITS: Checkups visits are very important to insure that your child is healthy and growing and developing properly. During checkup visits we assess growth and development, do examinations to screen for health problems, do any indicated laboratory work and give immunizations if they are needed. Because "sick visit" appointments are brief and focused on the problem at hand, these visits do not substitute for checkup appointments. Because checkups visits take more time, these should scheduled in advance and not combined with "sick visit" appointments.

PAYMENTS AND INSURANCE: Like other professionals, we expect payment for services rendered at our clinic at the time of the service unless prior arrangements are made.

We will assist you in filing your insurance for your reimbursement. For your convenience, we accept Visa, Mastercard, and Discover. Also, please know that insurance companies require the collection of a co-pay a the time service is rendered. Should you anticipate difficulty paying for the charges for your care, please consult our office staff. We will make every effort to work with you whenever possible. Unless other arrangements are made, we turn over unpaid accounts to a collection agency after an appropriate period of time. If your account is turned over to a collection agency, our Physicians will be unable to continue seeing your child or children as patients.

Please be aware that many insurance carriers require prior notification of any hospital services. In addition, many carriers require updates and pre-authorizations of medical tests and treatments. It is your responsibility to know the benefits, limitations and requirements of your child's health insurance coverage.

ACCIDENT PREVENTION AND HEALTH SUPERVISION

Accidents are the leading cause of death in children and adolescents. Most of these deaths are preventable. Part of our job as a pediatrician in your child's health supervision is stressing accident prevention. A few simple measures taken now to prevent accidents can save your child's life or prevent major injuries. Accident prevention for your child should begin on the day he or she is born.

ACCIDENT PREVENTION AND HEALTH SUPERVISION - NEWBORN INFANT -

1. Child Car Safety. When your child leaves the hospital, his or her first ride should be a safe ride in a car seat. If you need help in selecting a proper car seat for your child, call our office during regular office hours. The car seat should be a convertible safety seat, which is positioned reclined and set in the rear-facing position. By the time a child is 12 months of age, twenty pounds and is sitting well unsupported, the car seat may be faced forward. A child should remain in a car seat until the child is approximately 40 pounds or about three to four years of age. Please be aware that automobile seats equipped with air-bags are very dangerous for small infants and young children. There are reports of infant deaths from air-bags which deployed in minor traffic accidents in which there should have been no injuries. For this reason, your child's car safety seat should never be placed in an automobile seat equipped with an air-bag. The infant car seat should always be placed in the back seat of the automobile and secured with seat belts.
2. Infants should sleep on their back to lessen the risk of Sudden Infant Death Syndrome (SIDS). Sleeping on an infant's stomach or side is no longer recommended because of the risk of sudden unexpected death. Contrary to wide belief, infants sleeping on their back are not in danger of choking. Infant wedges designed to keep babies on their sides

during sleep are not recommended. We do recommend some daily "tummy time" for your infant while your infant is in your direct supervision. Placing your child on his stomach and then interacting with your child will help to strengthen your baby's neck muscles. These interactions actually help prevent sudden infant death. This "tummy time" should only be done while the infant is in your direct supervision however. We do want you to be aware that it is extremely dangerous to your child who is less than six months old to sleep on their stomach (prone position) when they are accustomed to sleeping on their backs. Death may result from such positioning. Grandparents should be warned about this. There have been major changes in sleep position recommendations by pediatricians across the years. This is a crucial fact for parents to know.

3. Crib Safety. Crib side rails should always be kept up when the infant is unattended. Crib bumpers are recommended. The distance between crib slats should be less than 2-3/8 inches. You should avoid mobiles and toys with long strings, cradle gyms that are not securely suspended and small objects in the crib.
4. Never leave your infant alone with young siblings or pets.
5. Your water heater thermostat should be set at 120 degrees Fahrenheit or less. This is a little below the normal setting. You should be able to hold your hand momentarily under the faucet with the hot water on without scalding.
6. Never leave your infant alone on a bed or other surface from which he/she may roll off.
7. Never leave your infant alone in a house or a car unattended.
8. Do not shake or jiggle your baby's head. Severe brain bleeding and brain damage including death may result from shaking your baby. The "shaken baby syndrome" is a well recognized form of child abuse.
9. Baby-sitters should be carefully selected. Please see our website for detailed information.
10. Infant jewelry such as earrings, necklaces, rings or other types of jewelry are not recommended.
11. Do not drink hot liquids or smoke cigarettes while holding your child because you could burn your child.
12. Do not use an infant feeder to feed your child baby food or semisolid food because of the risk of choking and aspiration of food into the trachea with the use of this device.
13. As your baby rests and sleeps on their back, make sure to change the position of your baby's head to minimize flattening of the back of the skull.
14. Because of the risk of sunburn, babies less than six months of age, should not be exposed to direct sunlight for any length of time. Keep your baby in the shade while outside. Sunscreens are not recommended for babies until they reach the age of six months.
15. Young infants and children need immunizations to prevent serious infectious diseases. Please see the next to last page of this handbook for our recommended immunization and check up schedule.

ACCIDENT PREVENTION AND HEALTH SUPERVISION
- YOUNG INFANT (SIX MONTHS) -

1. Small objects, baby powder and cleaners should be kept away from the baby so that he/she may not ingest these materials.
2. Small toys should be checked for vulnerability to breakage and small loose parts that can be pulled off and swallowed.
3. We generally discourage the purchase of an infant walker because of the risk of injury. If one is purchased anyway, we recommend constant supervision for your child while in the infant walker, especially around stairs. The use of an infant walker will not help your child to walk alone at an earlier age.
4. It is important to check your home for possible physical hazards such as stairs, fireplace hearths and sharp table edges. Fire place hearths are particularly dangerous for young children. The child should be protected from these hazards by gates and padding as appropriate. We discourage the use of certain expandable type gates because of the danger of strangulation.
5. We recommend that you take a crawling tour of your home looking for possible hazards that your infant can get into. Electrical outlets should have plugs placed; cabinet doors should have locks. Poisons, cleaning products, furniture polish and other toxic material should be placed well out of the reach of the infant. Other possible hazards should be identified and secured.
6. An infant should never be left alone in the bathtub.
7. We suggest using a playpen as an "island of safety."
8. Protect your infant from sunburns. Skin cancers are more likely to occur in people who have sunburns at an early age. Sunscreens are safe to use after the age of six months in babies.
9. Continue placing your child in a child car safety seat. By the time a child is twelve months of age, twenty pounds and is sitting well unsupported, the car seat may be faced forward. A child should remain in a car seat until the child is approximately 40 pounds or about three to four years of age. Make sure that the child car safety seat is the proper size for your child's weight. Continue to avoid placing the car safety seat in an automobile seat which is equipped with an air bag. (see the previous section for a discussion of this)
10. Begin to read to your child from books at this age to encourage language acquisition.
11. Young children need immunizations to prevent serious diseases. Please see the next to last page of this handbook for our recommended immunization and check up schedule.

ACCIDENT PREVENTION AND HEALTH SUPERVISION
- OLDER BABY (NINE MONTHS TO 12 MONTHS) -

1. The incidence of accidental poisoning greatly increases by this age. Poisons and toxic substances should be secure. In case of poisoning, refer to the poisoning section of this handbook. Syrup of Ipecac is no longer recommended for poisonings. In Little Rock, the phone number for poison control is 686-6161.
2. If guns are kept in the home, safety precautions are crucial. You should lock up guns and place trigger locks on guns so that there is no possibility that your child can accidently discharge the weapon. Ammunition should also be locked up in a separate location. It is a deadly mistake to keep loaded guns in a home with children present. Never allow a child to play with a gun even if it is known to be unloaded.
3. Infants and children should not ride on motorized machinery with parents. These include lawn tractors, lawn mowers, all-terrain vehicles, farm vehicles, industrial equipment and other like machinery.
4. Foods such as nuts, bacon, popcorn, chewing gum, hard candy, and hot dog like meats are dangerous because they can be aspirated into the lungs. They should never be given to young children.
5. Plastic bags and un-inflated balloons can also cause aspiration and/or suffocation. Your young child should not be allowed to play with these.
6. Continue placing your child in a child car safety seat. Make sure that the child car safety seat is the proper size for your child's weight. Continue to avoid placing the car safety seat in an automobile seat which is equipped with an air bag.
7. Lead exposure can harm your child, slowing physical and mental growth and damaging many parts of the body. The most common way children get lead poisoning is by being around old house paint that is chipping or peeling. We recommend lead testing at one year of age if your child has any of the following risk factors:
   - Lived in or regularly visited a house built before 1960. This could include a day care center, preschool, the home of a baby-sitter, etc. This is especially problematic if there is peeling or chipping paint.
   - Lived in or regularly visited a house built before 1960 with recent, ongoing, or planned renovation or remodeling.
   - Had a brother or sister, housemate, or playmate with lead poisoning.
   - Has taken or is taking folk remedies which contain lead.
   - Lived in a home with plumbing that has lead pipes or copper pipes with lead solder joints.
   - Lived with an adult whose job or hobby involves exposure to lead, such as refinishing

furniture, making pottery or stained glass, or working in any of the industries listed in the next statement.

· Lived near a lead smelter, battery plant, car repair shop, glass or pipe factory, or other industry likely to release lead.

8. Babies should be protected from the possibility of drowning in a swimming pool.

ACCIDENT PREVENTION AND HEALTH SUPERVISION - YOUNG CHILDREN (OVER THE AGE OF ONE) -

1. All outside play near the street or driveway should be strictly supervised. Be especially careful when backing out of the driveway.
2. Other measures concerning car safety, poisoning, drowning prevention, sunburn and burn prevention, as mentioned before, all apply to this age group.
3. Take extra care to provide protection for your child from animal bites. Even trusted pets can produce significant bite wounds in young children. If your child is bitten by an animal, consult the section on bites in this handbook.
4. Speech and hearing should be things of which you take notice. If your child has a poor response to noise or voice, has slow language or speech development, let us know this at the time of an examination. At 15 to 18 months of age, have our office do an autism screen called M-Chat. Please see the section on growth and development for normal time tables of development.

ACCIDENT PREVENTION AND HEALTH SUPERVISION - PRESCHOOL CHILD (THREE YEARS AND OLDER) -

1. When a child attains a weight of 40 pounds and your child's ears have reached the top of the car seat, a booster seat may be used. When a child reaches a weight of 60 pounds regular seat belts may be used. Even after your child has outgrown the child car safety seat, if at all possible, continue to avoid placing your child in an automobile seat which is equipped with an air bag. Air bags are designed for adults and are very dangerous for small children. Minor traffic accidents which result in the deployment of air bags have been known to kill small children in accidents that otherwise would have had no injuries. When your child reaches adult body proportions, usually at 10 to 12 years of age, they may sit in the front seat with an airbag.
2. Keep knives and other sharp objects out of reach.
3. Teach your child the danger of following a ball or an animal into the street, but do not depend upon your child remembering such instructions. The child playing near the street should be closely supervised.
4. Advise your child to be careful around and to avoid strange dogs, cats and other animals. Provide protection for your child from animal bites. Significant animal bites are a

particularly bothersome problem at this age. Pets at home can also pose significant danger to children. If your child is bitten by an animal, consult the section on bites in this handbook.

5. Even though your child may know how to swim, he or she is not "water safe" at this age. Close supervision while swimming is a must. It is a good idea to begin to teach your child to swim at this age. Swimming pools should be completely enclosed with a fence and a gate which closes automatically.
6. Your child should be taught his/her name, parent's name, address and telephone number. Additionally, your child should be taught not to go with strangers or to accept any food or candy from strangers.
7. Your child should be taught what to do in case of a fire in the home. It is a good idea to have a "fire drill" to prepare for the possibility of a fire in your home. For bedrooms in two story homes, rope ladders can be purchased and stored in an accessible place for use in case of fire.
8. Your child's vision should be tested before starting school, at about this age. If at any age a child develops the following then you should bring them in for a vision check up: eyes that turn inward (crossing) or outward, squinting, headaches, not doing as well in school work as before, blurred or double vision or red eyes.
9. Speech and hearing should also be something of which you take notice. If your child has a poor response to noise or voice, has slow language or speech development, or abnormal sounding speech you should have a hearing evaluation done.
10. Blood pressure should be measured regularly starting around the age of three years.
11. The use of trampolines is quite dangerous for children.
12. Other safety approaches mentioned earlier still apply to this age.

ACCIDENT PREVENTION AND HEALTH SUPERVISION - YOUNG SCHOOL AGED CHILD -

Your child should practice bicycle, skating and skateboard safety. A bicycle helmet is a must when riding bicycles. Again, trampolines are dangerous. Listening to very loud music, especially with earphones, can permanently damage your child's hearing. Other safety approaches mentioned earlier still apply to this age.

ACCIDENT PREVENTION AND HEALTH SUPERVISION - TEENAGE YEARS -

Most serious accidents during the teenage years involve the mixture of automobiles and alcohol and/or drugs. Of course, we do not recommend the use of these substances. Motorized all-terrain vehicles and motorcycles are also particularly dangerous for adolescents. Their use is strongly discouraged.

Suicide, sexually transmitted diseases and unwanted pregnancies are major health problems in adolescents. Adolescent sexual activity can result in venereal disease (including AIDS, syphilis, gonorrhea, chlamydia, genital warts, cervical cancer, HPV, herpes, vaginosis and others), emotional problems and pregnancy. To show the scope of the problem of early sexual activity by American teenagers, recent studies have shown that 50% of high school students are sexually active, many of whom have multiple partners. Over one-third of all ninth grade students in the US are sexually active. Many of the sexually transmitted diseases at first have minor symptoms which teenagers tend to ignore. These diseases can result in permanent damage to the reproductive organs which lead to infertility and other problems. In addition, some sexually transmitted diseases can cause serious disease and even kill (AIDS and syphilis).

The teen pregnancy rate in the United States is higher than that of any other industrialized country in the world. The rate in Arkansas is at or near the top of these statistics in the US. Many teen pregnancies result in abortions of the baby, with its attendant guilt and damage to the uterus. It is imperative that our children and young adults be taught the dangers of early sexual relationships. To avoid these problems, we recommend abstinence of sexual relationships until marriage. It is important that discussion of this topic occur early in your child's life, preferably well before junior high school. If you need help in communicating this subject to your teenager, please schedule an appointment with one of our physicians. We will be glad to assist you and your teenager.

For those adolescents who choose to engage in early sexual relationships, careful medical attention is needed to avoid disastrous complications. Examination of the genitalia of both boys and girls is needed for the sexually active teenager, including pelvic exams for girls. We perform these exams in our practice. Please see the section on genitalia in this handbook for a discussion of when pelvic exams should be done for a girl. Although we do not recommend that adolescents engage in early sexual relationships, we do manage the problems that early sexual behavior creates in a manner which is not judgmental.

Our physicians and staff care very deeply about our adolescent patients and the problems which they face in today's world. Not only do we welcome adolescents with problems such as unwanted pregnancies, venereal disease, substance abuse, suicidal thoughts, eating disorders, and other major adolescent problems, we view these problems as opportunities to make a positive impact on a teenager's life. Young people, if you face one of these problems, or parents, if you suspect that your teenager is facing such problems, please know that our office is a place of acceptance and help for you.

Open, honest lines of communication between parent and child during this time of transition are extremely important to help teenagers avoid disastrous life-style choices. Withdrawal, acting out, changes in behavior and/or friends and problems at school should never be ignored. These may be warning signs that your teenager is undergoing stress. Because of the risk of suicide in this age group, these symptoms should be brought to our attention if they occur. Parental involvement in a teenager's life can be a gratifying and helpful experience both for the teenager and the parent. You should stay involved in your child's life, during this time by keeping your communication lines wide open. For more info, see our website.

Accident prevention for your child is a lifelong endeavor. Common sense and effort go a long way to ensure that your child's life will be a long healthy one.

ALLERGIES AND CHRONIC RESPIRATORY PROBLEMS

"Is my child allergic?" is a question that we are asked many times in our practice. Allergy is a disease that tends to run in families. Allergic disorders have a wide variety of manifestations. They may cause symptoms as benign as a runny nose or they may result in a severe life-threatening event known as anaphylaxis, with breathing difficulty and cardiovascular collapse (shock). Thankfully, anaphylaxis is quite rare.

In the very young infant, allergy may be manifested by diarrhea, bloody diarrhea, nasal congestion, rash, wheezing and colic. Among other causes, these symptoms may be due to a formula allergy which, if untreated, can be serious. Additionally, the same symptoms may not be due to allergy at all, but to an infection or other cause. Because of this, we recommend bringing any infant with the above symptoms to the office for a checkup.

Older infants and children tend to have allergic manifestations that are very similar to what adults have. **Food allergies** can cause vomiting, diarrhea, blood in the stools, abdominal cramps, bloating or a rash (eczema). More rarely, some food allergies can cause nasal congestion, wheezing and/or anaphylaxis. The most common food allergy is to cow's milk protein. This is probably because infants are exposed to so much cow's milk in their diets at an early age. There are cow's milk proteins in cow milk based infant formula, in many processed foods and even tiny amounts in breast milk.

What happens with a food allergy is the body makes antibodies against a particular protein in the food. These antibodies which have been made against those certain food proteins stimulate the body to fight against those proteins even though the proteins themselves are harmless to the body. In essence, the immune system of a person with food allergies harms its own body as it tries to defend against this otherwise harmless "enemy".

The diagnosis of food allergy depends on a careful history, a thorough examination and sometimes laboratory testing. Elimination of the offending food is curative. Sometimes

however elimination of the offending food is quite difficult to do because of all the processing of foods today. If the food allergy occurs in the young infant, formula changes are needed. This change could entail switching from a cow milk based formula to either a soy formula or to a hydrolysate formula. Two examples of hydrolysate formulas are Nutramagen and Alimentum. Hydrolysate formulas contain a cow milk protein called casein which has been predigested, or broken up into smaller pieces. These smaller protein pieces are more easily digested and are small enough that the body can't make antibodies against them (an allergic reaction). Since the body is unable to make the antibodies, no allergic reaction can occur and the symptoms of allergy gradually fade. If you think that your child has a milk or soy allergy, please consult us prior to changing your baby's formula. We consider infant formula to be a medication, only changed on our direct advice. Cow milk allergy in breast fed infants is treated by having the mother avoid cow's milk in her diet.

There are other types of allergies besides food allergies. Particles in the environment which people are allergic to are called "allergens". Like what happens in food allergy, the body makes antibodies against allergens in the environment. These antibodies which have been made against the particles stimulate the body to fight against them even though the particles themselves are harmless to the body. Just like food allergy, the immune system of a person with environmental allergies harms its own body as it tries to defend against this otherwise harmless "enemy".

These allergens can be anywhere in the environment and can be one of many different types of particles. Allergens such as grass and tree pollens which float in the air and are inhaled may cause nasal congestion, runny nose or asthma (please see the section on asthma later in this handbook). Airborne allergens can also cause watery, red, itchy eyes. Allergens such as house dust or house dust mites that come into contact with the skin in allergic people can cause a chronic itchy, red, dry rash called eczema (see the section on rashes in this handbook). The symptoms of allergy may mimic other diseases, especially infection. It is no wonder that there is a great deal of confusion about allergic disorders. Even we as physicians sometimes have difficulty sorting out allergic diseases from other problems.

If your child has any of the above symptoms or suffers from recurrent ear infections, sinus infections or if he seems to keep a cold all of the time, he may be showing signs of allergies, irritation from smoke or an immune disorder. The simplest approach to stop these symptoms is to eliminate the suspected allergen, infectious agent or irritant from the environment or the diet. The following approaches may be helpful in the child with a chronic runny nose, chronic infection or a continual cold:

1. **AVOID CIGARETTE SMOKE.** Although not strictly an allergic problem, we are learning more and more about the harmful effects on children of parents who smoke

(passive smoking). Because cigarette smoke is so irritating, children exposed to passive smoking are much more likely to suffer from ear infections, upper respiratory infections, sinus infections, bronchitis, pneumonia and other problems than are children who are not exposed to passive smoke. If you must smoke, do this outside or in a well-ventilated room, completely away from your child. We recommend, however, that you stop smoking completely for you and your child's health sake.

2. AVOID EXPOSURE TO OTHER SICK CHILDREN. This is especially a problem in day-care centers and with baby-sitters with large numbers of children. Try to place your child in a day-care situation that minimizes exposure to large numbers of children.

3. AVOID HOUSE DUST. Naturally, no one can avoid house dust completely, but strive to keep the child's bedroom as free of dust as possible. Enclose pillows and mattresses in plastic cases and wash these with a damp cloth two or three times per week. Take stuffed animals out of the room. Vacuum frequently.

4. KEEP DOGS AND CATS OUT OF THE HOUSE.

5. AVOID CERTAIN FOODS. The most common food allergies are to milk, certain fish, eggs, strawberries, chocolate and peanuts. Try eliminating these foods from the diet and observe the response. This is usually done under our direct supervision.

Medication allergy is an important thing to note in your child should this occur. If your child has an allergic reaction to a certain medication, you should always call the office with this information. If your child has an allergic rash to an antibiotic for instance, we like to examine the child to determine if the rash is consistent with allergy. In addition to this, you should keep a list of all medications to which your child is allergic and be sure to read labels. Many medications are marketed under several different trademarks. For more information on antibiotic allergy see the section on antibiotics below.

There are a number of medications which can reduce the symptoms of allergy. These include antihistamines, cortisone type medications (anti-inflammatory steroids, oral, inhaled, topical, IV), leukotriene modifiers, mast cell stabilizers, immune therapy and others. Please consult us regarding the proper use of these medications. You may want to treat your child with Benadryl (see Dosing Guide for dose) for allergic complaints prior to an office visit.

Because the topic of allergy is such a complicated one, it is impossible to evaluate this problem by telephone. If you feel your child may be suffering from allergy, we strongly recommend bringing your child in for an appointment.

ANEMIA

Anemia is a condition in which red blood cells which carry oxygen to the body are not present in sufficient numbers. The vast majority of cases of anemia are due to iron deficiency, although there are other causes such as Sickle Cell Anemia, hereditary spherocytosis and Thalassemia to name a few. We routinely check a child for anemia at nine months of age. Symptoms of anemia include pallor (pale appearance), lethargy, poor growth and a tendency to fatigue easily. Other symptoms of anemia exist which are less common. If your child is diagnosed with iron deficiency anemia, usually an iron supplement is prescribed. This medication is usually given for several months to replenish the iron stores of the body.

Iron deficiency anemia is preventable. At birth, an infant is born with extra iron reserves. By two months of age, these stores have been utilized and the child requires iron from the diet to prevent anemia. For breast fed infants, depending upon the nutritional status of the mother, no iron supplementation is usually needed for the infant. You should consult the physician regarding recommendations for your specific child. Infants who are bottle fed should be on formula which is fortified with iron by two months of age. The use of low iron formula for infants older than two months of age is discouraged because such infants are at high risk of developing anemia and require repeated blood count testing to rule this out. Children over the age of one should have a diet high in iron containing foods. Examples of foods high in iron are beef, pork, liver, chicken, iron fortified cereal, beans, peas, eggs, tuna, peanut butter, tomatoes, pasta, green vegetables and prune juice.

ANTIBIOTICS

Antibiotics are medicines used to treat infections caused by bacteria. Because of the potential dangers of the illnesses that require antibiotics and because of the potential side effects and overuse of antibiotics in general, **WE DO NOT GENERALLY PRESCRIBE ANTIBIOTICS OVER THE PHONE.** The types of illnesses that require antibiotics need to be evaluated with a careful physical examination, often times laboratory testing and sometimes x-rays. These measures are helpful in establishing a correct diagnosis. Many types of illnesses do not benefit from an antibiotic and may actually be made worse by taking it. Antibiotics are effective only against bacterial illnesses and have no effect on the course of viral illnesses such as the common cold, the flu and viral gastroenteritis (vomiting and diarrhea). An accurate diagnosis is essential to determine not only if your child needs an antibiotic, but also to decide which antibiotic will work best, since certain types of infections respond best to a specific antibiotic. For these reasons please do not call us requesting an antibiotic for your child without a proper evaluation.

Taking an antibiotic for nonspecific symptoms such as fever, cough, sore throat or cold symptoms may not only be unnecessary, but may delay the diagnosis or mask a more serious illness. For this reason, we recommend that you do not give your child leftover medications

or use an antibiotic prescribed for someone else.

Just as with any medication, antibiotics have potential side effects. If your child is placed on an antibiotic, you should observe him/her for possible side effects.

SIDE EFFECTS: The most common side effect seen with antibiotic use is gastrointestinal upset manifested as diarrhea and/or vomiting. Mild diarrhea is of little concern. Sometimes yogurt, sweet acidophilus milk or Lactinex granules (one packet four times per day) can restore the bowel's normal bacterial flora which the antibiotic disrupted causing the diarrhea. If the diarrhea is severe or is associated with blood in the stool, you should make an appointment for an office visit. If vomiting occurs with antibiotic use, make sure you are properly administering the antibiotic. Some antibiotics are required to be taken with food. If this is unsuccessful at stopping the vomiting, you should call the office.

Your child may also have a side effect to an antibiotic manifested by an allergic rash. There are several different types of allergic rashes seen with antibiotic use. It is also common to have rashes caused by viruses during treatments with antibiotics. Because of these factors, it is impossible to evaluate rashes by telephone. You should do the following if your child develops a rash while on an antibiotic:

1. Discontinue the antibiotic and make an appointment for your child at the office during regular office hours. If a bruise-like rash or a rash associated with blisters develops, call us right away.

2. Administer Benadryl (see Dosing Guide). This may help to resolve the rash and will help with itching.

3. You should take your child to the nearest emergency room or call 911 (if severe) for breathing difficulties associated with an allergic rash.

Antibiotics can cause secondary yeast infections in the mouth with little white bumps called "thrush", and in the diaper area causing a diaper rash or diaper dermatitis. If your child develops a secondary yeast infection, call our office phone nurse during regular office hours. Our nurse will phone in a prescription for these two problems.

We are often asked about the effects of prolonged antibiotic use. Despite what most people think, prolonged antibiotic use is usually quite safe. Prolonged antibiotic use does nothing to harm the body's immune system. It is possible for bacteria to develop resistance to antibiotics to which they are exposed for long periods of time. Most often, we prescribe antibiotics for a period of only ten days, thus limiting this development of resistance. Certain types of infections such as sinus and ear infections may require a longer course of treatment.

Your child may need an antibiotic for several weeks or months. Certain individuals (for example, someone who has had rheumatic fever) may require antibiotics on a lifelong basis. Although resistance to antibiotics does sometimes develop, it is a problem which can usually be taken care of by switching to a different class of antibiotics. Although, taking antibiotics for long periods of time is not without some risk, it is riskier to have an infection which is either untreated or under-treated. Long-term consequences from prolonged antibiotic use are quite rare.

Antibiotics are wonderful drugs and have probably saved more lives than any other class of medication. They are not a cure-all, however, and are not without risk. They should only be used at the direction and under the supervision of a physician.

ASTHMA

Asthma occurs very commonly in children. One out of ten children in the United States has asthma. It is one of the main reasons that children are admitted to the hospital and miss school. Unfortunately, despite an increased understanding of asthma by the medical profession, the number of children who die of asthma is increasing. We want our patients with asthma to be well educated about their disease and to be managed well so that complications do not occur. With proper management, children with asthma can live normal healthy lives.

Asthma is one of the conditions which is generally caused by allergies. Asthma is a chronic disease of the small passageways of the lungs that carry air to the lungs. It is in these small air passageways or "airways" as we call them, that the problems of asthma occur. During an attack of asthma, groups of chemicals are released by cells of the immune system which are in the airways. These chemicals cause several problematic changes to the airway itself. First, the lining of the airways becomes swollen, irritated and inflamed, resulting in constriction in the size of the airways. Next, the mucous glands along the airways produce more mucus (phlegm). This causes a cough as the child tries to clear this. Lastly, the muscles surrounding the airways tighten, constricting them. This results in increased work necessary to move air. All these factors cause constriction of the size and resultant blockage of the airways. It makes it more difficult to move air in and out of the lungs. This obstruction to airflow is the main problem with asthma. The obstruction to airflow causes labored breathing, feelings of chest tightness and shortness of breath. Some children who experience an asthma attack may describe it as chest pain.

The first sign of an asthma attack is usually a **cough**, as the child tries to clear the mucous which is produced. Other symptoms follow shortly, including **wheezing** (a high pitched sound of air being forced through swollen, constricted airways), fast breathing and **retractions** (depressions of the skin over the chest). With continued worsening, the child may develop severe breathing difficulty. It is important to treat an asthma attack early, before

severe symptoms appear.

Prevention: If your child has been diagnosed with asthma, prevention of asthma attacks is the best way to manage the problem. Because asthma is a chronic, potentially dangerous condition, it requires input of time, energy and money on your part to keep your child in a safe, healthy state and out of the hospital. We recommend regular, office visits for our children with asthma to develop, implement and continue a preventative plan to manage and prevent asthma attacks. The goal of our treatment of asthma is to prevent lung scarring with its attendant long term complications.

We classify asthma into four categories which recognize persistent symptoms and severity. Treatment is based on this classification of asthma persistence and severity. These are:

Mild Intermittent Asthma
-Symptoms of cough, wheeze, chest tightness or difficulty breathing less than twice a week
-Flare ups are brief, but intensity may vary
-Nighttime symptoms occur less than twice a month
-No symptoms are present between flare-ups

Mild Persistent Asthma
-Symptoms of cough, wheeze, chest tightness or difficulty breathing three to six times a week
-Flare ups may affect activity level
-Nighttime symptoms occur three to four times a month

Moderate Persistent Asthma
-Symptoms of cough, wheeze, chest tightness or difficulty breathing occur daily
-Flare ups may affect activity level
-Nighttime symptoms 5 or more times a month

Severe Persistent Asthma
-Symptoms of cough, wheeze, chest tightness or difficulty breathing are continual
-Nighttime symptoms occur frequently
-Activity level is affected

Compliance with the asthma preventative plan that is developed and tailored to your child is essential to keep your child healthy and out of the hospital. The following can be helpful in preventing asthma.

1. Avoidance:
Once a child develops sensitive, over-reactive airways, there are many factors which can trigger an asthma attack. These "triggers" as we call them, should be identified in your child

and strictly avoided. Failure to avoid a trigger for your child's asthma can cause an attack of breathing difficulty. To avoid an attack of asthma you should do the following.

-There should be no exposure to cigarette smoke or fireplace smoke whatsoever.
-Avoid strong odors and sprays. This includes perfumes, cleaning agents, etc.
-Avoid exposure to house dust and dust mites.
    a. Vacuum and dust frequently. Remove dust catching rugs.
    b. Remove stuffed animals from the child's bed.
    c. Place plastic covers on the mattresses and pillows in your child's bedroom.
    d. If your child is allergic to dust mites consult us about dust mite control.
-Avoid exposure to dogs, cats, rabbits and other animals as much as possible.
-Avoid exposure to people with colds and flu.
-Avoid exposure to molds.
-If your child wheezes with exercise consult us about how to prevent this with medicine.
-Other triggers for your child.

Sometimes work up by an allergist is indicated to help identify and treat the role that different allergens may be playing in your child's asthma. Consult us for a referral to an allergist should this become necessary.

2. Immunizations: Make sure that your child has received the Chicken pox vaccine (Varivax). The reason for this is that cortisone medications are routinely given to stop asthma attacks. Chicken pox can be made much worse, if a child is on cortisone type medication when chicken pox develops. For this reason, to prevent this complication, the chicken pox vaccine should be given. In addition, your child should also get a yearly Flu Shot. Sometimes, we recommend one of the pneumococcal vaccines called Pneumovax or Prevnar.

3. Medications:

In addition to the above asthma preventative measures that are needed for all children with asthma, children with persistent asthma need daily medicines to control their symptoms. These medications are called "controller" medications. Please consult us regarding recommendations for your specific child with asthma. Some children with persistent asthma may also need an allergy workup. Please consult us about this if your child has had several episodes of wheezing or a particularly severe episode of wheezing requiring hospitalization.

Asthma Attack Management: Should your child develop an attack of asthma with

breathing difficulty, you should institute your asthma attack management plan. These plans are developed during a visit to our office concerning asthma for use when an attack of asthma occurs in your child. Typically, a "quick relief" medication is prescribed for your child for these situations. If you now find yourself in a situation in which your child is having an attack of asthma with no medication to treat it, you should contact us immediately or go to an emergency room. Repeated trips to the emergency room may indicate that the preventative plan is not effective enough and requires modification.

Our asthma attack management plans include three situations:
GREEN ZONE: Your child is doing well
-No cough, wheeze, chest tightness or shortness of breath during the day or night
-Your child can do usual activities
-WHAT TO DO: Take preventative medications as usual

YELLOW ZONE: Your child's asthma is getting worse
-Your child may be experiencing cough, wheezing, chest tightness or shortness of breath, or waking at night due to asthma
-Your child can do some but not all usual activities
-WHAT TO DO: Take preventative medications as usual AND take your quick relief medication

RED ZONE: Medical Alert! Emergency. Your child is not breathing well.
-Your child is very short of breath with wheezing, retractions and difficulty breathing.
-Quick-relief medicines have not helped,
-Your child cannot do usual activities
-OR- Symptoms are same or get worse after 24 hours in Yellow Zone
-WHAT TO DO: Take preventative medications as usual AND take your quick relief medications.
-If no better after quick relief medications, go to the Emergency Room or our office.
DANGER SIGNS: Cal 911 or go to the Emergency Room immediately if:
-Trouble walking and talking due to shortness of breath
-Lips or fingernails are blue

ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD)

Attention Deficit Hyperactivity Disorder (ADHD) has undoubtedly become the most common diagnosis for children with behavior problems. Because this disorder may affect as many as 5 to 7% of all children, this topic comes up regularly in our practice. Statistically speaking, there is usually at least one child in each school classroom with ADHD. Although the causes of ADHD are not known for sure, we think that these disorders are genetic

problems in which the chemistry of the brain is disordered. ADHD can run in families. We know that 30 to 40% of children with the disorder have a relative with it also. Further evidence for a genetic link is that if one twin has ADHD, the other twin has an 80% of having the disorder also. A very common scenario in our office is that during a work up for ADHD in their child, one of the parents or even siblings of that child may realize that they too have the disorder.

What is ADHD?
Essentially, children with ADHD can have problems to varying degrees with inattention, hyperactivity and impulsivity. Kids with ADHD find it very difficult to sit still, concentrate on their school work, focus their attention for long periods of time and finish their work. Some kids with ADHD may tend to be very active, "bouncing off the walls" as some parents describe this. Other children with ADHD at not hyperactive at all, but instead are inattentive. Impulsivity may also be a problem. This term refers to children who act without thinking about the consequences of their actions.

We classify ADHD into three known types:
ADHD predominately hyperactive type
These children fulfill the criteria listed below only for hyperactivity. The tend to be able to focus their attention well, but are unable to sit still for long periods of time. This type of ADHD is rare.

ADHD predominately inattentive type
These children fulfill the criteria listed below for inattention. They have a great deal of difficulty paying attention in class and finishing their work. School work that requires sustained attention is particularly difficult for them. Homework often causes tears. This is the most common type of ADHD found in girls.

ADHD combined type
Children with this form of ADHD have all the symptoms of ADHD: hyperactivity, inattention and impulsivity. This form of ADHD is most common in boys.

Because of the problems that ADHD cause: hyperactivity, inattention and impulsivity, children with this disorder generally begin to have problems in school. We can recognize a child with ADHD in our office because they are the ones who will inappropriately open every drawer, turn every knob, push every button and examine the contents of our pockets. In a word, they are "driven."

In addition to inattention and hyperactivity, kids with ADHD have problems controlling their impulses. What we mean by this is that they often blurt out answers before it is appropriate to answer the question. They have difficulty in awaiting their turns to do

different things. They inappropriately interrupt or intrude on others such as in games and conversations. In their dealing with other people, most children with ADHD tend not to be sensitive to the feelings, desires and reactions of others. Some parents feel that "they just don't get it" when it comes to interpersonal skills.

Because of their hyperactivity, inattention and impulsivity, other people tend to react in a negative fashion on a consistent basis to the child with ADHD. These negative interactions can make the child with ADHD feel that something is wrong with them. As time goes on with more and more negative interactions, the child may become socially isolated. To illustrate this, some children with ADHD tend over time to be excluded from social activities with their peers such as birthday parties and other activities. Over time they may also have difficulty in keeping friends. We frequently hear that when social isolation occurs, the child may choose friends who are "from a rough crowd". Because of their behavior and the interactions of those around the child, deep emotional, social and family problems can occur. A sense of failure and low self esteem may develop. If left untreated, the disorder can have major complications of school failure, a sense of worthlessness and failure that leads to depression and more severe behavior problems, and finally family chaos.

If all the symptoms of ADHD weren't enough, many kids with ADHD also have other disorders that complicate their condition further. These are so called co-morbid conditions. Oppositional defiant disorder (ODD) is the most common comorbid condition. Children with ODD tend to argue with adults, lose their temper, actively defy authority, deliberately annoy others, blame others for their mistakes, become angry easily, bully, threaten others, and start fights. Thankfully, ODD tends to lessen with the medical treatment of ADHD. Language disorders, anxiety disorder, learning disabilities, mood disorders, substance abuse and conduct disorder are more possible co-morbid conditions in any given child with ADHD that may need treatment. Part of our job as a pediatrician is to help you unravel the causes of the behavior problems that may be affecting your child and develop treatment strategies for those conditions.

There are many myths about the causes of ADHD. There are so many of these, that we could spend a lot of time discussing them. Let us just mention some of those factors that are not generally accepted as a cause of ADHD: too much sugar, too little sugar, aspartame, food sensitivity, food additives or coloring, lack of vitamins, television, fluorescent lighting, video games, and allergies. For a given child some of the above factors may influence behavior (such as an allergic child), but it is not the cause of ADHD. With regards to specific foods and other associations, if you are worried that your child's behavior seems to change after any particular food, drink or event, make a note of it. Try keeping you child away from those factors to see if there is any improvement.

How do you know if your child has ADHD? Unfortunately, ADHD is quite difficult to diagnose. There are no "tests" that can be conclusive. The following checklist may be helpful in determining if your child will need an ADHD workup. If 6 or more symptoms of inattention or 6 or more symptoms of hyperactivity-impulsivity have persisted for at least 6 months then you should bring your child in for an evaluation.

Inattention:

1. Often does not give close attention to details or makes careless mistakes in schoolwork, work, or other activities.
2. Often has difficulty sustaining attention in tasks or play activities.
3. Often does not seem to listen when spoken to directly.
4. Often does not follow through on instruction and fails to finish schoolwork, chores, or duties (not due to oppositional behavior or failure to understand instructions).
5. Often has difficulty organizing tasks and activities.
6. Often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as school work or homework).
7. Often loses things necessary for tasks or activities, such as toys, assignments, books, or tools.
8. Is often easily distracted by extraneous stimuli.
9. Is often forgetful in daily activities.

-Total number of inattention items selected: Significant if 6 or greater.

Hyperactivity

1. Often fidgets with hands or feet or squirms in seat.
2. Often leaves seat in classroom or in other situations in which remaining seated is expected.
3. Often runs about or climbs excessively in situations in which it is inappropriate (adolescents or adults may have feelings of restlessness).
4. Often has difficulty playing or engaging in leisure activities quietly.
5. Is often "on the go" or often acts as if "driven by a motor".
6. Often talks excessively.

Impulsivity

7. Often blurts out answers before questions are completed.
8. Often has difficulty awaiting their turn.
9. Often interrupts or intrudes on others, such as butting into conversations or games.

-Total number of hyperactivity-impulsivity items selected: Significant if 6 or greater.

ADHD is a diagnosis that we make by piecing together multiple bits of information and then arriving at a conclusion. Because behavior problems in children can have many causes and because the treatment of those causes is so different and at times associated with side effects, it is important that the correct diagnosis of your child's behavior problem be obtained. Stress in a child's life from events in the family structure such as divorce, can create behaviors in children that mimic ADHD. Child abuse such as physical and sexual abuse can also cause severe stress in children, causing behavior problems. Problems such as learning disabilities (such as reading) can also mimic ADHD. Children whose parents are either unable or too busy to give them all the love, attention and affection that they need can also have behavior problems that can look like ADHD. As you can see, because this condition is so complex, extended office visits to discuss the problem are necessary. When making an appointment for behavior problems, be sure to tell the receptionist why you are coming in for the visit so that she can schedule adequate time and so that you can obtain the necessary paperwork for your visit to our office. ADHD appointments are usually scheduled well in advance. It is helpful to fill out Vanderbilt forms prior to an office visit for ADHD. These are available on our website at the following address: http://www.afkpeds.org/adhd_5042_ct.aspx

In addition to our services as pediatricians, often times psychology services and even psychiatric services are necessary for children with ADHD. We will help you with these services should they become necessary.

BED WETTING

Despite what you may hear from other parents, up to 50% of children will continue to wet the bed at three years of age. Many children are much older than this before they achieve nighttime bladder control. Usually children who continue to be enuretic (bedwetters) after five or six years of age have a parent who was late in obtaining bladder control also. Those children who have never achieved bladder control by the age of six years, probably should have an office visit to discuss the problem, as there are treatment options available to them. Rest assured however, that the vast majority of enuretic children will eventually outgrow the problem with no long lasting complications. Because an enuretic child cannot help wetting the bed at night, any negative reinforcement of the problem such as spanking or shaming the child, is not recommended and will do damage to your child's psyche.

Children who have been dry in the past and who develop bed wetting or even daytime enuresis need to have an appointment at the office for evaluation. Urinary tract infections and emotional stress are the most common causes of this.

BITES

Dog or Other Domestic Animal Bites: Any animal bite that breaks the skin requires three types of management. The first is local wound care. If the wound is minor and only consists

of a minor abrasion, it should be thoroughly cleansed with soap and water, and then Neosporin ointment applied. The wound should be carefully watched for signs of secondary infection (pain, swelling, redness, red streaks, fever, discharge). If these symptoms should occur, an appointment should be made. If the wound is more extensive involving more than just a minor abrasion, then you should call the doctor. Antibiotics are advised for some animal bites.

The second part of management of animal bites involves the prevention of rabies from the bite exposure. If the animal is well known and has been vaccinated against rabies, there is little chance that your child will catch this disease. The offending animal should be confined for ten days and observed. If the animal is healthy at the end of ten days, the child has no need for rabies prevention. If, however, your child is bitten by a stray or wild animal, an animal which cannot be found or an animal that subsequently dies, it is very important to bring this to our attention immediately. Rabies immunization may be needed. Sick or dead wild animals should be strictly avoided because of the risk of rabies . Bats are also particularly prone to carrying rabies. They should be avoided.

Lastly, as with any other wound, it is important that the child be up-to-date with her immunization to tetanus. After an animal bite or other dirty wound, a tetanus immunization is required if the child has not had one in the past five years. If your child is not up-to-date and she does suffer a wound, you should bring her to the office during regular office hours.

Human Bites: Human bites should be treated like domestic animal bites with evaluation by the physician if a significant break in the skin occurs. Of course, the offending biter should not be kept up for ten days. He should just be appropriately punished.

Insect Bites and Stings: Most insect bites and stings are not dangerous unless the child is severely allergic to a particular bite or sting. These bites however can be quite painful.

Treatment:

1. If the stinger is present, remove it with a horizontal scraping motion.
2. Place a cold compress on the bite for several minutes to reduce swelling and resulting redness of the bite or sting. You should expect some redness and swelling to occur. You should call the office if this becomes severe (redness and swelling 4 or 5 inches in diameter).
3. Treat with Benadryl elixir (see Dosing Guide) to help relieve the symptoms.
4. Apply 0.5% Hydrocortisone ointment or cream to the area to help with further itching. This is available without a prescription.
5. Go to the nearest emergency room if your child develops difficulty in breathing and or becomes very pale and begins to feel faint.

6. Use acetaminophen (Tylenol) for pain (see Dosing Guide)

Snake Bites: Nonpoisonous snake bites are treated the same as bites from a dog or other domestic animal. Reptile bites do not cause rabies. If your child has been bitten by a poisonous snake, he should be taken immediately to the nearest hospital. You should make no effort to treat this yourself. Cutting the wound, oral suction, suction from snake bite kits, ice compresses, etc., are no longer recommended for poisonous snake bites.

Tick Bites: A lot of attention has recently been focused on the diseases which can be transmitted by tick bites. The three most notable of these are Lyme disease, Erlichiosis and Rocky Mountain Spotted Fever. Lyme disease usually begins with a rash, usually in the form of a ring which slowly enlarges around the site of the tick bite. The rash develops over a period of several days to weeks after an infected bite. Associated symptoms may include fever, enlarged lymph glands, headache, fatigue and swollen, sore joints. This disease generally takes several days up to a few weeks to fully develop.

The symptoms of Rocky Mountain Spotted Fever are high fever, headache and rash in association with a recent tick bite. This disease in contrast to Lyme disease has a much more rapid course. Erlichiosis is very similar to Rocky Mountain Spotted Fever, except that it rarely causes a rash. All three diseases are treatable with antibiotics. If your child has a history of a recent tick bite and high fever and a headache, you should be seen by the physician within 24 hours.

The best treatment for all of the tick-borne diseases mentioned above is prevention. A simple measure taken every day can prevent these diseases. If your child has been playing in an area which might be infested with ticks, you should inspect the entire area of your child's skin each evening. If a tick is found, remove it with forceps (tweezers), grasping the tick nearest the mouth and pulling it straight out. Tick-borne diseases such as Lyme disease, Erlichiosis and Rocky Mountain Spotted Fever can be prevented by removing an infected tick before 12 to 24 hours have elapsed from the attachment of the tick.

Wild Animal Bites: The physician should be called immediately with any wild animal bite.

BLEEDING

Bleeding From the Navel: Many times in newborns, a small amount of blood is noted on the navel after the cord falls off. This is no cause for alarm. As long as the bleeding does not make a spot on the clothing larger than a quarter, it is of no significance. The navel should be kept clean with alcohol and the bleeding will usually stop on its own. If after two or three days the bleeding continues to be a problem, the child should have an office visit. Significant bleeding from the umbilicus of an infant is extremely rare. If your child loses enough blood to soak a cloth diaper the size of a quarter, you should call the doctor. Redness

of the skin surrounding the navel or pus draining from the navel are also reasons for an office visit.

Vaginal Bleeding in the Newborn: Occasionally, because of the effect of mother's hormones, infant girls will have a small amount of vaginal bleeding the first few days of life. This will stop spontaneously and requires no treatment.

Nose Bleeds: Nose bleeds can be caused by dryness of the lining of the nose or by picking or rubbing the nose too vigorously. Allergies or upper respiratory infections may aggravate the problem. Having the child sleep with a vaporizer can decrease the dryness of the air, thereby decreasing the episodes of nose bleeds. Additionally, a child that has nose bleeds can benefit from Neosporin ointment applied into the nose with a Q-tip. To stop active nose bleeds, have the child sit up, tilt his head back and pinch the nose together or use an ice pack. After the bleeding stops, do not remove the clot from the nostril, as this may cause the bleeding to start up again. If the bleeding continues for more than ten minutes despite the above measures, contact our office. Chronic nose bleeds should be evaluated in the office during regular office hours.

Rectal Bleeding: Rectal bleeding can be a more serious type of bleeding. Although it can be due to something as simple as a small tear around the rectum, children with any type of rectal bleeding should be scheduled for an office visit during regular office hours. If the bleeding is severe, more than just a few drops of blood coming from the rectum, the doctor should be notified at the time it occurs.

Other types of bleeding such as blood in the urine, coughing up blood, wounds that fail to stop bleeding, etc., of course, are potentially serious and you should notify the doctor.

BRUISES

Bruises are usually normal in active, playful children. Bruises which are particularly common include bruises along the shin and elbows in young children. Any unusual amount of bruising or bruising noted in uncommon areas should be evaluated by the doctor at an office visit. A rash that rapidly develops and resembles a severe bruise without a history of injury is potentially serious. You should immediately contact us with this information if your child should develop such a rash.

BURNS

Burns severe enough to cause blisters or breaks in the skin should be evaluated right away in the office or in the emergency room. All electrical burns should be evaluated by the doctor immediately. Burns of the hands, face and genitals are more serious than burns in other locations. Burns that merely cause redness of the skin and do not cause blisters or breaks in the skin are generally minor and require only watchful care. The following steps can be taken at home immediately after a burn to both minimize further burn and to begin treatment.

1. Hold the burned area under cool water for several minutes. Remove any hot material from the affected area to prevent further burn damage.
2. Use Acetaminophen (Tylenol) for pain (see Dosing Guide for recommended dosage).
3. An antibiotic ointment such as Neosporin can be applied and the area covered with a clean dressing. Clean white socks are good for protecting burns on the hands or feet. If your child has an extensive burn, clean sheets can be used for protection while in route to the doctor or hospital.
4. If the burn results in blistering or breaks in the skin, a tetanus booster will be needed if one has not been given during the last five years.

CHICKEN POX (VARICELLA)

Chicken pox is a common viral infection of childhood. After an incubation period of 10 to 21 days, the child with Chicken pox will break out with a rash which begins as small red bumps and which very quickly form clear blisters. The clear blisters then rupture and form dark crusts. There are, therefore, three skin lesions that are seen with Chicken pox: first, small red bumps; secondly, small blisters and thirdly, bumps with crusts (scab-like appearances). These three lesions occur in sequence. Lesions generally begin on the chest or back and then spread to the face, neck, arms, and legs. Children usually run fever for several days. In addition to this, they may have a runny nose, sore throat and/or cough.

Chicken pox is highly contagious. The child is contagious one day to two days prior to breaking out with the rash and remains contagious until all lesions have completely crusted over and there are no blister lesions. This generally takes five to seven days from the onset of the rash. You can usually expect the child will break out with new lesions for two or three days after the first lesion is seen.

Chicken pox is generally a mild illness with no complications. If complications do occur, the most common one is secondary bacterial infection of the lesions manifested by redness and/or discharge of pus. You treat these as you would treat impetigo (see section on impetigo). If the lesions should grow to the size of a quarter, if there is discharge of significant amounts of pus or if there are red streaks coming from the lesion, then you should make an appointment for your child.

Serious Chicken pox complications are very rare. These involve pneumonia, encephalitis and a late secondary blood infection with the bacteria which causes strep throat (group A streptococci). Signs of Chicken pox pneumonia are severe coughing and trouble breathing. Call us if these should occur. Signs of encephalitis include headache, stiff neck, vomiting, and lethargy. If your child should become lethargic and begin vomiting, our office should be called right away. The main sign of the late strep blood infection is high fever which occurs after the child seems to have overcome the initial Chicken pox infection. Because strep blood

infections can be serious, if your child seems to be recovering from chicken pox with the fever resolving only to have a high fever recur after the initial fever has resolved (usually day 4 - 8), your child will need an appointment.

Shingles is a reactivation of a Chicken pox infection and is usually seen in adults, although it can occur in children. This strange illness occurs because the Chicken pox virus is stored in the nerves near the spinal cord in people who have had Chicken pox in the past. When the Chicken Pox virus reactivates, it sends infection down the course of the nerve that is affected, causing blister lesions on the skin that are full of Chicken pox virus. We call this pattern of involvement, dermatomal distribution. That is, the rash of shingles follows the path of the nerve that is infected with the virus. Most of the time, shingles results from the occurrence of another viral infection or some other alteration of the immune system.

People with active shingles are contagious and can spread the Chicken pox virus to others who have not had Chicken pox before. To put it another way, you can catch Chicken pox from someone with shingles, but you cannot catch shingles from someone else. Shingles only occurs in someone who has had Chicken pox at an earlier time in their life. Parents and grandparents do not need to worry about catching shingles from their children with Chicken pox. Shingles is treated the same as chicken pox unless the child develops painful shingles which should prompt an office visit. We have elect to use a cortisone type medication in this situation.

Treatment for Chicken pox:

1. Keep your child away from other susceptible children. Although Chicken pox is usually a mild illness in children, it can be more severe in adults. If you are unsure as to whether you have had Chicken pox and your child catches the disease or has been exposed to someone with the disease, you need to contact your own physician.
2. Use Benadryl for itching (see Dosage Guide for dose), and trim the child's fingernails. If itching is quite severe even with Benadryl, try Aveeno baths. Scratching lesions can cause secondary infections and scarring.
3. For the discomfort of fever and the pain of Chicken pox lesions you may use acetaminophen (Tylenol; see Dosing Guide) if you desire. Please be aware however that fever is actually beneficial in Chicken pox, and should not be treated if your child is comfortable. Studies have shown that children with Chicken pox who had fever reduction treatment were sick longer, had more lesions and were more likely to scar than children who had no fever control. For this reason you should avoid as much as reasonably possible the use of fever control medications with Chicken pox (please see the section on fever in this book). Aspirin should be strictly avoided in the treatment of

Chicken pox because of the potential for Reye's syndrome.

4. The child is contagious for about a week after the onset of the rash or until all sores have crusted over and have begun to dry. So, keep your child home from school, daycare or church until all lesions have fully crusted over (5 to 7 days)
5. We do not recommend exposing your child to Chicken pox in order to catch the disease. A Chicken pox vaccine is now available to control the disease. It is usually given anytime after the age of one year.
6. If begun early in the course of Chicken pox, there is a medication called acyclovir (and other medications in this class) which can shorten the duration that a child has Chicken pox. Consult us for the use of this medication.

Treatment for Shingles:

1. Shingles is much less contagious than Chicken pox. It is acceptable to completely cover the lesions with gauze and tape and allow those individuals to go back to work, school or daycare. Care must be made to keep the lesions completely covered however.
2. As with Chicken pox treatment, there is a medication called acyclovir (and other medications in this class) which can shorten the duration that a person has Shingles. Consult us for the use of this medication.
3. For painful Shingles, consult us about the use of cortisone type medications.

COMMON COLD

Unfortunately, at some time or another, every baby and child is going to catch a cold. Colds are caused by several different viruses and are usually spread person-to-person from the infected nose or throat.

Rhinoviruses (RVs) are the most common family of viruses to cause colds. They are small, nonenveloped viruses that contain a single-strand of ribonucleic acid (RNA) genetic information (genome). RVs belong to the Picornaviridae family, which includes the Enterovirus family (polioviruses, coxsackieviruses groups A and B, echoviruses) and Hepatovirus family (hepatitis A virus) of viruses. Approximately 101 serotypes of Rhinovirus are identified currently.

In addition to Rhinoviruses, other viruses such as Enteroviruses, Respiratory Syncytial Virus, human metapneumovirus, adenovirus, influenza, and parainfluenza viruses can all cause cold symptoms. Yes, this is very, very complicated. In addition to common cold symptoms, many of these viruses can also cause croup, and even viral pneumonia. Cold viruses also play a significant role in the development of otitis media and asthma flare ups.

Although literally everyone will come down with a cold from time to time, most cases are mild and self-limited. Colds usually begin with a watery discharge from the nose accompanied by sneezing and watery eyes. The child can also develop fever, cough and a sore throat. Usually, the cough and sore throat are not particularly severe. The child may run fever for two to three days. As a cold progresses, the nasal drainage often becomes thicker and may turn yellow or green. This may be the final stage in the resolution of a cold and no additional treatment is needed if your child is otherwise doing well. The total duration of a cold may be as short as four to five days, or as long as 14 days or longer. So far, there is no cure for the common cold. Since the infection is due to one of the many viruses identified above, antibiotics are not helpful. Treatment of a cold is aimed at relieving symptoms and keeping the body well hydrated and nourished so that it can fight off the infection.

Treatment:

1. Rest. Stay in bed for a while. Sleep.
2. Encourage plenty of fluids, especially clear liquids. This will keep the mucus thin and prevent dehydration.
3. Encourage your child to eat nutritious foods.
4. Acetaminophen (Tylenol) for fever and/or aches (see Dosing Guide) if these are particularly bothersome. Please see the section on fever for information on the benefits of fever in fighting off infections.
5. Saline nose drops. These are particularly helpful for very small children who are unable to blow their noses. Saline nose drops (AYR, Salinex, Ocean, Simply Saline) are quite helpful when placed in the nose to loosen the mucus. You should put two or three drops in each nostril, wait a minute or so and then suction the nose with a nasal aspirator (bulb syringe) as often as needed. In using a nasal aspirator effectively, it is necessary to insert the tip of the nasal aspirator one-half inch into the nose and then aspirate. This is accomplished by using an aspirator with a small tip and inserting it straight into the nose. Saline nose drops can be made at home by adding one-half teaspoon of salt to four ounces of warm water. Allow the solution to cool before using and make it up fresh every day.
6. Vaporizer. Use a cool mist vaporizer to decrease the nasal congestion and make the mucus thinner so your child can cough this out. You should use this especially at night. Make sure to wash the water tank daily to prevent molds from forming in the tank. Although the steam of warm mist machines is actually a little better than cool mist machines, you should not use warm mist machines unless you can insure that your child will not be burned by them. Recently, some safer warm mist machines have been brought to market which produce mist that is not of scalding temperature. These are fine to use.
7. Taking a long hot shower can help loosen mucous and help children breath easier.

8. Sometimes for children over the age of two, nasal decongestants and cough/cold preparations can be helpful for comfort's sake.

You Should Call the Office for an Appointment:

A. If the nasal drainage persists after the usual 14 days of a cold and seems to become thicker and yellow, creamy, or greenish in color. This may indicate that your child has a secondary bacterial infection of the sinuses, called sinusitis.
B. If the cough becomes particularly severe and is associated with a high fever above 102 degrees Fahrenheit. This may indicate that your child is developing pneumonia.
C. If your child seems to "keep a cold" year around, your child may be allergic and should have an office visit to evaluate this. Please see the section on allergies in this handbook.
D. If your child's temperature persists over 101 degrees Fahrenheit for more than three days.
E. If your child's sore throat is particularly severe or if bad breath is present. This may indicate strep throat.
F. If your child develops ear pain.
G. If your child develops significant breathing difficulty or wheezing (see the RSV bronchiolitis section of this handbook).

Do not start any leftover antibiotic prescriptions, as these drugs do not cure the common cold and can cause more harm than good (see section on antibiotics).

COLIC

The term colic has been used in various ways by people over the years. Our definition of colic is a condition in which babies, usually less than four months of age, have periods of unexplained, extreme fussiness, but are normal in every other way. Typically, a regular pattern of crying develops in babies with colic. The attacks of fussiness usually occur between the hours of 3:00 p.m. and midnight, when both the infant and parents are most likely to be fatigued.

The attacks are characterized by sudden outbursts of loud and more or less continuous crying. The baby is usually sucking on its fist, wanting to eat every 15 to 30 minutes, passing gas, drawing its legs up to the abdomen, flailing the arms and legs about and turning red in the face. The infant, however, is fine between these episodes of crying. Parents are usually convinced that the baby has a stomach ache or even worse that something is dreadfully wrong with the infant. Your screaming infant may also cause a great deal of emotional upset for you with feelings of rejection as a parent. Rest assured, you did not cause your baby's colic.

The cause for colic is not well understood. Many people assume that the baby is experiencing

cramping abdominal pain because the infant is pulling its knees up to its chest. However, babies will demonstrate this same pattern of movement with crying to anything in their environment that upsets them, such as being stuck with a safety pin or being startled by a loud noise. For these reasons, colic is probably a much more complex issue than simple abdominal pain. Possibly, colic is a response of the infant to a constellation of factors, including a baby's natural temperament (personality), adjustments to feeding, adjustments to the external environment, fatigue, perceived stress of the parents, possible formula intolerance, and/or other factors. With a problem as poorly understood as colic, you can imagine the treatment is quite varied. In the past, sedatives have been used extensively such as tincture of opium (paregoric) and even ethyl alcohol. We do not recommend these because they are dangerous to the infant.

Colic is a condition that the infant will outgrow, usually by the age of four months (thank goodness). Infants with colic will develop normally and will have no long-lasting psychological or personality defects. The following approaches may be helpful in treating your child with colic.

1. Check your baby to make sure there is no obvious reason for the crying. This should be done with baby completely undressed. If there is nothing physically wrong, make sure your baby is well fed, adequately burped and appropriately dressed, including a clean, dry diaper. Your infant should have a normal temperature with nothing obviously hurting him. If your child has any other symptoms, consult the appropriate section of this handbook.
2. If the baby is breast fed, you should consider any recent changes in your diet which might be affecting your baby. For both breast fed and bottle fed infants, attempts at frequent burping may have dramatic effects in decreasing the symptoms of colic. If your baby is bottle fed, try changing the type of bottle to Dr. Brown, Avent, Evenflo or Playtex disposable nursers. Sometimes formula intolerance or food allergy is the cause of colic. You should discuss this with us at the time of an office visit to evaluate this possibility. Sometimes switching formula from a milk-based product to either a soy-based formula or even a hydrolysate formula is needed. Examples of soy formula are Isomil and Prosobee. Examples of hydrolysate formulas are Nutramagen and Alimentum. Hydrolysate formulas contain a cow milk protein called casein which has been predigested, or broken up into smaller pieces. These smaller protein pieces are more easily digested and are small enough that the body can not make antibodies against them (an allergic reaction). You can try lactofree formula such as Similac Sensitive. Please see the section on allergies for a discussion of this topic. We view infant formulas as medications and something that you should change only on our direct advice. Please call

the office prior to changing your baby's formula.

3. Simethicone drops (Mylicon & Phazyme) are sometimes helpful in decreasing the amount of gas in the stomach. The dose is one dropperful (0.6 ml) every six hours. Again, the most effective way of decreasing intestinal gas, however, is adequate burping and this should always be done.
4. Swaddle the baby. Your baby should be wrapped snugly in a blanket and possibly rocked for several minutes. If your child continues to cry, then place the baby in the crib and leave him or her alone for several minutes. Almost always in a little time your infant will fall asleep and get the rest that he needs. Holding, patting, rocking, jiggling and moving about a baby who is straining, screaming and crying only bruises them, making the muscles sore which intensifies the crying further.
5. If the above measures are not helpful and your infant continues to scream, it is possible that your child has another problem besides colic. He or she should be brought to the office for an appointment. Unusual screaming which is inconsolable and persists for more than two hours should prompt a call to our office.

CONSTIPATION

Constipation in Infants: Parents of newborn and small infants are usually quite concerned about the character and frequency of their child's stools. Elimination is an important body function, but is seldom a cause for great concern. The frequency and character of bowel movements in infancy are quite variable. Some infants may have a stool with almost every feeding, while others only have a stool every three to five days. Both of these patterns are probably normal. Most breast fed babies tend to have frequent, watery stools much more so than do formula fed babies. This is especially true for the first three weeks of life, but is usually not the case thereafter.

Parents are often concerned about constipation in their infant because of straining during a bowel movement. Part of a newborn infant's normal behavior is grunting and straining to pass stools. The infant will often turn red in the face and seem to be having difficulty in passing his stools. This behavior is normal. As long as your baby is having a stool every three to four days and is not having an extreme amount of difficulty in passing them, her bowel habits are normal. If, however, it has been four days since a bowel movement or if she has extremely thick, pasty stools or has to strain excessively to push out firm balls, she is probably constipated.

Constipation Treatment in Infants: Since constipation is caused by having hard stools which are difficult to pass, treatment is aimed at softening the stools. If your baby's stools are soft, she needs no treatment for constipation. The following measures are usually helpful

for constipation.

1. If your infant is crying in pain from a hard stool which is difficult for her to pass, one-half of a glycerin suppository can be inserted. These can be obtained without a prescription. You should not make a habit of using glycerine suppositories, however. They should be used very infrequently because a child can become dependent upon them to have a stool.
2. To loosen the stool, give prune juice which is diluted half with water three times per day. Other juices like apple juice can also be effective.
3. If juice is not effective, try Milk of Magnesia, dosage of one-half teaspoon two to three times per day.
4. Honey is no longer recommended in the treatment of constipation because of the potential for infant botulism poisoning.
5. Mineral oil may also be used to soften the stool. It should be chilled and added to a small amount of juice for your child to drink. Begin with one-half teaspoon three times per day and increase the dose if needed.

Constipation in Older Children: Constipation in older children is usually due to a combination of inappropriate diet and bad bowel habits. The diet should be tailored to increase the amount of juices, water and bulk in the diet. A good way to determine if there is enough fiber in a child's diet is to observe the stool in the toilet. If the stool floats in the toilet, the child has adequate fiber in the diet; if it sinks to the bottom, the child does not have adequate fiber and fiber should be increased. The vast majority of the cases of constipation in older children are due to inadequate fiber. The treatment of constipation in older children is primarily directed at the increasing dietary fiber and bulk.

Treatment of Constipation in the Older Child:

1. The amounts of juices and water should be increased in the diet.
2. The amount of fiber in the diet should be increased. This is accomplished with the use of bran, uncooked raw vegetables and raw fruit. Unprocessed bran can be added to casseroles, hamburger, meat loaf or any kind of baked goods. Bran crackers or wafers can be given. Actually, bran is a good idea for the whole family because it reduces cholesterol in the blood and probably helps reduce certain types of gastrointestinal cancers. If the high-fiber diet is unsuccessful at reducing the problems of constipation and this is evident by stools which still do not float in the toilet, then it is a good idea to add bulk laxatives to the child's diet. This includes methylcellulose (Atrucel), psyllium hydrophilic mecelloid (Metamucil), Equalactin, Benefiber, or Fibercon tablets. Equalactin is particularly convenient to use because it comes in a chewable form. The dose for this is:
    - 3-6 years: one tablet once or twice per day; maximum of two tablets

· 6-12 years: one to two tablets one to three times per day/maximum of four tablets
· adult: two tablets one to four times per day; maximum of 8 tablets

3. The amount of dairy products in the diet should be decreased somewhat. The total milk intake should be approximately 12 to 16 ounces per day. Larger amounts of milk products can be associated with the constipation. Besides milk, dairy products include, cheese, ice cream, cottage cheese, yogurt, etc.
4. Medications such as Ex-Lax and other laxatives should not be used chronically, because they are potentially habit-forming.
5. If your child is acutely constipated and having abdominal pain, a suggested regimen to relieve the constipation includes a pediatric Fleets enema, followed by two or three days of Milk of Magnesia. This will generally relieve the acute problem of constipation. Then of course, you should attack the main problem and increase the child's dietary fiber.
6. Mineral Oil. As discussed above, you should chill the mineral oil and add a small amount to juice. Start with a dose of one teaspoon three times per day and increase as needed to one tablespoon three times per day as needed.
7. If the above measures fail, your child should have a regular office visit. Other laxatives such as Miralax may be indicated for an extended period of time. Rarely, medical conditions such as Hirshsprung's disease or hypothyroidism may be the cause of constipation. These conditions require more in depth treatment. We will investigate these possibilities during an appointment to discuss the problem.

CONTAGIOUS DISEASE

If your child is exposed to a contagious disease other than rabies, call the office during regular office hours for advice. Rabies exposure, however, is an emergency and should be dealt with immediately. All other contagious disease exposure should be handled during regular office hours. Some exposures, such as meningococcal meningitis, whooping cough and influenza require certain medicines to prevent those diseases.

COUGH

The cough reflex is the body's defense mechanism against mucus accumulation in the bronchial tubes. It is the primary defense mechanism of the body to prevent pneumonia. Coughs are very common and are usually not serious. Coughs frequently accompany an ordinary cold, and require no treatment. For children over the age of two years, for comfort's sake, coughs may be treated with over-the-counter cough medications. Medications such as Dimetapp cold and cough, Robitussin DM, Pediatric Formula 44, and Delsym, to name a few, are all effective. Please see Dosing Chart for the proper dose for your child.

Children from birth to two years of age usually should not have their cough suppressed

because of a slight risk of developing pneumonia. A dose of cough medicine mainly given at night for children over the age of two years, is quite safe and should allow your child to get the rest that he or she needs. Of course cough medications which we prescribe at an office visit for a specific illness should be taken as we direct. Infants and children younger than two years should probably not receive cough suppressant medications unless directed by a doctor.

Coughs which need to be evaluated further are those which:

1. Are accompanied by high fever.
2. Persist for more than seven to ten days.
3. Interfere significantly with sleep and daily activities.
4. Are accompanied by labored or difficult breathing, or a blue discoloration of the lips, gums or face (see section on asthma and RSV Bronchiolitis).
5. Are particularly severe with coughing fits that last several seconds.
6. Occur in infants three months or less.
7. Are associated with vomiting.

Any of the above symptoms should prompt an office visit during regular office hours except coughs which are accompanied by labored breathing (breathing difficulty) which should prompt immediate care.

CROUP

Croup is a viral infection of the upper part of the airway and voice box. It is caused by the same viruses that can cause colds (see the section on colds in this handbook). It is most common in younger children and is associated with low-grade fever, hoarseness and a loud barking cough. Although croup is usually not serious, occasionally a child with croup can have an attack of breathing difficulty which usually occurs at night. During these attacks, the child will be noticed to have difficulty drawing in his breath. You may even notice extra breathing movements called retractions in which the skin above the collar bone, over the ribs, and over the stomach depress in with respirations. This airway obstruction is due to swelling which occurs in the upper airway around the larynx (voicebox). If breathing difficulty occurs and this is accompanied by retractions please see the section which follows on the treatment of croup.

Treatment of Croup:

1. Give the child plenty of clear liquids and use a vaporizer to keep the secretions moist (we recommend cool mist).
2. If you desire you may treat the fever with acetaminophen (Tylenol, see Dosing Guide for dose) for comfort's sake (see section on fever). Please see the section on fever for a

description of the benefits of fever in fighting off a viral infection.
3. During an attack of breathing difficulty, place the child in the bathroom, turn the shower on hot and fill the room with steam. Fifteen to 20 minutes in this environment will often relieve the attack. If this does not work, wrap the child up warmly and take her out into the cool night air for a few minutes. If these measures fail to help and she continues to have breathing difficulty, she will need to be taken to the office or to the emergency room.
4. If your child develops an inability to swallow manifested by constant drooling and has the above symptoms of barky cough, fever (usually high), hoarse voice and breathing difficulty, she may have a serious bacterial infection of the throat called epiglottitis. This requires an immediate trip to the emergency room.

CRYING

Continual crying in an infant, of course, is not normal. After the age of four months, the incidence of crying in a small child decreases dramatically. Many times, continuous crying can signify a medical problem. Please refer to the section on infant colic. If these measures are not helpful in calming your child and he has cried continuously for more than two hours, you should notify the physician. The doctor will arrange to have your child seen in the emergency room or after-hours pediatric clinic. There is no way to identify the cause of crying by telephone.

CUTS, SCRATCHES AND ABRASIONS

These should be treated in the following manner to prevent infection and to ensure prompt healing with minimal scarring.

1. If there is any possibility that stitches might be required, the child should be brought in for an evaluation. Stitches usually are not placed after 12 to 18 hours have elapsed from the time of injury.
2. Clean the area thoroughly with soap and water and cover with an antibiotic ointment such as Neosporin and a clean bandage.
3. If your child has not had a tetanus shot within five years, he should be brought in during regular office hours. The tetanus shot can be given anytime within 24 hours of the wound.
4. A clean bandage should be applied to the area.
5. Alcohol, iodine, Mercurochrome and Merthiolate are not recommended, because they injure the tissues.

DAY CARE

Carefully choose a day care for your child that has the same concerns for her health that you

do. Choose a day care with an appropriate worker to child ratio. This is optimally one worker per six children or less. Try to limit your child's exposure to children with fever and other infections. We recommend that you not take your child to daycare or to the baby-sitter when she is sick. See our website for more info on selecting a daycare. www.afkpeds.org

DISCIPLINE AND FAMILY RELATIONSHIPS

Wise parents do certain things for their children to help them become strong and healthy people in all areas of their lives; physically, emotionally and spiritually. There are ten things that we think are important for you to do to help your child as they grow up. We hope you will do all ten of them.

1. Pray for your children. The power of a parent's prayer in the life of a child is great. It acknowledges that God is in control and releases His power to help your child and your family. God has said that He answers your prayers for your children to the next several generations.

2. Express your love to your child openly and often. Let them hear you say, "I love you" in both word and deed each day. Hugs, kisses and other appropriate physical touch from parents to their children are like water for plants. They are essential for the healthy emotional growth of your child. The emotional needs of a child for affection have been likened to a "love tank" that needs to be filled with unconditional love from their parents. If the tank isn't full, you can expect emotional problems from your child, even resulting in behavior problems. Many of the behavior problems that we see in our patients are the result of un-met emotional needs of unconditional love from their parents. You can not assume your child knows that you love him or her. You must tell them and show them on a daily basis. We recommend that you read the book by Drs. Ross Campbell and Gary Chapman, called the "Five Love Languages of Children". This book describes the ways that we as people both express and receive love. Briefly, these five ways that parents can express their love to their children are by physical touch (hugs, kisses, pats on the shoulder, etc.), words of affirmation (genuine praise), acts of service to the child, quality time spent alone with the child receiving the parents undivided attention (Children spell the word "love", "TIME"), and lastly, gifts that come from the parent's heart. We urge you, love your children and demonstrate that love to them. It will help them more than anything you can do for them. Give them memories of loving, rich family experiences.

3. Communicate with your child. Listen to them. Talk with them. Try to avoid shallow communication with your child. Do not let the end of the conversation be something like this, "do this because I told you so". Teach them the principle behind your words. Let them see the reasons for what you are saying. Be honest with them in your

communication about your family and the world around them. There is no way to "fool a child" with words. They can see how things really are without words being spoken. Lastly, when you communicate with your child, give them your undivided attention.

4. Train your children. Teach them. Instruct them. Correct them. Teach them wisdom, knowledge, courtesy and common sense. Make sure that they are in a good school where they are well taught with the values that you believe in. Teach them the Bible.

5. Study your children. Learn what makes them tick. Know their needs, their personality, and their temperament. Children are all different and they need different things from their parents. So, what worked for one child may not be what the next child needs. Wise parents know this and strive to meet those individual needs. As you discover the innate personality and emotional makeup of your child, modify your parenting style to maximize your child's potential. One of the needs of every child is stability in their home environment. Strive to give them this needed stability.

6. Think and talk about your child often. Think about their physical, emotional and spiritual well being. Read, reflect, communicate. Talk about their condition with your spouse and other important people in your life. Seek our guidance when needed.

7. Control your family's access and use of television, video and the internet. Values are taught and caught by children. Make sure that they are getting the right ones. Internet pornography is a major problem, especially for adolescent boys. Attention to ratings on television shows and movies are important, as well as filters on internet sites. Violent video games have also been shown to be problematic in the instillation of values in young people. Be careful, what they watch.

8. Help your child build good relationships with others. Associate with family members and friends whose life-styles are a positive example for your child. Do not allow your child to associate with "people from a rough crowd". They will most definitely be affected by them in a very negative way. Who your child associates with will in a large extent determine their values and behavior. Be especially careful who they are around. Help your child choose healthy friends.

9. Inspire hope in your child. Help them dream dreams. Talk about their future and what they want to be and to do when they grow up. If your child wants to be a fireman, visit the fire station. Lay foundations of hope for the future, this will help ensure success.

10. Discipline your children. Discipline is very important in a child's life. It will mold how they interact with others and how they view themselves. The following paragraphs describe our philosophy of discipline. We recommend that you read Dr. James Dobson's book on discipline entitled, "Dare to Discipline". These philosophies are borrowed from him and are explained in his book.

The discipline that children receive and the integrity of the family structure in which children are raised, are of enormous importance. Although exactly how you discipline your child can vary considerably, there are some principles of applying discipline that every parent should know and follow.

1. DEFINE THE BOUNDARIES BEFORE THEY ARE ENFORCED. The most important step in any disciplinary procedure is to establish reasonable expectations and boundaries in advance. The child should know what is and what is not acceptable behavior before he is held responsible for those rules. This precondition will eliminate the overwhelming sense of injustice that a youngster feels when he is spanked or punished for his accidents, mistakes and blunders. If you haven't defined it, don't enforce it! Be fair.

2. WHEN DEFIANTLY CHALLENGED, RESPOND WITH CONFIDENT DECISIVENESS. Once a child understands what is expected, he should then be held accordingly. That sounds easy, but most children will assault the authority of their elders and challenge their right to lead. In a moment of rebellion, a little child will consider his parent's wishes and defiantly choose to disobey. Like a military general before a battle, he will calculate the potential risk, marshal his forces and attack the enemy with guns blazing. When that nose-to-nose confrontation occurs between generations, it is extremely important for the adult to win decisively and confidently. The child needs to know that when he chooses to disobey his parents that he will never win in that confrontation. In moments like these, if you choose to spank your child, always apply the discipline to the bottom. The bottom is a padded safe area to spank which will not harm your child. Beating, slapping of the face, use of instruments to strike the child, shaking of the body and other abusive actions should never be done. Also, you should never spank your child if you are angry. If your child's misbehavior causes you to become angry, it is better to leave the room than to physically abuse your child. Always explain why your child is being disciplined before it occurs.

3. DISTINGUISH BETWEEN WILLFUL DEFIANCE AND CHILDISH IRRESPONSIBILITY. A child should not be spanked for behavior that is not willfully

defiant. When he forgets to feed the dog or make his bed or leaves your tennis racket outside, remember that these behaviors are typical of childhood. Be gentle as you teach him to do better. If he fails to respond to your patient instruction, it then becomes appropriate to administer some well-defined consequences (he may have to work to pay for the item he abused or be deprived of its use, etc.). Childish irresponsibility, however, is very different from willful defiance, and it should be handled more patiently.

4. REASSURE AND TEACH AFTER THE CONFRONTATION IS OVER. After a time of conflict during which the parent has demonstrated his right to lead (particularly if it resulted in tears for the child), the youngest between 2 and 7 (or older) may want to be loved and reassured. By all means, open your arms and let him come! Hold him close and tell him of your love. Rock him gently and let him know again, why he was punished and how he can avoid the trouble next time. The purpose of your discipline is not to hold your child at an emotional distance, but to lovingly correct him.

5. AVOID IMPOSSIBLE DEMANDS. Be absolutely sure that your child is capable of delivering what you require. Never punish him for wetting the bed involuntarily or for not becoming potty-trained by 2 years of age or for doing poorly in school when he is incapable of academic success. These impossible demands put the child in an unresolvable conflict; there is no way out.

6. LET LOVE BE YOUR GUIDE! A relationship that is characterized by genuine love and affection is likely to be a healthy one, even though some parental mistakes and errors are inevitable.

7. SUPPORT. Mom and Dad have to agree on when and how to discipline their children. Parents must be supportive and consistent, not allowing the child to win the battle by Dividing and Conquering.

We need to recognize that there is a growing tendency in our society, to attack the integrity, authority and even the very existence of traditional family structure. The price of this attack on the family is paid by our children. The nurturing, stable, loving environment of a family is of vital importance to children as they grow up. Take the lead in your child's life. Be involved. Teach them. Train them. Discipline them. But most of all, LOVE THEM.

EAR PROBLEMS

Ear Ache: Many times in children, an ear ache is due to a middle ear infection, although there are other possibilities. Middle ear infections hurt because the infection causes the

middle ear space which is normally filled with air to fill with blood and pus, putting pressure on the eardrum. If the infection is bad enough, sometimes this pressure can cause the eardrum to rupture releasing the blood and pus into the ear canal (see the section on Draining Ear that follows on how to manage this).

Ear aches, especially when they are associated with fever, should be evaluated by the doctor. We usually recommend that this be done in the office during regular office hours. Medications are not prescribed for an earache by telephone because it is impossible to determine the problem by telephone and prescribing antibiotics without a proper diagnosis is dangerous to your child (please see the section on antibiotics). Other problems which can cause an ear ache are Swimmer's Ear (Otitis externa, see below for a description of this condition), strep throat and an inability to equalize pressure in the ear such as following a cough, sneeze, or crying episode, etc. If the pain is due to the inability to equalize pressure, many times this will be relieved by swallowing a liquid followed by a few minutes of rest. An antihistamine decongestant preparation can help with this if the Eustachian tube is blocked.

To provide relief for your child at home prior to an office visit for evaluation of an ear ache, the following measures may be tried:

1. Use acetaminophen for pain (Tylenol - see Dosing Guide for dose).
2. If acetaminophen is not effective, give ibuprofen (see Dosing Guide) to control pain.
3. If there is no drainage from the ear and if you have some Auralgan or Americaine drops on hand, these may be placed in the ear to relieve the pain. Do not use ear pain drops if there is ear drainage or if your child has pressure equalizing tubes. Remember, an ear ache is usually worse at night and the child should be brought in the following day even if he seems better.
4. If you have a cough/cold preparation containing codeine such as Phenergan with codeine, Tylenol with codeine or other codeine containing medicines, these can be given every four hours as needed. If the ear ache is severe enough to require codeine to get the child through the night, then you should bring him into the office the next day even in he feels fine. This medication, of course, does nothing for the infection, it only relieves the pain.
5. Children who develop ear ache and fever should be seen in the office within 24 hours of the onset of their illness.
6. Old prescriptions should not be given to a child with a new onset of ear ache. Antibiotics usually take two to four days to have any effect on the infection. Starting your child on an antibiotic at night will not significantly hasten his recovery, but may only needlessly expose him to a potentially harmful medicine.

Chronic Middle Ear Infections: Many children develop chronic, long-standing and recurrent infections of their middle ear spaces. These infections may require repeated courses of antibiotics and many office visits to treat them. They are quite frustrating for parents. Thank goodness that most children will outgrow these eventually. After 4 or 5 such infections within six months, treatment at preventing ear infection is generally undertaken. This can involve daily medications or even the placement of pressure equalizing tubes at surgery in the affected ear drums. These options are discussed during ear recheck appointments. Ear recheck appointments are very important to ensure that the ear infection resolves so that your child's middle ear will not be damaged by these recurrent and long term infections.

There are times in which a child who has had several middle ear infections, may develop a middle ear space that is filled with thick viscous mucous. We call this a "glue ear". This condition has the medical name of otitis media with effusion. This condition is really not an ear infection, but a fluid filled middle ear. We treat this with watchful waiting for a few months. After three to six months, a ventilating tube may be necessary to prevent hearing loss by draining the affected ear.

Draining Ear: If your child's ear is draining pus, then the child should come in for an examination. It is possible that she may have a perforated ear drum. This is not a serious condition and the ear drum should heal with proper treatment. Alternatively, a draining ear may be the sign of a swimmer's ear, which is an infection of the ear canal itself which happens a lot when children get water in their ears. The child should come in for an office visit during regular office hours to check for these conditions. A cotton wick made from a cotton ball may be placed into the ear to absorb the drainage.

To prevent swimmer's ear you may make a solution of one-half part rubbing alcohol and one-half part white vinegar. A few drops of this solution placed into the ears after swimming can prevent swimmer's ear. If your child has pressure equalizing tubes or an ear perforation don't use the drops in the ear because of ear pain that your child will experience if you use them.

Hearing Problems: All hearing problems should be evaluated in the office during regular office hours.

Object in the Ear: Rocks, seeds, beans and other small objects that are placed in the ear by a child should be removed during regular office hours unless the child is having pain or bleeding with this. If either significant pain or bleeding occurs, the physician should be called.

ENTEROVIRUS INFECTIONS

What are enteroviruses?

Enteroviruses are small viruses that are made of ribonucleic acid (RNA) and protein. This group or family of viruses includes the polioviruses, coxsackieviruses, and echoviruses. In addition to the three different poliovirus strains, there are 61 non-polio enteroviruses that can cause disease in humans: 23 Coxsackie A viruses, 6 Coxsackie B viruses, 28 echoviruses, and 4 other enteroviruses that are designated by numbers. All three types of polioviruses have been virtually eliminated from the Western Hemisphere by the widespread use of vaccines. Only the non-polio enteroviruses are known to cause disease in the US. Non-polio enteroviruses are second only to the "common cold" viruses (the rhinoviruses), as the most common viral infectious agents in humans. It is interesting that rhinoviruses and enteroviruses are very similar. Enterovirus infections are among the most common reasons a pediatric patient will visit a pediatrician. The enteroviruses cause an estimated 10-15 million or more symptomatic infections a year in the United States.

What illnesses or symptoms do these viruses cause?

Enteroviruses cause many different symptoms in infected individuals. Most enterovirus infections are not serious at all and resolve on their own without treatment. Typically, the younger the infected person, the more severe the disease. Some very young infants infected with an enterovirus may have the appearance of sepsis (a severe bacterial infection of the blood) with high fever and lethargy, requiring tests to investigate what is causing the illness. Newborns who become infected with an enterovirus may rarely develop an overwhelming infection of many organs, including liver and heart, and die from the infection. Thankfully this is very rare. Because most adults have quite a bit of immunity to enteroviral infections, breastfeeding is a very good way to prevent this possibility by passing on maternal immunity to the child through breast milk.

Thankfully, older children who become ill with enterovirus, usually develop much milder symptoms. This may include upper respiratory symptoms much like a "cold" with a runny nose, sore throat and cough. Headache is common with an enterovirus infection. Other children may develop a flu-like illness with fever and muscle aches. Many enteroviral infections may cause a rash. Typically the rash is characterized by many very small, flat red dots on the skin of the chest and back with individual lesions having the size of a pin head (1/8th of an inch). Another, prominent feature of enterovirus infection is the development of vomiting and diarrhea sometimes associated with abdominal pain. Mouth ulcers are also possible. An individual child may have one or all of the above mentioned symptoms with any particular infection.

It is a very common scenario for a child with enterovirus infection to develop fever and vomit

a few times on the first day of the illness. Then shortly later develop mild abdominal pain and mild diarrhea followed by symptoms of runny nose, cough and a mild sore throat. As the illness goes away by day 5 to 7, a fleeting rash as described above, lasts for 1 to 3 days and then fades. The child completely recovers.

Another common peculiar enterovirus infection syndrome is known as **hand, foot and mouth disease,** in which the child develops ulcers and blisters on the hands, feet and in the mouth. Sometimes a child with hand foot and mouth disease may also have blisters on the buttocks. The most common cause of hand, foot and mouth disease is coxsackievirus A16, although sometimes, the infection is caused by enterovirus 71 or other enteroviruses. Like other enterovirus infections, this is typically a minor illness that resolves on its own.

Rarely, some persons with enteroviral infections may have aseptic or viral meningitis. Usually, there are no long-term complications from aseptic meningitis. Eye infections can also occur. Recovery is the rule. Very rarely, a person may develop an illness that affects the heart (myocarditis) or the brain (encephalitis) or even have an infection that causes paralysis. Thankfully severe infections like this are very very rare. Enterovirus infections are suspected to play a role in the development of juvenile-onset diabetes mellitus (sugar diabetes). Most adults who are infected with an enterovirus actually have no disease at all.

How does someone become infected with one of these viruses?
Enteroviruses can be found in the respiratory secretions (e.g., saliva, sputum, or nasal mucus) and stool of an infected person. Other persons may become infected by direct contact with secretions from an infected person or by contact with contaminated surfaces or objects, such as a drinking glass or telephone. Parents, teachers, and child care center workers may also become infected by contamination of the hands with stool from an infected infant or toddler during diaper changes.

On average, enteroviruses cause about four infections per child per year during the first several years of a child's life. Once a child has had an infection with a specific enterovirus, the child is typically immune to that particular virus for life. Doing the math, 61 possible infections at 4 infections per year means that a typical child is immune to most enteroviruses by the time they are an adult. So, these are truly "pediatric viruses" primarily affecting children. This is why a child may become ill with a certain enterovirus and the parent usually will not become ill with that virus. However, everyone is potentially at risk. Infants, children, and adolescents are more likely to be susceptible to infection and illness from these viruses, but adults can also become infected and ill if they do not have immunity to a specific enterovirus. In the United States, infections caused by the enteroviruses are most likely to occur during the summer and fall. No vaccine is currently available for prevention of

infection with the non-polio enteroviruses.

Treatment:
The treatment of an enterovirus infection is supportive and determined by the symptoms present. Because it is a virus, there is no definitive treatment to stop this infection.

1. Cold symptoms are treated according to our "common cold" guidelines. Refer to "common cold" section of this handbook for these instructions.
2. Painful mouth ulcers of Hand, Foot and Mouth disease are treated with an equal mixture of Benadryl and Maalox liquid. The dose is one teaspoon of Benadryl and one teaspoon of Maalox mixed together per 22 pounds. The child should swish this mixture around in her mouth to help ease the discomfort. You may repeat this treatment every four hours.
2. Vomiting and diarrhea are treated according to "vomiting and diarrhea" guidelines in this handbook. Give plenty of fluids to prevent dehydration. Sometimes promethazine is prescribed to control nausea.
3. Fever is treated according to our "fever" guidelines in this handbook. We generally discourage the treatment of fever with enterovirus infections so that your body can fight this infection off.
4. The rash of enterovirus is treated with Benadryl. See our dosing guidelines for Benadryl in this handbook.
5. More serious symptoms such as meningitis or encephalitis (severe headache and stiff neck), and myocarditis (chest pain and extreme fatigue) require the immediate attention of one of our physicians. These complications are very rare.
6. Newborns with enterovirus infections require our immediate attention.

EYE PROBLEMS

Newborn: There are three minor problems with the eyes of newborn babies that parents should be aware of. The first is mildly swollen or irritated eyes appearing in the first few days of life which may be a reaction to antibiotic drops which are placed in the baby's eyes at birth. The incidence of this problem has decreased due to a change in the medicine we now use. Usually, the swelling and irritation will resolve without treatment in a few days. If the swelling becomes marked, if the eyes drain a yellow or green discharge, or if the eyes themselves are red, then the child should have a checkup.

Infants may also have a blocked tear duct. Tear duct obstruction in an infant or child causes the eyes to water excessively. The treatment for this is massaging the tear duct by squeezing the inside bridge of the nose between your thumb and index finger at the inner corner of the eye. Pressure should be applied in a gentle but firm way. This will help open the tear duct. You should discuss this problem at a routine office visit. If the child continues to have tearing

problems after several months, we refer the child to an ophthalmologist.

Many young infants can have intermittent crossing of the eyes. This usually resolves spontaneously by six months of age. If it continues past this time, we refer the child to an opthalmologist.

Pink Eye: Pink eye or conjunctivitis is a mild inflammation of the outer lining of the eye manifested by redness and discharge from the eye. It is most often due to an infection although there are other causes including irritation from dust and allergy. Sometimes, conjunctivitis can be associated with infections in other parts of the body, especially ear infections. Because pink eye has so many causes and is many times associated with other infections, it is difficult to evaluate this by telephone. If your child develops pink eye, you should make an appointment during regular office hours to have your child evaluated.

Eye Trauma: Trauma to the eye that results in significant pain that does not go away in a few minutes should be evaluated on an emergency basis.

Eye Pain: Any severe eye pain, even if it is not associated with trauma, should be evaluated on an emergency basis.

FEEDING

Newborn: We highly recommend that mothers breast feed their infants. Breast milk has many advantages over formula feeding, including optimal nutrition, enhanced cognitive ability of the child, establishment of strong emotional ties between the mother and infant, providing anti-infectious factors to the baby from the mother, cost savings, ease and convenience of food preparation, and other advantages. For these reasons, our clinic enthusiastically recommends breast feeding for all of our patients. For more information on breast feeding please see our reading list in the back of this handbook and our booklet entitled “Advice for newborn care”.

Sometimes however, breast feeding is not chosen and an infant formula must be used. Two such formulas are Similac Advance and Enfamil Lipil. For milk allergic infants, Isomil and Prosobee are available. Please contact our office for the appropriate formula for your child. Infants who are bottle fed should be on formula which is fortified with iron by two months of age. The use of low iron containing formula for infants older than two months of age is discouraged because such infants are at high risk of developing anemia and require repeated blood count testing to rule this out.

We feel that breast feeding and/or formula feeding should be continued until the child is 9 - 12 months old. This will provide proper nutrition for your child during this very important period of growth. You should not start your child on cow's milk during the first nine to twelve months of life because it won't meet adequate nutritional needs. Cow's milk has too much protein, too little iron, too much sodium and differences in vitamin, mineral, fat and calorie distribution from breast milk and infant formula.

Certain infants may require a certain formula for health reasons. In some circumstances, it may be dangerous to change from one formula to another. For these reasons, you should disregard infant formula advertisements, sample promotions, and coupon promotions which are directed at obtaining your business for their formula company. The choice and use of an infant formula should be under our direct supervision for the proper health and nutrition of your child. **You should not change your baby's formula without the advice of your doctor.** We do not recommend "follow-up" formulas routinely.

A frequent question we are asked by parents relates to the need for **vitamin** and fluoride supplementation in their child. There is no question that breast feeding provides the best and most complete nutrition for your baby. However for vitamin D, which is needed for calcium deposition to make strong bones, breast feeding may not provide all the vitamin D that the baby requires. More precisely, breast milk is actually rich in pro-vitamin D, an inactive form of vitamin D that requires sunlight for activation. Vitamin D is called the "sunshine vitamin" because direct sunlight is needed to activate the pro-vitamin D to the active form. Because direct sunlight is not good for a baby's skin and because of an increasing amount of Rickets (vitamin D deficiency) in the US among breast fed babies, the American Academy of Pediatrics recommends that vitamin D supplementation be done for all breast fed infants. For some breastfed infants, fluoride supplementation is also done depending on the water fluoride content. Infants who require vitamins are generally started on these at the four week visit or earlier. The purpose of fluoride supplementation is to prevent tooth decay.

Formula fed infants usually do not require vitamin supplementation because the vitamins are contained in the infant formula. Fluoride supplementation is not necessary in bottle fed infants if the formula is mixed with water containing adequate amounts of fluoride. Most communities, including Little Rock and North Little Rock have adequate amounts of fluoride in their water supply. If you have questions concerning this, you should contact your local water official for information about fluoride levels in your water system.

Four to Six Months: During the first four months of life, breast feeding and infant formula feeding provide all of the calories, water and nutrients that your baby will need. We generally

recommend starting **solid foods** at four to six months of age when your child is physically ready to swallow them. Solids have less calories per unit volume than both breast milk and formula. Because of these two considerations, it is best to wait until four to six months of age to start them. Rarely, some babies may need to begin solids earlier than this time as directed by your doctor (such as for reflux or spitting up).

The goal of introducing solid foods into your baby's diet is to provide a starting place for a more mature diet. Your baby's first solid food should be an iron fortified infant **cereal**. There are three cereals available: rice, barley and oatmeal. Any of these are fine to use. The first feeding should usually be one tablespoon mixed with either breast milk, formula or water. The eventual goal is four tablespoons per serving, two or three times per day. This should be increased gradually.

Vegetables can also be started at four to six months of age. We recommend trying carrots first, followed by squash, green beans, peas, and sweet potatoes in that order. We recommend this because of ease of digestion. Vegetables should be introduced before fruit so that your child will develop a taste for them.

After a new food is introduced into your child's diet, you should wait three to four days before introducing another food because of the possibility of food allergy. Vomiting, diarrhea, rash, colic, runny nose, irritability and sleeplessness can be signs of food allergy. If these should occur after the introduction of a new food, you should discontinue it and report this to us during a regular office visit. Each feeding that your child receives should be followed by milk or water. The amount your child eats should depend upon her desire. Give as much as she wants, but do not be insistent when the child is no longer interested.

The next food to introduce in your child's diet is **fruit.** You can introduce a new fruit every three to four days. You should initially use individual fruits and not mixed fruits because of the need to identify which food your child might react to. We recommend starting vegetables first, then fruits. Fruits are much sweeter and your child will prefer these over vegetables if you start them first.

Meats are the last foods that you should introduce into your baby's diet. They have the highest protein content and are the most difficult for the infant to digest. We generally recommend delaying meats until the child is approximately seven to nine months old. Because of ease of digestion, we have an order of introducing meats that we would like to suggest to you. First, try lamb, then chicken, veal, turkey, beef, liver, pork and fish, in that order. Of course, our food lists are a bit arbitrary in the order of introduction of foods into

the diet, but many mothers appreciate these. These lists are merely presented as suggestions and are certainly not hard, fast rules. After your child has tried all of the individual foods above, you can try food mixtures for the sake of variety and convenience.

Juices such as apple juice, white grape juice, pear juice, etc., can be added to the diet at the time the fruits are added. These are not essential to the diet, but are a good source of extra fluid and calories, and may be given at any time during the day. Try to not give your child more than about 6 ounces of juice per day so that more of the nutritious milk will be taken.

One Year and Older: The first year of life is your child's period of most rapid growth. After about 12 months, the rate of growth decelerates and parents notice that the child's appetite decreases. Many times, parents become very concerned that their one-year-old child seems to be eating less. Part of your health supervision visits is to actually plot the height, weight and head circumference of your child on a growth chart. As long as his/her growth percentiles are within the normal range and the blood count is normal, you can be assured that your child is receiving adequate nutrition.

After the age of 9 - 12 months, usually breast feeding and/or formula feeding is discontinued and cow's **milk** is introduced into the diet, although it is fine for breast feeding to be continued after 12 months. We generally recommend whole milk until two years of age and then 2% milk thereafter. It is a good idea for young children to have mealtimes at a regular hour each day. Between meal feedings are usually not a good idea, although there are exceptions. We like for children to eat a balanced diet from all food groups. However, you should never force your child to eat food he does not want. Simply make foods available to your child. At 12 to 18 months of age, we also like to encourage parents to discontinue the use of a bottle and offer their children beverages in a **cup.**

Vitamin supplementation after the first year of life is usually not needed as long as the child is eating a well balanced diet from all of the food groups. If this is not the case, then a multivitamin with iron is probably a good idea. Fluoride supplementation for the older child is needed only if the water supply contains inadequate amounts of fluoride.

The Picky Eater: We find in our practice many parents who are exasperated with their toddlers and young children because of their picky eating habits. Some children eat only a very limited diet which is actually unhealthy for them and parents instinctively know this. Most of the time, a picky eating child will graze on snack foods such as crackers, Cherios and cookies all day long. In addition, most picky eaters will consume a lot of fruit juice as well. As we don't have to tell you, this is not a healthy pattern because nutritional deficiencies may

result. Also, patterns of unhealthy eating develop this way. These patterns may well last a lifetime if not checked. You must change your child's eating habits.

To help your child overcome this bad habit, there is a wonderful, natural remedy for this situation. It is called "hunger". Simply wait out your child's picky eating habits and refuse to give them unhealthy foods. At three meals times per day, provide your child with a healthy, nutritious meal from all the food groups in appropriate proportions. If your child eats a good meal, then a snack and some fruit juice is fine between the next meal. However, if that child refuses to eat the nutritious meal, there is nothing offered except water until the next meal. This pattern is repeated until the child eats a good diet. Most children will throw a temper tantrum with the loss of their first snack of crackers or cup of juice as their expectations are not met. Appropriate punishment needs to be applied at this time, and no food or fruit juice is given until the next meal, only water. After missing one to three meals, most children will miraculously develop healthy eating habits. Missing a whole day's food supply will not hurt normal children, just make sure that your child drinks adequate water. The point of this exercise is discipline. Discipline is healthy and needed in our kid's diets.

In regards to fruit juice, please know that a large consumption of fruit juice has been shown to be associated with poor weight gain and poor eating habits. You should limit the amount of fruit juice your child gets each day. In addition, fruit juice can cause cavities.

FEVER

Stay calm, don't panic! Fever is a sign of illness and is not an illness in itself. Fever alone is not dangerous. Contrary to wide belief, fever does not cause permanent brain damage, even high fevers of 105 to 106 F. In fact, we are not aware of any reports in the medical literature of brain damage occurring with fever alone as the cause.

Fever should be viewed as the body's normal response to fighting infection. Fever is caused by "pyrogens" which are substances released into the blood stream by the body's white blood cells as they attack invading bacteria or viruses. The brain senses these pyrogens and causes the body's temperature to rise (shaking, chills and increased heart rate). Thus fever is actually a signal to the rest of the body's white blood cells that there is an infection present and that they should fight harder. They respond by fighting much harder than they do at normal temperatures. Therefore fever is the normal response of the body to infection. With fever, bacteria and viruses are killed more efficiently. Chicken pox for instance is less severe if the fever is not treated (less lesions, less scarring, shorter duration of illness). This is the case for all infectious illnesses, fever is beneficial.

The problem that fever presents is determining how severe the infection is that is causing it. The vast majority of fever associated illnesses are caused by trivial viral infections which are short-lived and not at all serious. Many times the severity of the illness is not related to the degree of temperature elevation. What we mean by this is that trivial fever virus infections may cause high fevers and these of course are not serious. Because of these considerations, fever alone should not be a cause of alarm and is almost never an emergency.

In order to determine the seriousness of a fever associated illness, we have developed the following approach for our patients with fever. This approach is not directed at treating the fever because it is dangerous by itself, but instead is aimed at determining the seriousness of an illness which has fever as a sign. How your child is acting is a much more important sign of the seriousness of the illness than is the degree of fever. You should carefully follow the steps we have laid out in the section below to determine what your course of action should be. Our approach to fever is based on associated symptoms of the child and the fact that the fever caused by most trivial viral infections will be short lived and easily brought down. Please remember that you are treating fever to determine the seriousness of the illness and for comfort's sake. Your child is not going to be brain damaged because of fever alone. Because serious illnesses do cause fever, your following our advice in this section may be crucial to your child's health.

If you feel your child has a fever, take the temperature. For children under three years of age, the rectal temperature is the most accurate and simplest to take. We recommend digital thermometers. These can be purchased for a minimal amount of money at most discount stores. Take the temperature by lubricating the thermometer with petroleum jelly (Vaseline) and inserting it into the child's rectum approximately one inch. Remove the thermometer after two minutes. Fever is defined as a temperature above 100.5° F taken rectally. The temperature may also be taken under the arm (axillary), under the tongue (oral) or with an ear (tympanic) thermometer. The rectal temperature is usually one degree higher than an oral and two degrees higher than an axillary temperature. Axillary temperatures are the least accurate way of measuring temperature. You should note the actual temperature and note the method used. We discourage the use of mercury containing thermometers because of the risk of toxicity of mercury should the thermometer break.

Tympanic (ear) thermometers are very quick, painless and accurate in measuring temperature for children over the age of six months. Ear thermometers are inaccurate in very young children and should not be used during the first six months of life. The device is actually an infrared camera that takes an infrared "picture" of the eardrum and calculates the temperature from that picture. Because the temperature of the eardrum is different than rectal and oral

temperatures, ear thermometers automatically add a certain value to the measured temperature. The thermometer displays two types of calculated temperatures. One is the oral mode and the other is the rectal mode. For children less than four years old, set the ear thermometer to the rectal mode. To take the temperature, place the probe in your child's ear after you have gently but firmly pulled the ear upwards and backwards to straighten out the ear canal. Point the probe of the thermometer at the opposite ear and then press the button down for one second. This temperature corresponds to a rectal temperature. Fever taken in this fashion is defined as a temperature above 100.5 degrees Fahrenheit.

In taking the temperature of children four years of age and older use the oral mode of the ear thermometer. To take the temperature, place the probe in your child's ear after you have gently but firmly pulled the ear upwards and backwards to straighten out the ear canal. Point the probe of the thermometer at the opposite ear and then press the button down for one second. Normal "oral mode" temperatures for children in this age group are 96.4 to 100.4 degrees Fahrenheit.

Treatment of Fever:

1. Give acetaminophen (such as Tylenol, see Dosing Guide).
2. Dress your child in loose fitting clothing such as a T-shirt and under wear or a diaper. Do not bundle your child tightly or cover him with a blanket because this will only make the temperature rise further.
3. Give your child cool liquids to drink.
4. If your child has a high fever which does not respond to the above measures within 30 to 60 minutes, you may try to lower your child's temperature by giving him a sponge bath with lukewarm water. To do this, place your child in a tub of lukewarm water and sponge him off thoroughly. You can use a cup and pour water over his head. You can expect your child to shiver and cry vigorously during the sponge bath. This is no cause for alarm.
5. If you have ibuprofen (Children's Motrin, Children's Advil Suspension) you may give it to relieve fever. There are several liquid forms of ibuprofen which have been approved for children six months of age and older. See Dosing Guide for instructions. We intend for ibuprofen to be used for particularly high fevers, usually above 102 degrees F. These medications are available without a prescription. Acetaminophen and ibuprofen may be given simultaneously, acetaminophen every four hours and ibuprofen every six to eight hours if acetaminophen alone is unsuccessful at relieving the fever. An alternative way of using ibuprofen and acetaminophen together is to alternate them every 3 hours: acetaminophen given now, ibuprofen given in three hours and then alternate them every three hours. Ibuprofen however, should be viewed as the second line drug for fever control, only to be used in addition to acetaminophen if acetaminophen alone is not completely effective at reducing the fever. Please check the dosing guide for proper dose. Please note that the use of ibuprofen is discouraged for the fever of strep infections and

Chicken pox, because of a possible link to a severe infection called necrotizing fasciitis. So, in these infections avoid using ibuprofen.

Your Child should be Evaluated When:

1. You should call the office during regular office hours if your child has a prolonged fever above 101 degrees F. for more than 48 hours.
2. You should call the office during regular office hours if your child has fever plus any sign of a minor infection such as a sore throat, ear ache, pain on urination, significant cough or mild rash.
3. More significant symptoms such as breathing problems, severe headache, stiff neck, inconsolable irritability, lethargy, unusual difficulty in waking the child, seizures, a bruise like rash, or any other significant symptom which is unusual for your child associated with fever, demands prompt attention from the physician when they occur.
4. Fever above 100.5 degrees F. taken rectally in infants younger than two months is significant even in the absence of other symptoms. This is the only instance of a true emergency with fever as the only sign of illness. The physician should be notified with any such infant with fever and immediately evaluated.
5. The physician should be notified with any high fever above 104 degrees F. which is unresponsive to acetaminophen, ibuprofen, and sponge baths. If your child's high fever comes down with the above measures, then there is no cause for alarm from the fever. High fevers which come down only to recur shortly after the medication has worn off should be evaluated in the office during regular office hours.

Once a diagnosis is obtained, fever control is usually not necessary and if done may prolong and worsen the illness. Fever is a defense mechanism of the body and as such is beneficial in fighting off infections. In our practice, we have chosen 102 degrees Fahrenheit, as the temperature at which we would recommend using acetaminophen and/or ibuprofen for comfort's sake.

We do want to make you aware that febrile seizures (seizures which occur with fever alone as the cause) do occur rarely with fever in young children. It has been estimated that 1 to 4 percent of children will have one or more febrile seizures in their lifetime. Although quite frightening when they occur, febrile seizures are harmless and result in no permanent brain damage. If your child should have a seizure associated with fever, you should take your child to the nearest emergency room. We will evaluate your child to make sure that a more serious condition is not the cause of the seizure.

GENITALIA -BOYS

Newborn infant boys who have been circumcised require management of the circumcision wound. For the first two to three days, gauze with petroleum jelly (Vaseline) should be applied directly to the entire surface of the penis. After this, for the next three to four days Vaseline alone should be applied to prevent the wound from adhering to the diaper. Any excessive bleeding, abnormal redness or discharge of pus from the penis should prompt an office visit. Please know that a yellow scab appears on the penis after circumcision for a few days. This is normal.

Older circumcised boys will often get irritation and redness at the opening of the urethra (the small hole at the end of the penis) called meatitis. Chronic meatitis can cause the opening of the penis to be scarred and too small. You should treat this with Neosporin antibiotic ointment applied several times per day. Another problem with circumcised boys is adhesion of the skin to the head of the penis at the area of the circumcision. This can be checked at the time of a routine examination.

Uncircumcised boys can have problems with inflammation of the foreskin. If this occurs, a routine office visit should be made.

At the time of birth, the foreskin is attached to the underlying head of the penis. If your child remains uncircumcised, it should not be forcibly retracted. By the time your boy is three years old, the foreskin can usually be retracted. When the foreskin can be easily retracted, you should do this during each bath and clean it for hygiene purposes.

Pain and/or swelling of the testis occurring at anytime during a boy's life is not normal. This should prompt an immediate call to the physician.

Adolescent boys with a burning sensation on urination or discharge of pus from the penis, need an examination. Sores or blisters on the penis or groin area also require an examination. Sexual activity prior to marriage during the teenage years is fraught with complications and is discouraged. Please see the section on accident prevention on page 14 and 15 for a discussion of this topic.

Any bulges in the groin area in both boys and girls should raise your concern about a possible **hernia.** A hernia is caused by a defect or small opening in the muscular abdominal wall which allows for a portion of the intestine to protrude through it, producing a bulge which is usually found in the groin area. In boys the bulge is usually seen in the scrotum. Typically, the intestine will move easily back and forth through this opening and the bulge produced

by the hernia will often appear when the intra-abdominal pressure is increased such as with crying. The bulge will often disappear when the abdomen is relaxed.

The danger of a hernia is that the intestine can protrude through the opening in the abdominal wall and somehow become twisted or swollen so that it is unable to return to its proper position within the abdominal cavity. When this happens, the hernia is said to be incarcerated and the bulge of a hernia becomes firm, and often red and painful. This results in intestinal obstruction and vomiting. An incarcerated hernia is a surgical emergency and the physician should be notified immediately.

GENITALIA -GIRLS

Because of the effect of mother's hormones, newborn girls often have a considerable amount of mucousy, white vaginal discharge. This is normal and requires no treatment. In addition, sometimes a small amount of vaginal bleeding can occur during the first few days of life. This will stop spontaneously and also requires no treatment.

Vulvovaginitis is an irritation of the external genitalia usually occurring in young girls. It is generally caused by decreased attention to proper hygiene. Bathing in bubble bath or soapy water can make this worse. Other causes of this are infections with yeast and certain types of bacteria. Treatment for this problem includes:

1. Improved hygiene -teach your child to wipe from front to back and have her put on a clean pair of cotton underwear daily. In addition, a Sitz bath in warm tap water for 10 to 15 minutes twice daily for four to five days is often helpful. One-half strength white vinegar (one-half water plus one-half white vinegar) can be a applied to the irritated genitalia to help resolve the vulvovaginitis.

2. If the above measures are not helping the child, she should have an appointment. A small amount of bleeding in this area with vulvovaginitis should not alarm you, but should prompt an office visit.

Puberty: The topic of explaining all the information that is needed for the child who is going through the passage of puberty is one that is beyond the scope of this handbook. We have literature in our office to help with the task of explaining pubertal changes to your children. In way of a brief explanation, on average, most girls begin the breast budding stage of puberty at about 10 years of age, although there is wide variation to this. Generally, menses begin two years after the onset of breast budding. Skeletal growth generally stops about two years

after menarche (the beginning of menses).

Abnormal pubertal development such as early breast bud development (before age 8) or early development of hair in the genital region (before age 8 or 9) should prompt an office visit to discuss this. Also, delayed pubertal development should prompt an office visit. We would define delayed pubertal development as no breast development by age 14 or no menstrual cycles despite one to two years of mature sexual development.

Abnormal vaginal discharge in a girl of any age is a reason for an examination. Normally in adolescent girls, the vagina secretes a very small amount of thin, clear to white mucous. Prepubertal girls rarely secrete any mucous from the vagina. An abnormal discharge would be characterized by an increase in the amount of material produced as well as color and consistency changes. The abnormal discharge could have a yellow or green color with a "pus" type consistency, or a white cottage cheese like color and consistency. An abnormal discharge can also be associated with an unpleasant odor. Particularly in adolescent girls, an abnormal vaginal discharge may be a sign of an infection that needs treatment. Ignoring such a discharge may have devastating complications such as infertility problems and pelvic inflammatory disease.

Like an abnormal vaginal discharge, sores and blisters on the external genitalia are significant in adolescent girls. If these should appear, an examination during regular office hours is appropriate.

Sexual activity prior to marriage during the teenage years is fraught with complications and is discouraged. Please see the section on accident prevention on page 14 and 15 for a discussion of this topic.

We are asked many times about when a girl should have her first pelvic examination. This should be done with any of the following:

At the age of 21 years
Delayed pubertal development
-no breast development by 14 years
-no menstrual cycles despite mature sexual development
Initiation of sexual activity
Menstrual Disorders, such as excessive bleeding and pain
Unexplained abdominal pain
Abnormal Vaginal Discharge

GROWTH AND DEVELOPMENT

Your child will have her height, weight and head circumference measured at each well child visit. These results will be recorded on a growth chart for the physician and your inspection. This will enable our doctors to pick up any abnormalities in your child's growth as early as possible. In addition to this, her developmental milestones, dietary habits, immunization status, sleep pattern and physical characteristics will be assessed at each routine checkup.

Children grow and develop at different rates. The following developmental milestones show the ages by which most young children develop certain abilities. It is normal for a child to do some of these things later than the ages noted here. If your child fails to do many of these at the ages given, or you have questions about her development, please schedule a visit with one of our physicians to discuss this.

2 Months

- Smiles, coos
- Watches a person, follows with the eyes

4 Months

- Laughs out loud
- Lifts head and chest when on stomach, grasps objects

6 Months

- Babbles, turns to sound
- Rolls over, supports head well when sitting

9 Months

- Responds to name, plays peek-a-boo
- Sits alone, crawls, pulls self up to standing

1 Year

- Waves bye-bye, says mama or dada
- Walks when holding on, picks up small objects with thumb and first finger

18 Months

- Says 3 words other than mama or dada, scribbles
- Walks alone, feeds self using spoon

2 Years

- Puts 2 words together, refers to self by name
- Runs well, walks up stairs by self

3 Years

- Knows age, helps in buttoning clothing, washes and dries hands
- Throws ball overhand, rides tricycle

4 Years

· Knows first and last name, tells a story, counts 4 objects
· Balances on one foot, uses children's scissors

5 Years
· Names 4 colors, counts 10 objects
· Hops on one foot, dresses self

HEAD INJURY

Most head injuries in children are relatively minor and are seldom severe enough to justify the hours that parents spend worrying about them. There are a variety of signs and symptoms to watch for following a head injury during the first 24 to 48 hours. Some of these symptoms are common to a small degree following a head injury and are only worrisome if they become excessive. You should observe your child for the following symptoms and report them to the doctor as instructed.

1. If your child loses consciousness, you should immediately contact the physician.
2. Drowsiness. Most children will become drowsy after a head injury and sleep. It does no harm for your child to fall asleep. In fact, this is very common. It is important, however, to make sure that your child can be fully aroused. It is a good idea to awaken your child every three to four hours during the night after a bad blow to the head. If you have difficulty in waking your child, you should report this to the doctor.
3. Any convulsion or seizure following head trauma should be reported to the doctor.
4. Double vision or other visual problems should be reported to the doctor.
5. Unequal pupils should be reported to the doctor.
6. Weakness in one arm or one leg should be reported to the doctor. Any limp or staggering which persists more than a few minutes after the head injury should be reported.
7. Any abnormal leakage of fluid from the nose or ears should be reported to the doctor.
8. Vomiting. Vomiting is common following even minor head trauma. If it persists more than twice following head trauma, you should report this to the doctor.
9. If your child develops slurred speech or is unable to speak, you should contact the doctor.
10. Headache. This is a common symptom after head injury. If it persists or becomes increasingly severe despite acetaminophen (Tylenol - see Dosing Guide), you should notify the doctor.
11. Mental Status. If your child just seems to be "not with it", or not acting normal, you should contact the doctor.

If your child exhibits none of the above, then it is very unlikely that your child has sustained a significant head injury. A hematoma (a collection of blood under the skin at the site of

head trauma) or "goose egg," as some parents call them, is of no consequence unless it is huge (size of a baseball). This will resolve on its own.

HEADACHE

Headache is not as common in children as in adults. Any recurring headache or headache associated with vomiting, poor coordination or other symptoms should be evaluated in the office during regular office hours. Mild infrequent headaches can be treated with acetaminophen (see Dosing Guide for proper dose). Headaches associated with fever and a stiff neck are potentially serious and should be evaluated by the doctor right away. This can be a sign of meningitis. Headache associated with head trauma should be treated as you would head injury. Please see this section of our handbook.

IMMUNIZATIONS

Our schedule of routine checkups and immunizations is printed on the next to last page of this handbook. Please refer to this schedule when making your child's routine checkup appointments.

Immunizations are a very important tool in preventing serious childhood diseases. In Arkansas, immunizations are required prior to school admission. Our clinic follows the American Academy of Pediatrics and the American College of Immunization Practices (Center for Disease Control committee) guidelines for administering childhood immunizations. These two important vaccine committees decide which vaccines our children should receive. Recently, there have been extensive changes in our immunization practices. We expect this to further change with time. It is important to periodically check on new recommendations in regard to your child's immunization status.

It is imperative that you keep an immunization record for each of your children. This record should be completely up-to-date and always available. It is a good idea for parents to keep this information with them. Of course we will record your child's immunizations each time they are given, and this information is readily available to you during regular office hours. However, it is your responsibility to always keep up with your child's immunization records because this may be very important at the time of an accident or illness, especially if it occurs after office hours. During your child's health supervision visits, we will be happy to provide you with an immunization card to keep up with the immunizations that your child has received.

DTaP Vaccine: The pertussis part (aP) of the DTaP vaccine is given to prevent pertussis (whooping cough), a very serious life-threatening disease, especially in young children under the age of one. Pertussis causes pneumonia with a severe cough. The treatment of pertussis

for young children often requires intensive care and prolonged hospitalization. Pertussis has a high mortality rate among young infants. Occasionally, pertussis can cause severe inflammation of the brain and spinal cord called encephalitis sometimes resulting in permanent brain damage. Because of these factors, we feel that there is a strong need to prevent pertussis infections.

The most effective way of accomplishing this goal is with universal immunization. Unfortunately, pertussis immunization has had side effects in the past. The vast majority of side effects due to the pertussis vaccine have been minor and of no long-term consequence. The possibility of more serious side effects have been worried about for years. There is an ongoing controversy among the experts in the field as to whether the old "whole cell" pertussis vaccine (DTP) could cause any sort of permanent brain damage or disability. It has been felt that this immunization might cause permanent brain damage as a very rare event, affecting one child in every three-hundred thousand receiving the immunization. The study which demonstrated this relationship was not done in the United States and probably was flawed in its design. Most experts feel that these problems were not related to pertussis vaccination. However, because of lingering concern about the safety of the Pertussis vaccine, the accellular Pertussis vaccine (DTaP) has been developed and is now in general usage.

The newer DTaP vaccine has been shown to have less minor side effects than the old "whole cell" DTP vaccine which previously had been in general use. The DTaP vaccine is a "recombinant vaccine" that is actually chemically made. DNA from pertussis organisms are used to chemically make several cell coat proteins that confer immunity to pertussis when injected into a child. Older versions of the DTP vaccine were made by simply killing the bacteria and injecting these dead bacteria into the child. This whole cell vaccine commonly caused fever, fussiness and redness and swelling at the injection site. With the newer DTaP vaccine, these minor reactions are quite rare. Additionally, if the newer DTaP ever causes serious reactions such as brain damage, then such an event would indeed be extremely rare. We feel that the overall risk of immunization for pertussis is much lower than the risk posed by not immunizing children for pertussis.

Most children have little or no problem from the DTaP shot. Potential minor side effects of DTaP vaccine may occur in a few of the children receiving it. These reactions are minor and should not concern you. They usually resolve in 24 to 48 hours after receiving the immunization. These reactions include:

1. Fever, usually around 101 degrees F. You should treat this with Tylenol (see dosing Guide).
2. Irritability and fussiness. Your child should be consolable and not have uncontrollable crying. See below on when to call if this is excessive.

3. Redness, swelling and/or knot at the injection site. The redness and swelling will resolve within a few days. Sometimes the knot at the injection site may persist for weeks to months. This should be of no concern.

The following are unusual reactions which may be more serious. If these occur, you should call the physician:

1. An unusual high-pitched cry.
2. Crying without stopping for 3 hours or longer.
3. Temperature of 105 degrees F. or greater.
4. A convulsion (seizures, fits, spasms, twitching, jerking, or staring spells).
5. A limp or shock-like state.

Pertussis still occurs every year in Arkansas. In our practice, we treat children with pertussis with some frequency. Many children who catch pertussis are inadequately immunized. If your child remains un-immunized to pertussis, you are taking a great risk with his or her health. Pertussis immunizations have prevented the devastating pertussis epidemics of only one generation ago. We agree with the American Academy of Pediatrics and the ACIP in recommending that your child receive diphtheria, tetanus and pertussis vaccines unless specifically advised against by our office. There are three reasons not to get the DTaP shot. The first is a current serious illness. The second is a brain problem which results in the child not developing normally. Lastly, any severe reaction to a previous immunization as listed above is a reason to withhold further pertussis immunization.

The D component of the DTP immunization prevents diphtheria, a serious disease which can make a person unable to breathe, cause paralysis or heart failure. One out of ten people who get diphtheria die of it. The D component of the vaccine is quite safe with few side effects.

The T component of the DTP immunization prevents tetanus (lockjaw). Please see the section below on tetanus.

Hepatitis A Vaccine: Also called infectious hepatitis, hepatitis A is a viral infection of the liver which can cause jaundice and transient liver damage. It is usually a benign disease that lasts about one month with complete recovery for the vast majority of children. However, one can be quite sick for the month that it takes for the virus to run it's course. This vaccine is not required for school admission by state law. However, the vaccine is now recommended for all children by the vaccine committees.

Hepatitis A vaccine is especially needed for children who will be travelling to third world countries where hepatitis A is a problem. It requires multiple doses months apart to be fully

and permanently effective. However if you are in a time crunch, one dose given at least two weeks before departure, can help prevent the disease.

HEP B (hepatitis B vaccine): Also called serum hepatitis, hepatitis B is a viral infection of the liver. The infection can lead to several problems of the liver including jaundice, liver damage, even progressing to liver failure, cirrhosis, chronic carrier state, cancer of the liver and other problems. Although the vehicles for transmission of the virus are often blood and blood products, the virus can be found in tears, saliva, breast milk, urine, semen and vaginal secretions. Babies can be infected by hepatitis B infected mothers at the time of birth. All pregnant women should be screened for hepatitis B during their pregnancy. Hepatitis B virus is capable of surviving for days on environmental surfaces exposed to hepatitis B infected body fluids. For these reasons hepatitis B is an important vaccine to be given to children. The vaccine is given shortly after birth to prevent hepatitis B infections that can be acquired from the mother at birth or even from the stay in the hospital. For this reason, it is important to get this vaccine shortly after birth. Delaying the vaccine until later may result in transmission of hepatitis B to the newborn, a disastrous event. The vaccine is quite safe and side effects are uncommon. Please see our schedule of immunizations regarding the timing of hepatitis B immunization.

HIB (haemophilus Influenza type B vaccine): This immunization prevents invasive infections due to Haemophilus Influenza type B bacteria. The most serious of these is meningitis, but also includes buccal cellulitis, pneumonia, ear infections and sepsis (blood infection). This vaccine will not protect your child against all forms of meningitis, but will prevent this most common form of meningitis. Side effects of the HIB vaccine are very uncommon. The timing for the HIB vaccine has changed since it was first introduced. This vaccine has virtually eliminated the most common form of meningitis that we as pediatricians previously routinely treated. Please see our recommended schedule at the back of this book.

HPV (human papilloma virus vaccine: Gardasil): This immunization prevents infections with certain human papilloma viruses which are known to cause cervical cancer in women. Because cervical cancer is caused by certain sexually transmitted HPV infections, in order to prevent the cancer one must be immune to those types of HPV before exposure ever occurs. We position the immunization at the 11 to 12 year of life to insure this. Young girls getting the vaccine have been reported to rarely faint due to the needle stick. Because of this, please make plans to spend 15 minutes in the office after the administration of HPV vaccine.

MMR (measles, mumps, rubella): This vaccine is intended to prevent measles, mumps and rubella. In the past, it has been given one time at the 15 month visit. Because of outbreaks of measles and mumps in immunized children, it has been recommended that re-

immunization be done after the fourth birthday in addition to the 15 month primary immunization.

Side effects of MMR are generally minor. Usually, there is no reaction for the first day or two. However, within a week or two, a few children will develop a low-grade fever, runny nose and rash. This can be treated with acetaminophen (Tylenol -see Dosage Guide). These symptoms will resolve spontaneously. Rarely, children who receive the MMR may develop joint swelling and or redness. Very rarely, this pain and stiffness of the joints can last for months.

More serious side effects to the MMR do occur. They are all rare events, however. Convulsions (fits, seizures, spasms, twitching, jerking or staring spells) occur in very rare cases. Hearing loss has been reported as has inflammation of the brain after receiving a dose of MMR. Again these reactions are quite rare. The chances of brain inflammation after MMR is approximately one in 1,000,000 people receiving the vaccine.

Your child should not receive the MMR vaccine if:

1. your child is severely allergic to eggs with a life-threatening reaction called anaphylaxis (low blood pressure and shock) or with a significant rash called urticaria (hives, whelps) after eating eggs. You should notify us of any severe egg allergy prior to your child receiving the MMR at a routine office visit.
2. your child has had an allergy problem to an antibiotic called neomycin so serious that it required treatment by a doctor.
3. is taking special cancer treatments such as x-rays or drugs or is taking other drugs, such as prednisone or steroids, that make it hard for the body to fight infection.
4. is born with or develops any disease that makes it hard for the body to fight infection, such as cancer, leukemia, or lymphoma (cancer of the lymph glands).
5. has received gamma globulin during the past 3 months.
6. is pregnant or thinks she is pregnant. It is safe to give the MMR to a child whose mother is pregnant.

The MMR vaccine has acquired an unfounded reputation of causing autism when given to young children. This reputation was the result of one paper that was written by Andrew Wakefield and published in the Lancet in 1998. The paper was flawed resulting in the retraction of its publishing by The Lancet. Despite this, the unfounded association persists. The Center for Disease Control makes this statement regarding MMR and autism. “Current scientific evidence does not support the hypothesis that measles-mumps-rubella (MMR) vaccine, or any combination of vaccines, causes the development of autism, including regressive forms of autism. The question about a possible link between MMR vaccine and autism has been extensively reviewed by independent groups of experts in the

U.S. including the National Academy of Sciences, Institute of Medicine. These reviews have concluded that the available epidemiologic evidence does not support a causal link between MMR vaccine and autism."

Inactivated Polio Vaccine (IPV): The inactivated polio vaccine (IPV) is given to prevent polio. Some children and adults who get a serious case of polio can become paralyzed. Because of the extremely effective vaccination program against polio, the disease has been virtually eliminated from the United States. Although the disease in the US is extremely rare, there are still many thousands of cases of polio each year in other countries. Therefore, it is important to protect our children with vaccines so that they cannot get the disease when someone brings the virus into the US from another country.

Side effects of the Inactivated Polio Vaccine are extremely rare. Older parents may remember giving their children an oral (live virus) form of the polio vaccine. Because of rare, but serious reactions to the oral vaccine (vaccine associated paralysis), we now only use Inactivated (killed) Polio Vaccine (IPV). This vaccine (IPV) only comes in an injection. IPV does not cause vaccine associated paralysis as the oral polio virus did in the past.

Meningococcal Vaccine (MCV4, Menactra): This vaccine licensed in 2005 can prevent 4 types of meningococcal disease, including 2 of the 3 types most common in the United States and a type that causes epidemics in Africa. Meningococcal vaccines cannot prevent all types of the disease, but they do protect many people who might become sick if they didn't get the vaccine. This vaccine works well, and protects about 90% of those who receive it. Meningococcal disease is a serious illness, caused by a bacteria called meningococcus. It is a leading cause of bacterial meningitis in children 2-18 years old in the United States. Meningitis is an infection of fluid surrounding the brain and the spinal cord. Meningococcal disease also causes blood infections. About 2,600 people get meningococcal disease each year in the U.S. 10-15% of these people die, in spite of treatment with antibiotics. Of those who live, another 11-19% lose their arms or legs, become deaf, have problems with their nervous systems, become mentally retarded, or suffer seizures or strokes. Anyone can get meningococcal disease, but it is most common in infants less than one year of age and people with certain medical conditions, such as lack of a spleen. College freshmen who live in dormitories have an increased risk of getting meningococcal disease.

Menactra is recommended for all children at their routine preadolescent visit (11-12 years of age). For those who have never gotten Menactra previously, a dose is recommended at high school entry. Other adolescents who want to decrease their risk of meningococcal disease can also get the vaccine. Meningococcal vaccine is also recommended for other people at increased risk for meningococcal disease:

- College freshmen living in dormitories.
- Microbiologists who are routinely exposed to meningococcal bacteria.
- U.S. military recruits.
- Anyone traveling to, or living in, a part of the world where meningococcal disease is common, such as parts of Africa.
- Anyone who has a damaged spleen, or whose spleen has been removed.
- Anyone who has terminal complement component deficiency (an immune system disorder).
- People who might have been exposed to meningitis during an outbreak.

About half of people who get Menactra have mild side effects, such as redness or pain where the shot was given. If these problems occur, they usually last for 1 or 2 days. A small percentage of people who receive the vaccine develop a fever. This information for meningococcal vaccines was obtained from the CDC website.

Pneumococcal Vaccines: Prevnar (13 valent pneumococcal vaccine, PCV13) and Pneumovax (23 valent pneumococcal vaccine, 23PS)

Prevnar and Pneumovax are vaccines that are given to prevent diseases caused by a bacteria named streptococcus pneumonia (pneumococci for short). This germ causes several very serious diseases such as bacteremia (bacterial infection of the blood), meningitis (infection of the brain and spinal cord), and pneumonia. Less serious diseases such as sinus infections and ear infections (otitis media) are also caused by this bacteria. In recent years, this bacteria has developed significant resistance problems to many antibiotics which is very problematic. Because of the seriousness of the diseases mentioned above and the development of antibiotic resistance of this bacteria, this trend is concerning. To help combat this growing problem of resistance and to prevent pneumococcal disease, particularly in small children, Prevnar has been developed.

For years a vaccine named Pneumovax, which is active against 23 serotypes of pneumococci has been available. Because children younger than two years usually do not respond to this vaccine, it is ineffective if given before this age. Because the bulk of serious pneumococcal disease happens before the end of the second year of life, it was important to close this gap. Therefore in 2000 Prevnar (PCV7) was licensed for use in the United States. Recently, 6 more strains of pneumococcus have been added to make PCV13. Thus, Prevnar protects against the 13 most common strains of Pneumococcus that cause invasive disease. The vaccine is more immunogenic than Pneumovax because it is combined with a protein carrier that the body easily identifies as foreign. Prevnar is given to children under the age of two and Pneumovax is the vaccine given to older individuals. We now recommend that all infants be given four doses of the Prevnar vaccine in the first year of life. See our immunization

schedule in the back of this handbook for details. The Pneumovax vaccine (23PS) protects against many different types of the pneumococcus bacteria and it is recommended that to be given to people over age 65 and children over age two who are at high risk for pneumococcal disease.

The American Academy of Pediatrics released their recommendations for the prevention of pneumococcal infections with pneumococcal vaccines on June 5, 2000. The AAP recommends the routine use of Prevnar for all children 23 months and younger.

Children with severe, recurrent or complicated otitis media (ear infections) also may experience a modest benefit from the Prevnar vaccine. Studies have shown that in children who received Prevnar Vaccination, the incidence of clinically diagnosed otitis media (ear infections) was modestly reduced by 7% to 8% and up to 23% for very frequent otitis media. This is defined as 5 episodes of ear infections in 6 months or 6 episodes in 12 months. The frequency of tympanostomy tubes was reduced by about 20% in children who received the Prevnar vaccine.

The incidence of adverse reactions (side effects) was low and limited to local reactions of erythema (redness) or swelling (less than an inch) at the site of injection in 33% to 43% of children. The incidence of fever was 26% when given with other routine vaccines. Rates of fever greater than 104 degrees Fahrenheit did not exceed 5%. Other reactions included drowsiness (27% to 49%), fussiness (37% to 39%) and decreased appetite (12% to18%) when given along with other childhood vaccines. Serious adverse reactions have not been a problem.

TB Skin Test: This test is not an immunization, but is a test which we do to determine if your child has been infected with tuberculosis. We do TB skin tests for children with certain risk factors for the disease. Please consult us about doing a TB skin test if your child has been exposed to someone with active tuberculosis, if you are in the health profession with direct patient contact, or if you have traveled outside the United States with your child in the last year.

The site of the TB skin test injection should be examined closely at 48 to 72 hours after administration. Any redness or swelling should be reported to the office during regular office hours.

Td Vaccine (tetanus diphtheria vaccine): Tetanus (lock jaw) is a disease which is caused by a bacteria which can grow in contaminated wounds. The bacteria can produce a toxin or

poison which causes severe muscular spasms. The tetanus bacteria named Clostridium Tetani is a normal inhabitant of soil and animal and human intestines. Thus, dirty wounds are particularly tetanus prone. Universal immunization with tetanus vaccines have virtually wiped out tetanus in the United States. Children who suffer dirty wounds should have particular attention paid to their immunization status. If your child has had three or more DTaP vaccines (diphtheria, tetanus, pertussis) or three or more DT (diphtheria, tetanus) vaccines, then your child does not require tetanus immunizations after a dirty wound. The exception to this is if five years or more have elapsed since the last immunization to tetanus in which case a tetanus booster will be required if a dirty wound occurred. Children and adults should receive a tetanus immunization at least every ten years, even if a dirty wound does not occur. Please see the section below on the Tdap vaccine with it's new recommendations for use in children and adults.

Tdap Vaccine (Tetanus, diphtheria, a cellular pertussis vaccine): This vaccine combines the Tetanus diphtheria vaccine described above with the acellular pertussis vaccine described previously. This vaccine helps to boost immunity to pertussis as well as providing immunity to tetanus and diphtheria. Because the immunity of pertussis vaccination wanes over time, it is important to boost it to prevent pertussis infection. The problem of pertussis has increased to the point that numerous infections are diagnosed in our clinic each year. These infections are usually in teenagers and older children. Pertussis is the most common diagnosis in a child or an adult who has a cough that lasts longer than three weeks. To combat this declining immunity, this vaccine was developed. It should be given to children age 11 and older on a routine basis. On June 30, 2005 the Advisory Committee on Immunization Practices (ACIP) voted to recommend the routine use of Tdap vaccines in adolescents aged 11–18 years in place of tetanus and diphtheria toxoids (Td) vaccines. On October 26, 2005 the ACIP voted to recommend routine use of a single dose of Tdap for adults 19-64 years of age to replace the next booster dose of tetanus and diphtheria toxoids vaccine (Td). The ACIP also recommended Tdap for adults who have close contact with infants less than 12 months of age. This vaccine is also designed to take the place of the tetanus diphtheria booster described above. See our immunization schedule for details of when your child should receive it.

Varivax (Chicken pox vaccine): Of course, the Chicken pox vaccine is given to prevent Chicken pox, a common viral exanthem (viral rash) seen commonly in childhood in the past. The vaccine is approximately 85% effective in preventing chicken pox. Since beginning the national Chicken pox vaccination program, the incidence of Chicken pox has fallen dramatically. For those who are part of the group of 15% of children who get Chicken pox later in life despite their vaccination, generally the illness is very mild with only a few "bumps" and little else. The vaccine certainly protects against severe disease which in some children may require hospitalization or rarely even kill the child. Since the illness lasts 7 or

more days, it is desirable to many families to prevent it. Therefore it is important for our children to get this vaccine. Side effects of the vaccine are quite rare and include the development of a few small vesicles on the skin (these look like chicken pox lesions) which resolve over a few days. The vaccine does not prevent the occurrence of Shingles (see section on Chicken pox in this handbook), but does make it less likely to occur.

IMPETIGO

Impetigo (skin infection): Impetigo is a superficial infection of the skin. It is most common during the summer months and is characterized by yellow, weeping sores which are usually located on the face, arms and legs. Impetigo is usually due to either a Strep or Staph infection.

If the lesions are very small and appear minor, the treatment of impetigo consists of first washing the sores daily with soap and water, thus removing the crusty lesions. Next, apply Neosporin ointment or another topical antibacterial ointment to the sores. If the areas are particularly bad, you should call the office during regular office hours for an appointment. Sometimes a prescription ointment or even oral antibiotics are necessary to completely resolve the infection. Other measures can be taken to make your child more comfortable. These include Benadryl (see Dosing Guide) for itching and keeping the fingernails trimmed. Sores with surrounding angry looking red areas or red streaks, especially those associated with fever, are concerning. If this should occur, call the doctor.

ITCHING

Itching due to insect bites, rashes and chicken pox can be treated with Benadryl Elixir (see Dosing Guide for proper dose). This can be given every four hours as needed. It is also a good idea to trim fingernails to protect the skin from scarring.

JAUNDICE

Jaundice refers to a yellow tint of the skin usually due to liver immaturity in newborns or to liver disease in older children. In these conditions, a bile pigment called bilirubin accumulates in the blood stream and is deposited in the skin. Bilirubin is the breakdown product of red blood cells of the body which carry oxygen. It is the liver's job to rid the body of this bilirubin. The liver of a newborn infant is not mature enough to do this job and hence bilirubin accumulates and the child can become jaundiced. Usually by five to seven days of life, an infant's liver is mature enough to take care of the bilirubin load. Most all babies develop some degree of jaundice which is a little more pronounced in breast fed babies. We want to check infants who develop jaundice which is present on the arms, legs and feet. We also like to check infants whose jaundice lasts more than ten days. Under these circumstances, you should call for an appointment within 24 hours. The problem that

significant jaundice presents is that it can cause brain damage in infants if the bilirubin level is too high. Low to moderate levels of bilirubin do no harm. The bilirubin level is checked in our office with a blood test.

Jaundice which develops after the newborn period can be due to liver disease. All such children who develop jaundice should have a routine office visit to check this.

Sometimes, children who eat a lot of yellow vegetables (carrots and squash) develop a yellow tint to their skin, but not in the whites of the eyes. This is known as carotinemia and is not true jaundice. It is harmless and requires no treatment. We generally advise children who have carotinemia to eat less yellow vegetables.

KIDNEY AND URINARY PROBLEMS

Any symptom suspicious for urinary tract infection, including painful urination, urinary frequency or urgency should be evaluated in the office.

Other common types of urinary problems involve irritation of the bladder. This occurs especially in girls who take bubble baths or add soapy substances to their bath water. We do not recommend that children use bubble baths, dish washing powder, bath oil, bath beads or other additives. These substances can be drawn into the urinary bladder by sitting in soapy water. This can irritate the bladder, mimicking a urinary tract infection.

If your child develops problems with nighttime or even daytime wetting (enuresis), please see the section on bed wetting (enuresis) in this booklet.

LEG AND ARM PROBLEMS

If your child refuses to use her arm or leg, you should bring your child to the office for an appointment. A limping child who has no fever and is not in much pain should be evaluated if the limp has failed to disappear after 24 hours. More severe pain of either the arms or legs, especially after trauma, should prompt a visit for an X-ray examination of the affected limb. Any swelling, redness or pain in a joint, associated with fever, is a cause for immediate concern and the physician should he notified.

In-toeing and out-toeing when a youngster walks is a common problem in pediatrics and should be discussed at the time of a routine checkup.

LICE, SCABIES

If you find that your child has a lice infestation, you should purchase Nix Cream Rinse at your local drug store. This medication is available over-the-counter without a prescription. Use as directed on the box. If this is ineffective, another treatment at home is possible

although it is a little messy. Applying a liberal coat of vaseline to the entire scalp overnight can suffocate the lice and kill them effectively. Use dishwashing detergent to remove the vaseline the next morning. If you cannot get rid of the problem with the above measures, you should bring your child to the office for an office visit.

If your child has a scabies infection manifested by itching red bumps, especially in the spaces between the fingers, you should bring your child in for a regular office visit.

LUMPS, LYMPH NODES AND KERNELS

Children normally have lymph nodes which can be felt in the neck, especially under the chin, but also in other areas. As long as they are small, rubbery feeling, movable and non-tender, they are of little consequence. A lump that is rapidly enlarging, is red and tender, is associated with fever or one that does not go away after a few days should be evaluated in the office during regular office hours.

MOUTH PROBLEMS

Mouth Injury: See Teeth section.

Thrush: Thrush is a yeast infection of the mouth in small infants which causes white patches on the side of the mouth and gums. It is particularly common after antibiotic usage. If this occurs in your infant, you should call the office during regular office hours and we will call in a prescription for this.

Viral Stomatitis: This is an infection of young children which causes fever and ulcers on the inner surfaces of the lips, gums and throat. It lasts a few days and can be fairly uncomfortable for your child. It is best treated as follows:

1. Encourage fluids to ensure that your child stays well hydrated (see Diarrhea section for signs of dehydration). Try to avoid carbonated beverages or fruit juices which will worsen the discomfort. Milk, ice cream, popsicles and Jello are all good choices.
2. Acetaminophen (Tylenol) may be used for fever (see Dosing Guide).
3. A mixture of equal volumes of Benadryl elixir and Maalox liquid can be given to the child to help with the mouth pain and sore throat. The dose after mixing the two medications together is two teaspoons for every 22 pounds of body weight. This can be given as often as every four hours.

PINWORMS

Pinworms look like tiny white threads. They live in the intestines of children and adults who are infected with them. At night, they travel to the rectal opening and lay eggs on the outside

skin. This causes tremendous itching of the child's bottom and can cause restless sleep. You can check for pinworms by examining your child's skin about the anal opening with a flashlight in the wee-hours of the night. Even though you may feel like the midnight stalker, this is an effective way of determining if your child is infected with pinworms. Usually, the best time to check your child is around midnight. This infection is spread by the passage of eggs from infected persons to others.

Pinworms require treatment with medication to relieve the infestation. We can check for pinworms during an office visit. When an infection is identified, all family members should be treated for the infection. At the time the family members are treated, underwear and bed linens should be changed and washed in very hot water. The house should also be vacuumed thoroughly. In addition to this, fingernails should be trimmed and the hands thoroughly cleansed. The above measures are necessary to rid the person and the home of pinworm eggs.

POISONING

If your child should swallow an unusual substance, call the office number immediately (224-5437) or Poison Control (686-6161). Please refer to the section on accident prevention on how to prevent poisoning in your child.

RASHES

Newborn Rash: Most rashes in newborns are entirely normal and are of no concern. Small white bumps on an infant's face and nose are called milia. These bumps contain old dead skin remnants. They will eventually wear off in a month or so and they require no treatment. Neonatal acne which resembles acne in older children occurs in infants due to maternal hormone stimulation. This, too, will fade with a little time.

Flat red birthmarks ("capillary hemangiomas" or "stork bites" for short) are common in babies, especially over the eyelids and over the back of the neck. These tend to fade somewhat with time and do not generally get larger. They should be discussed at a routine office visit. "Strawberry birthmarks" (Cavernous hemangiomas) are red, raised birth marks which for the first year or so of life actually increase in size only to fade with time thereafter. These however unlike flat birthmarks can become quite large and disfiguring prior to regressing at age three to four years. If treated in the first few weeks of life, these birthmarks can be reduced in size or even eliminated with laser therapy. Raised, red birthmarks particularly of the face should be evaluated by us in the first two to three weeks of life to determine if laser therapy is needed.

Red irritation on the knees and cheeks from rubbing the sheet is common and can be treated

by placing the baby on a soft cloth diaper and by applying 1/2% hydrocortisone cream (Cortaid) to the irritated area two or three times a day. Dry scaly skin is also common in newborns. Because baby lotion can make this condition worse, we do not recommend its use. Instead of baby lotion, apply Vaseline to dry skin. This will seal the dry skin so that no further moisture loss can occur.

Bruise-Like Rash: Any purple or bruise-like rash which cannot be explained by simple bruising should be evaluated right away.

Chicken pox: Please see this handbook for a discussion of this childhood disease.

Diaper Rash: Diaper rashes are usually due to either irritation of the skin from a wet diaper (ammonia) or to a yeast infection in the diaper area. A yeast can grow on the skin in moist areas. When a diaper rash appears, try especially hard to keep the skin clean and dry. Change the diaper as soon as it is wet or soiled (we realize this is hard). It is also a good idea to put zinc oxide ointment (Desitin) and Vaseline in those areas. Medicated A&D Ointment is also a good choice to treat this. If the rash is due to irritation from urine (ammonia), this treatment will be quite effective and the rash should resolve. However, if the rash does not improve with this treatment, you should call the office for advice. Your baby may have a yeast infection and need to have an antifungal ointment applied. One such over-the-counter ointment is Lotrimin AF.

Eczema: Eczema is a skin condition seen in allergic people which causes the skin to be dry and sensitive. Sometimes, this can progress to a generalized rash which is scaly, red, itchy and sometimes even broken open or weeping. Eczema tends to occur in people with a family history of allergy (asthma, hayfever, eczema, and/or itchy, watery eyes). The treatment of eczema is primarily directed at keeping the skin well hydrated. To do this, we recommend using the mildest and the least amount of soap as is possible. Examples of mild soap are: Dove, Tone, Basic and Neutrogena. Soap washes away the normal oils of the skin and makes eczema worse. In addition to this, we recommend applying Vaseline or Eucerin to the affected skin to further seal the skin from continued water loss.

Sometimes exposures to certain things in the environment and/or diet can make eczema worse. This is particularly true of cow's milk, soy, peanuts and strawberries. Please refer to the section in this book on allergy.

One percent hydrocortisone ointment may be used to treat this condition. If your child's dry, sensitive skin continues to be a problem despite the above measures, you should bring your

child into the office for a routine office visit. There are effective treatment options available.

Fifth Disease (Erythema Infectiosum): Fifth disease is a viral infection which causes a very typical rash in children and adults. It is caused by human parvovirus B19. Fifth disease was so named because it was the fifth pink-red infectious rash to be described by physicians years ago, before those diseases were renamed. For those history buffs out there, the other four diseases are:

1. Rubella
2. Measles
3. Scarlet Fever
4. Filatov-Dukes disease

Fifth Disease usually begins as a bright red or rosy rash on both cheeks which lasts for 1 to 3 days. Some people say that the rash gives a child a "slapped cheek" appearance. The rash on cheeks is followed by pink "lacelike" rash on the extremities as if the child had been laying on lace for some time. This "lacey" rash mainly appears on the thighs and upper arms. It appears and disappears several times over a 1 to 5 week period. It is especially prominent after warms baths, exercise, and sun exposure. Usually the child has no fever or only a low-grade fever (less than 101 F) with fifth disease. This is a very mild disease with either no symptoms or a slight runny nose and sore throat. No treatment is generally necessary.
Fifth disease is contagious. Over 50% of exposed children will come down with the rash in 10 to 14 days. Because the disease is mainly contagious during the week before the rash begins, a child who has the rash is no longer contagious and does not need to stay home from school or daycare.

Most adults who get fifth disease develop just mild pinkness of the cheeks or no rash at all. In addition to the mild rash, adults can develop joint pains, especially in the knees. These pains may last 1 to 3 months. Taking ibuprofen usually relieves these symptoms. An arthritis workup is not necessary for joint pains that occur after exposure to fifth disease.

The main risk of fifth disease is to pregnant women who are not immune to the disease. Research has shown that 10% of unborn babies whose mothers are not immune to fifth disease who are subsequently infected with the virus before birth, may develop severe anemia or even die. This is especially true of the first 3 months of pregnancy. This virus, however, doesn't cause any birth defects. If you are pregnant and exposed to a child with fifth disease before the child develops the rash, see your obstetrician. He or she will may get a sample of your blood for an antibody test to see if you already have had the disease and are protected from becoming infected again. If you do not have antibodies against fifth disease, your

pregnancy will need to be monitored closely.

Hives and Allergic Rashes: Hives is a red, raised rash in various sizes which is usually due to an allergic reaction. The rash seems to move to different areas of the child's body. It is often associated with itching and sometimes with swelling of the hands and feet. The rash is usually not dangerous, but can be uncomfortable. Hives can be caused by anything that the child has eaten, breathed or come in contact with. Believe it or not, hives is almost never due to something that is new in the diet. Usually, the child has been exposed to the very thing that caused the hives at sometime in the past with no reaction.

The treatment of hives is to remove the causative agent and make the child comfortable. Of course, to remove the causative agent requires us to identify it, which is very difficult. We recommend that you write down everything that your child had to eat or was exposed to during the 24 hours prior to the break-out of the rash. If the hives recurs, this should be done again. With each episode, the list should be compared to try to identify the agent responsible.

Benadryl should be given to your child. This will help resolve the rash and control the itching (please see Dosing Guide for proper dosage). If your child develops a breathing problem associated with this rash (very rare), the child should be evaluated immediately.

Poison Ivy: If your child has come in contact with poison ivy or another irritant, it is important to wash the involved area thoroughly with soap and water to remove the poison ivy toxin. You should treat poison ivy (contact dermatitis) with three types of treatment to speed healing and comfort the child. First, cortisone medicine is quite effective in decreasing the inflammation due to poison ivy. Over-the-counter, 0.5% to 1% hydrocortisone cream or ointment (Cortaid) can be helpful. If the rash is particularly severe, you should bring your child into the office for an office visit. A stronger cortisone cream or ointment may be prescribed or an oral form of cortisone may be prescribed. If an oral form of cortisone is prescribed for your child, your child should take all of the prescription, even if the rash clears before the prescription is finished because a rebound poison ivy rash may result if all of the cortisone medicine is not taken. Benadryl elixir can be used to control itching (see dosing chart for proper dose). Lastly, Calamine lotion and Aveeno baths are sometimes helpful for itching. As with other rashes that cause itching, you should trim your child's nails to prevent scratching and scarring.

You cannot catch Poison Ivy rash by touching the rash of someone who has contracted poison ivy (contact dermatitis). Contact dermatitis is not contagious from one person to

another. However you can catch the Poison Ivy rash if you come into contact with the Poison Ivy toxin (an oil from the plant) which is on clothing, pets or other objects that have come into contact with Poison Ivy plants. You should thoroughly clean these objects. Poison Ivy toxin can be removed by washing with warm water and a lot of soap.

Rashes Due to Drugs: If a rash develops while your child is taking a medication, the medication should be stopped and the office should be notified during regular office hours. See section on allergy and the section on antibiotics in this handbook.

Seborrheic Dermatitis (cradle cap): Cradle cap is a red, scaly rash on the scalp and body of newborns and infants. The exact cause isn't known. The cause may be different in infants and adults. Seborrheic dermatitis may be related to hormones, because the disorder often appears in infancy and disappears before puberty. Or the cause might be a fungus, called malassezia. This organism is normally present on the skin in small numbers, but sometimes its numbers increase, resulting in skin problems.

The use of baby oils can make it worse. Seborrheic dermatitis (cradle cap) is treated by removing the scales with an anti-dandruff shampoo such as Sebulex and scrubbing with a soft baby brush. If the rash on the body is particularly severe or if the cradle cap does not resolve with the dandruff shampoo, you should bring your child in for a routine office visit.

RSV BRONCHIOLITIS

RSV or Respiratory Syncytial Virus infection is a condition which is being recognized frequently, as we are able to identify the cause of many respiratory infections. Most people who catch RSV infections have what amounts to a deep "chest cold". Most often, this illness could be described as the "common cold". For most people, RSV infections are not at all serious and resolve without incident in about two weeks. Please see our handbook for advice regarding the treatment of colds.

Both adults and children can catch RSV infections. Each year, usually in the winter months, we have epidemics of RSV infections. In the United States there are usually about 3 million children who will get RSV infections annually. Because RSV infections do not cause life long immunity, you can catch RSV many times. The infection is very contagious. The usual story we get from patients is that "the whole house is sick" with a bad cold.

The problem that RSV infection presents is that very young children less than 6 months old, children with medical problems such as prematurity and heart disease, and children with asthma who catch RSV can develop more severe breathing problems than just common cold

symptoms with the development of breathing difficulty. This breathing difficulty is similar to what children with asthma experience during an asthma attack. Approximately 20% of children less than two years of age will develop wheezing with breathing difficulty when they are infected with RSV. In very rare cases, the breathing difficulty of RSV bronchiolitis can even progress to respiratory failure. Many people call this "viral bronchitis" or "viral pneumonia". This condition has the medical name of "bronchiolitis".

Thankfully, to lessen the burden of severe RSV infection in premature infants and infants with chronic medical conditions such as lung problems and heart problems, we now have a preventative treatment to help prevent severe disease due to RSV.

Other viruses besides RSV can cause bronchiolitis. Human metapneumovirus and parainfluenza virus are examples of other viruses which can cause bronchiolitis. Because the symptoms, course and treatment of these viruses are the same as that of RSV, these will all be covered in this one section on bronchiolitis.

Symptoms of Bronchiolitis

For the 20% of children who catch RSV and then develop bronchiolitis, the symptoms have to do with inflammation of the smallest air passages of the lungs, the bronchioles. Just as a cold virus can make the nose become congested and filled with mucous, RSV infection in some children can "go down into the chest" and cause the bronchioles to become swollen, constricted, and filled with thick mucous. These factors cause the lungs to become stiff with obstruction to air flow which is especially seen when the child tries to exhale. The obstruction to airflow in the lungs causes the hallmark symptom of bronchiolitis, **wheezing**. Wheezing refers to the high pitched, or whistling sound that air makes when being forcibly pushed through swollen, constricted air passages.

In addition to wheezing, the swollen, constricted, mucous filled bronchioles cause a severe, wet sounding **cough** as the child tries to clear the thick mucous from the airways. Coughing is an important defense mechanism of the body in bronchiolitis which should not be interfered with because it protects against the development of bacterial pneumonia.

Another symptom of bronchiolitis is **rapid breathing**. This is usually mild when the respiratory rate is 40 to 60 breaths taken every 60 seconds. Respiratory rates greater than 60 breaths per 60 seconds while the child is not active are more worrisome. This may indicate that the child is having difficulty getting enough air in and out of the lungs to meet the demands of the body. Often this type of respiratory distress is accompanied by **retractions**, which refers to sinking in of the skin between the ribs, near the collar bone and

at the base of the neck which occurs with breathing. Another sign of a more serious problem with breathing is audible wheezing as the child exhales. Sometimes, with more severe distress, the child breathing can actually become quieter indicating less air movement. Rapid respirations above 60 breaths per minute accompanied by retractions and labored breathing in a child whose respirations are very quiet are not normal and are worrisome. You should seek medical attention in such circumstances.

Usual Course of Bronchiolitis

RSV bronchiolitis is a 14 day illness which like other viruses has a typical clinical course. After an incubation period of 4 to 7 days, the first symptom of RSV is a runny nose which is usually associated with fever. The runny nose is typically very bad with copious clear mucous running out of the nose. A cough then develops one to two days later, which is soon followed by wheezing and sometimes shortness of breath. Very young infants less than 6 months old who catch RSV are particularly prone to severe disease and apnea (stopping breathing).

The following graph shows the expected time course and symptoms of RSV.

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Runny Nose		X	X	X	X	X	X	X	X	x	x				
Fever			X	X	X	X	X	X							
Cough					X	X	X	X	X	X	X	X	x	x	
Wheezing						X	X	X	X	X	X	x	x		
Apnea							X	X	X						
Hospitalization							X	X	X	X	X	X	X		
Contagious	X	X	X	X	X	X	X	X	X	X	X	x	x	x	

Days of illness

As seen by the graph above, RSV takes several days to develop. The course of RSV is predictable, it gets worse for several days then gradually gets better. Like other viral infections, it is impossible to effectively treat bronchiolitis to prevent severe disease. The disease is going to run its course despite our best efforts. Therefore, even if parents seek prompt medical attention at the beginning of an RSV illness with the initiation of appropriate treatment, the child may worsen despite that treatment, and require hospitalization. Of the 3 million children who contract RSV each year in the US about 100,000 or 3.3% will require hospitalization.

Treatment:

The treatment of RSV depends on the severity of the illness. Children who have only nasal congestion and cough without breathing difficulty require only "common cold" treatment as described in this handbook (please refer to this). Again, 80% of children who catch RSV will fall into this category.

Children who have mild wheezing should be seen in the office for an appointment during regular office hours. We usually treat children with mild wheezing due to RSV with an inhaled asthma medication called albuterol. It opens the lungs by helping to relax the airways which are constricted. This medication may cause tremors, agitation, hyperactivity and insomnia. Only if these become severe, are they worrisome. Mild wheezing is not serious, as long as the child is taking adequate fluid and is playful and alert.

Similarly, we treat more severe RSV infections with inhaled albuterol in metered dose inhaler form or as an updraft (fine mist) with an updraft machine. A newer alternative updraft medication is Xopenex, a more purified form of albuterol which probably has fewer side effects of tremors, agitation, hyperactivity and insomnia. In addition, Xopenex has recently been released as a metered dose inhaler. There are other respiratory treatments that are also available if your child is more severely affected. We will choose the most appropriate medication for you during your office visit.

Other things you can do at home include:

1. Give plenty of fluids.
2. Use a humidifier. Humidity helps to loosen thick secretions so that they can be coughed up.
3. Do not smoke around your child with bronchiolitis. This is extremely harmful and may well cause your child to develop respiratory failure.
4. In young children, suction the nose to remove mucous. You should use saline drops with this. Please see the section on "common cold" on how to do this.

Antibiotics do not help RSV infection because it is a viral illness and antibiotics do not treat viruses. Ear infections are common with RSV occurring in 20 to 30 % of the cases. You should know however, that the antibiotics while helping the ear infection will do nothing for the RSV infection.

Contact us within 24 hours if the following occur:

1. Your child does not take enough fluids in and begins to show early signs of dehydration (see the Parents Medical Handbook for a description of the signs of dehydration).

2. Your child develops an earache.
3. Your child develops difficulty sleeping, but is ok otherwise.

More severe breathing problems are much more worrisome. You should contact us immediately if:

1. Your child develops labored or difficult breathing.
2. Your child develops rapid breathing faster than 60 breaths per 60 seconds while your child is quiet.
3. Your child develops significant retractions (sinking in of the skin between the ribs, near the collar bone and at the base of the neck which occurs with breathing)
4. Your child's wheezing worsens.
5. Your child stops breathing or passes out.
6. Your child appears to be sicker and not doing well.
7. Your child develops a blue color of the lips and the area around the lips.

Other information: Your child is contagious for two weeks from the beginning of the illness. Usually the illness is thought to be noncontagious when the wheezing disappears. The illness is spread by direct contact with infected nasal secretions. Therefore, avoidance of infected nasal secretions is important. Handwashing is an effective tool at preventing the spread of RSV as is avoiding being around someone with RSV.

Prescription Treatment of RSV Bronchiolitis may include:

1. Albuterol MDI, _____puffs every _____ hours as needed for wheezing. This medication my cause tremors, agitations, nervousness and insomnia. Only if these become severe are they a cause for concern.
2. Albuterol inhalant solution, _____ ml with 2 ml of bronchosaline, as updraft every _____ hours for wheezing.
3. Xopenex _____, 1 vial as updraft every 4 to 6 hours for wheezing.
4. Pulmicort _____, 1 vial as updraft every 12 hours for wheezing.

How to use a Metered-Dose Inhaler with an AeroChamber® with Mask:

1. This type of spacer is for the child who is too young to always be able to breathe in through his/her mouth at the right time. Usually this is someone 6 years of age or under or who is unable to use a mouthpiece for another reason.
2. Remove the plastic protective cap from the MDI.
3. Insert the metered dose inhaler (MDI) into the plastic holder on the rubber end of the AeroChamber®.
4. Shake the AeroChamber® and the MDI.
5. Sit the child on your lap. The back of your child's head should be against your chest.

6. Apply the mask to your child's face so that the nose and mouth are covered.
7. Spray 1 puff from the metered-dose inhaler into the AeroChamber®.
8. Keep the mask in place for 6 breaths. Have your child breathe through his/her mouth, if possible. Watch the child's chest to count breaths. If your child objects to the treatment and cries, this only increases how deeply your child is breathing. This will actually help deposit the medication deeper into the lungs. So, don't let the objections of your child stop you from giving him or her the needed treatment.
9. Rest and repeat according to the our directions.
10. At least once a week, take the AeroChamber® end off and rinse with warm tap water.

SEIZURES

Seizures are caused by abnormal electrical activity in the brain which can be of several types. The type of seizure that most people are familiar with is the tonic-clonic type which causes the child to lose consciousness and develop uncontrolled jerking movements of the body. This can be one of the most frightening events in a child's life for his/her parents. Most parents are afraid that their child will stop breathing and die during a seizure. This is almost never the case. If your child should have seizure, place the child on her back or side and turn her head to the side to prevent aspiration of stomach contents into the trachea in case of vomiting. The tongue should be protected as best you can. Your child should then be taken to the nearest emergency room or call 911. We should be notified of your arrival so that the cause of the seizure can be identified and appropriate treatment instituted.

SLEEP PROBLEMS

"Why doesn't my baby sleep through the night?" is a question that we are asked many times in our practice. Most parents do not realize that it is **their** (the parents) behavior in the vast majority of cases that is responsible for their infant or child's nighttime awakening. Attention to three areas of parental behavior can cure the vast majority of nighttime awakening.

Most children, especially during the first year of life, awaken up to four to five times each night even though the parents may not be aware of this night time awakening. However, most of these children can put themselves back to sleep without parental help. Children who have not learned to master this will cry for their parent. If you provide too much attention, your child will become dependent upon you for returning to sleep. Children with this behavior are known as **trained night criers.** Usually, the child will be rocked to sleep by his parent and placed in bed asleep. Then, the parents will tiptoe out of the room to make sure not to wake the baby. Whenever the child awakens, the parent will immediately come back into the room and re-rock the child to sleep again. This pattern is repeated over and over, making for exhausted parents and children alike. Parents of trained night criers will often

place signs on their front porch stating something like this, "please don't ring the doorbell, child is sleeping". You see, parents of trained night criers need all the rest that the baby will give them and anyone who would wake their sleeping baby is quickly chastised. In essence, the baby rules the house.

Infants who are fed at night if they wake up are called **trained night feeders.** It is only during the first two to four months of life that a child may need to be fed at night. From birth to two months of age most babies normally awaken two times per night for feedings. Between two and three months of age, most babies will need one middle of the night feeding. By four months of age, over 90% of infants can sleep more than eight hours consecutively without feeding. Only premature and small newborn infants need to be awakened for nighttime feedings. You should let your child sleep through the night if he will, especially after four months of age.

Fearful night criers are children who are fearful or who panic when the parent leaves the room. Many times, these children will becomes extremely manipulative, crying until they vomit, or crying nonstop for hours. These children do not tolerate separation from their parents. Most parents feel guilty about letting them cry and will give in to their bedtime demands. The child, thus, "rules the roost" and parents have a great deal of difficulty in disciplining them. Many times fearful night criers turn into young children who throw tremendous temper tantrums. This is probably due to a lack of discipline. Events surrounding bedtime are extremely important in your child's discipline.

Some children have aspects of trained night feeders, trained night criers, and fearful night criers in the cause of their sleeplessness. We recommend that you take the following steps to promote healthy sleep habits for your child.

1. **Put your child to bed while he is awake.** It is disorienting to a child to go to sleep in his mother's arms in a rocking chair during a feeding and then awaken in his crib without his mother being present. The last memory of your baby before he goes to bed should be of his crib, not of you, your breast or the bottle.
2. **Don't feed your baby at night.** If your baby is four months of age or older, he does not require nighttime feedings. If he awakens at night and demands something to eat, give him water only, and after a few days discontinue this. It is O.K. to feed your baby prior to going to sleep, but do not let your baby keep his bottle in the bed and use it as a pacifier. Offer him a pacifier instead. You should increase the daytime feeding intervals to at least every three hours. A child that feeds every two hours in the daytime cannot be expected to make it eight to ten hours at night without feeding.

3. **Have your child sleep in his own bed in his own room.** Letting the child sleep with you in your bed or having the crib next to your bed is not a good idea. This will further foster your baby's reliance on you for normal sleep.
4. Eliminate long daytime naps. If your baby has slept for more than two to three hours, you should awaken him. If he is taking several naps per day, you should try to decrease that number.
5. Don't change your baby's diaper during the night. Babies can survive until morning with a wet diaper. Of course, if the diaper is soiled or if you are treating a diaper rash, you can change it.
6. Keep the room dark. Most of the time if a baby cannot see anything he will go back to sleep. The exception to this is a fearful night crier. Sometimes a night light can comfort fearful night criers. It is fine to use this.

To convert your baby from a trained night feeder, a trained night crier, or a fearful night crier to a child who sleeps all night will require patience and diligence on your part. We realize that if you institute the measures outlined above, this will more than likely initiate crying at bedtime for your child. We recommend not giving in to your child's wants but forcing him to conform to the above pattern. This will enable your child to develop healthy sleep habits that will last a lifetime. We do not recommend letting your child scream for hours on end without comforting and consoling him. Usually, we would recommend that you check on your child periodically while he is crying to make sure that he is O.K. You should comfort your child, but do not turn a light on, nor entertain him. Once the crying has subsided, you should leave the room again. You should not pick up your child while you are trying to retrain his sleep habits. Usually, within a very few days of the above treatment, your child will be sleeping all night long.

SORE THROAT

A mild sore throat without fever can be treated with warm salt water gargles, throat lozenges, acetaminophen (Tylenol, see dosing guide) or Chloroseptic spray. If fever is present with a sore throat or if the sore throat is severe, your child should be evaluated in the office to have a test for strep throat. Untreated sore throats due to the strep bacteria (Group A streptococci) can cause Rheumatic Fever, a serious inflammatory disease of the heart, joints, skin and brain. If your child has a sore throat which persists over four days, even if she has had a strep culture, she should be evaluated in the office.

If your child is diagnosed with strep throat, it is important to throw away your child's toothbrush after 24 hours on the antibiotic. The bacteria can live on various surfaces for quite some time. Also, wash any dishes that your child may have used in very hot water.

Because ibuprofen has been associated with a severe complication of Group A strep infections called necrotizing fasciitis, you should not use ibuprofen for strep infections. In addition, ibuprofen should not be used in Chicken pox infections which can also cause an increase in Group A streptococcal infections for the same reasons.

SPITTING UP

A small amount of spitting up is common in most all babies. It should not be thought of as abnormal. Spitting up that is more frequent or forceful probably should have some attention. The most frequent cause of spitting up is improper burping. Your baby should be burped well. Even if she burps one or two times, you should not stop at this point because she may have more stomach gas to get up. Babies also spit up because of overfeeding. You should probably not feed your child over four or five ounces at a feeding during the first month or two of life.

More rarely, spitting up can be due to formula intolerance. If your child is on cow's milk formula and spits every feeding and this is associated with intestinal gas and fussiness, we recommend switching your baby to a soybean type formula such as Isomil or Prosobee. If your child does not improve on the soybean formula, then you should bring your child in for an appointment. Projectile vomiting (vomiting which shoots out of the mouth under force) is abnormal. The baby should have an appointment to check this out (see section on vomiting). Pyloric stenosis, a potentially serious condition needs to be ruled out.

Another way to help reduce spitting up is to put your child in an infant seat for 30 to 45 minutes during and after feedings. This position will help to decrease the amount of spitting up. As long as your child is growing and developing well, is not having choking episodes or turning blue, and is not excessively irritable, spitting up is more of a nuisance than it is dangerous. If you have any questions about your child's weight gain, the possibility of choking episodes or if your child is excessively irritable with spitting up, you should call the office for an appointment.

STAPH INFECTIONS

A recent development in the past few years in medical practice has been the development of methicillin resistant staph aureus (MRSA) infections. MRSA is a type of staph bacteria that is resistant to certain antibiotics. These antibiotics include methicillin and other more common antibiotics such as oxacillin, penicillin and amoxicillin. Staph infections, including MRSA, occur frequently among persons in hospitals and healthcare facilities (such as nursing homes and dialysis centers) who have weakened immune systems.

MRSA infections that are acquired by persons who have not been recently (within the past year) hospitalized or had a medical procedure (such as dialysis, surgery, catheters) are known as community acquired CA-MRSA infections. Because the carrier rate of MRSA has increased in our population, MRSA infections are much more common now. CA-MRSA infections are usually manifested as skin infections, such as pimples and boils, and occur in otherwise healthy people. More serious infections of the blood, brain and bone can also happen with MRSA. Should your child come down with a boil or an abscess, call the office for an appointment, antibiotics and incision and drainage of the abscess may be necessary.

STOMACH ACHE

Most minor stomach aches in children are not serious and require no treatment, except maybe some tender loving care. The most common reason that a child might have a stomach ache is constipation. Please see the section of this handbook that covers this topic. "Have a bowel movement and you will feel better", is a favorite saying of mine.

A child should be evaluated by the doctor if she should have a stomach ache associated with fever, pain with urination, persistent vomiting, or if the stomach ache is severe. Severe stomach aches associated with anorexia (no appetite) are potentially serious. Children with these symptoms should be evaluated right away by the physician.

SUNBURN

Sunburn is a reaction of the skin to exposure to ultraviolet (UV) radiation from the sun or other sources such as tanning beds. In response to UV radiation, the top layers of your skin release chemicals that cause the blood vessels in your skin to expand and leak fluids, causing inflammation, swelling, pain and redness.

Without protection, UV radiation (both UVA and UVB) will immediately start to penetrate deep into the layers of your skin, damaging the skin's cells. Skin turns red within one to six hours of being burned. It will continue to develop for the next twenty-four to seventy-two hours. UVA radiation penetrates deep into the skin, affecting the living skin cells that lie under your skin's surface. UVA causes long-term damage like wrinkles, blotchiness, sagging and discoloration, and also contributes to skin cancer. UVB radiation penetrates the top layer of skin and is the main cause of skin tanning and sunburn. Damaged skin cells self-destruct and eventually peel off in tattered sheets. This is the body's way of getting rid of damaged skin cells that might develop into cancers.

Please know that repeated sunburn will increase your risk of skin cancer. There are several skin cancers that can occur. These include malignant melanoma, squamous cell carcinoma

and basal cell carcinoma. To say the least, all of these are bad problems, although some cancers are worse than others.

All types of sunburn, whether serious or mild, can cause permanent and irreversible skin damage. Further sunburn only increases your risk of developing skin cancer.

Ultraviolet (UV) radiation is most intense 10 am–2 pm (or 11 am–3 pm during daylight savings time). In Arkansas, sunburn can occur in as little as 30 minutes in the middle of a hot July day. To prevent sunburn, we recommend using suncreen with a high sun protection factor (spf) of 30 to 50. Also, while outside for long periods of time wear a hat.

Sunburns typically heal themselves within a couple of weeks. If your child is sunburned, depending on the severity and location of the sunburn, the following may help.

-To alleviate pain and heat caused by the sunburn, take a cool (not cold) bath, or gently apply cool, wet compresses to the skin.
-Take a pain reliever such as acetaminophen, or ibuprofen (see dosing guide).
-To rehydrate the skin and help reduce swelling, apply topical moisturizing cream, aloe, or 1 percent hydrocortisone cream.
-Stay in the shade until the sunburn is healed. Additional sun exposure will only increase the severity and pain of the sunburn.
-If the sunburn is severe and blisters occur, consult us within 24 hours.

TEETH - TEETHING

Most babies cut their first tooth at around six months of age. There is considerable variation. Teething is a normal event in a child's life. It probably does not cause illness in children. Drooling and chewing are also normal around six months of age and these may be in part due to the discomfort of teething. In general, it is not recommended that you put salve or lotion on the baby's gum for teething symptoms. Acetaminophen (Tylenol) can be given for mild teething symptoms (see Dosing Guide). Certainly any severe symptom such as fever, prolonged vomiting and irritability should never be assumed to be due to teething, but rather treat it as you would any illness in your baby. Probably the best advice to give for the child who is teething is to provide a cold pacifier or cold teething ring to bite on. A rough wash cloth soaked in ice can also be used. Massaging the gums with your finger may also help your child.

Mouth Trauma: Young children are prone to take falls and often injure their mouths in the process. Bleeding after such a fall can be due to a tear of the frenulum which is a small

growth of skin between the lip and gum. Applying pressure to the gum will stop the bleeding in a few minutes and no other treatment is needed. A cut on the lip is generally not serious unless it crosses the border between the lip and the regular skin of the face. If this should happen repair is needed for good cosmetic results. A large cut on the lip with a wound margin that gapes open more than 1/8th of an inch also needs our attention. If teeth are loosened or knocked out, consult your dentist. If a tooth is knocked out, you should put the tooth in a clean container of cold milk or water and then bring it to your dentist. Some teeth can be replaced.

Dental Health: Most dentists recommend that children be seen for their first dental visit at the age of two to three years. To prevent cavities we recommend that children brush their teeth often, refrain from eating excessive amounts of sweet foods and drink water that is fluorinated. In the Pulaski County area, city water supplies are adequately fluorinated. Should you have question regarding this contact your local water official.

VOMITING AND DIARRHEA

Vomiting or forceful emptying of the stomach usually happens when the stomach becomes irritated. This is usually caused by a viral infection, although there are other causes. When vomiting is due to a routine stomach virus, it is many times associated with diarrhea. Although uncomfortable, vomiting in and of itself is not dangerous to the child. If your child's vomiting is associated with a significant head injury, please refer to the section on "head injury" in this handbook. Otherwise, continue reading in this section.

Diarrhea is characterized by frequent, loose, watery stools. It is most commonly caused by a viral infection called gastroenteritis. This causes the cells of the stomach and intestine to become sick and even stop their normal function (absorbing fluids and nutrients). Gastroenteritis often begins with vomiting and fever. Then, after several hours, the vomiting resolves and diarrhea follows. Rarely, there are other more serious causes of diarrhea other than stomach viruses. These include diarrhea due to bacteria (Salmonella, E. Coli, Campylobacter, Shigella and others), parasitic infections (such as Giardia) and milk allergy. The vast majority of the cases of diarrhea are due to gastrointestinal viruses, which resolve without any specific treatment. Our approach to treating vomiting and diarrhea is based on the assumption that the vomiting and diarrhea is due to a stomach virus which will eventually resolve on its own. Please see the section below on when to worry that your child's vomiting and diarrhea is more serious.

The main concern with vomiting and diarrhea is that dehydration may result. Our goal with therapy of vomiting and diarrhea is to prevent this until the intestine can recover and resume its normal function. We do not recommend the routine use of medications to stop diarrhea

unless specifically prescribed by our office. Certain types of diarrhea can be dangerous to stop with an antidiarrheal medication. These particular medications work by paralyzing the intestine and not by reversing the diarrhea process. Serious types of diarrhea producing germs can sometimes enter into the blood stream in a small child if antidiarrheal medications are used. The underlying cause of the diarrhea must be treated, not masked, and this is done by diet.

Dehydration results when there are excessive fluid losses from the infant or child, usually as a result of the vomiting or diarrhea. Dehydration can also result from any condition in which the child does not take in adequate fluids such as with severe mouth ulcers and other viral infections, such as RSV bronchiolitis. Dehydration is serious and should be evaluated in the office or emergency room. Signs of dehydration include:

1. **Dry mouth.** Place your finger inside the child's cheek and then rub your thumb and forefinger together. If it is wet, there is not need to worry about dehydration. If, however, it feels sticky, tacky or definitely dry, then dehydration may be present. A child that is drooling is not dehydrated.

2. **Poor urine output.** Infants and children usually urinate at least once every eight hours. Decreased urine output in the presence of diarrhea may mean that dehydration is present. No urine output in a 24 hour period is a serious sign of dehydration.

3. Absence of Tears. If your child is making tears when she cries, then there is little chance of dehydration. If there are no tears when your child cries, this could possibly indicate dehydration when taken with other symptoms outlined above.

4. Decreased skin turgor. Pinching the skin on the back of the child's hand or abdomen should cause it to snap back into place readily and rapidly. If the skin is slow to return to its place, then dehydration may be present when taken with other symptoms outlined above.

5. Lethargy. If your child or infant is not alert or shows little interest in her surroundings and little interest in normal activities such as eating and playing and, this behavior is in association with diarrhea and or vomiting, this may be a sign of dehydration when taken into consideration with the above signs of dehydration.

Note: The most reliable and important signs of dehydration are items #1 and 2.

Your Child Should be Evaluated If:

1. Signs of dehydration are present.
2. The diarrhea is associated with high fever over 104 degrees unresponsive to acetaminophen.
3. If pus or blood is noted in the stool.
4. If diarrhea persists for more than three days despite diet changes listed below.
5. The vomiting persists more than 24 hours.
6. Your child becomes confused or difficult to arouse.
7. The vomiting is associated with a severe headache.
8. The vomitus is green stained (bilious).
9. Your child is less than three months old and is vomiting forcefully.
10. Your child is less than three months old and is having a high volume of diarrhea after 24 hours.

Treatment of Vomiting and Diarrhea in Infants:
For the first 24 hours:

1. Give nothing by mouth for two or three hours after your child's vomiting begins to rest the stomach. Then, begin to give fluids gradually increasing the volume. If your child is breast fed, continue to breast feed your baby encouraging a more frequent feeding schedule. Breast milk is very easy on the stomach and has antibodies and other anti-infectious factors which can help your baby get over a stomach virus more rapidly. If your baby is formula fed, discontinue giving the formula and give one of the oral rehydration solutions instead. There are several of these that you can use. We recommend Pedialyte or Infalyte. These solutions have simple sugars and salts in them which are easily absorbed and help sustain your child until he or she recovers from the illness. Give these solutions in small amounts, frequently and at room temperature. Even if your infant's vomiting persists begin the fluids anyway, in between vomiting episodes. As much as one-half of the fluid can be absorbed even though the vomiting continues. If diarrhea alone is present, begin fluids as outlined below in large amounts. The goal of fluid therapy in vomiting and diarrhea illnesses in children is to give more fluid to the child than is lost in the diarrhea and vomiting so that dehydration won't result.

2. Watch closely for signs of dehydration. (see above signs of dehydration)

After 24 hours:

1. Continue breast-feeding.

2. If your baby is formula fed and not allergic to soy, you should start a dilute soy formula,

such as Prosobee, Isomil or Isomil DF. If your baby is allergic to soy formulas please call us for advice on managing your child's vomiting or diarrhea illness. Soy formulas are easier on the stomach during a stomach virus illness than are milk based formulas because milk based formulas have milk sugar, or lactose in them. It is very common to become lactose intolerant during a stomach virus. You should dilute the soy formula with an equal volume of water to make one-half strength formula. Example: to make a 6 ounce bottle, mix 3 ounces of formula with 3 ounces of water. Give this for the next 24 hours and then go to full strength formula as described below.

3. Watch closely for signs of dehydration. (see above signs of dehydration)

After 48 hours:

1. Continue breast-feeding.

2. Give full strength soy formula for the next three to five days and then switch back to your baby's original formula as the illness resolves.

Treatment of Vomiting and Diarrhea for Older Children:
For the first 24 hours:

1. Give nothing by mouth for three or four hours after your child's vomiting begins to rest the stomach. Then, begin to give fluids, gradually increasing the volume. Give these in small amounts, frequently and at room temperature. Even if your child's vomiting persists begin the fluids anyway, in between vomiting episodes. As much as one-half of the fluid can be absorbed even though the vomiting continues. If diarrhea alone is present, begin fluids as outlined below in large amounts. The goal of fluid therapy in vomiting and diarrhea illnesses in children is to give more fluid to the child than is lost in the diarrhea and vomiting so that dehydration won't result.

For the first 24 hours, give the following:

- no milk products
- clear fluids in small amounts at room temperature and offer frequently
- offer fluids such as:

Infalyte
Pedialyte
Kaolectrolyte
Kool-aide or Gatorade
Jello, Jello water
Sprite or 7-Up
Gingerale
Bouillon or chicken soup
Popsicles

2. Watch closely for signs of dehydration. (see above signs of dehydration)

After 24 hours:

1. Offer bland foods if your child can tolerate these. These foods include:
   - Chicken and rice soup
   - Rice or cooked cereals
   - Ripe bananas
   - Applesauce
   - Crackers or dry toast
   - Plain macaroni, spaghetti, noodles (no cheese or grease)
2. Watch closely for signs of dehydration. (see above signs of dehydration)

After 48 hours:

As your child's appetite increases, offer foods such as:

- Canned or cooked vegetables, apples, apricots, peaches and pears
- Angel Food cake or cookies
- Plain macaroni, spaghetti, noodles (no cheese or grease)
- Rice or mashed potatoes
- Baked or broiled chicken, fish or lamb

You should avoid milk or milk products, whole grain cereals or breads, raw fruits and vegetables, citrus juices, red meats, greasy foods, and fried and spicy foods for a few days after an episode of vomiting and or diarrhea.

WARTS

Signs and Symptoms:

A wart is a tiny, hard bump on the skin, with a rough surface that may look like the surface of a cauliflower. Warts vary in color (white, pink, brown), and inside the wart are tiny spots that may look like black hairs or specks. These spots are actually blood vessels that are filled with blood clots. Warts can affect any area of the body, but they are most common on the fingers, hands, arms and feet. They are usually painless, except when they affect the sole of the foot (plantar warts), where they can cause discomfort that feels like walking on a small stone. When warts affect the palms or soles, they may be flattened and level with the surface of the skin, instead of appearing as little bumps. Sometimes a wart can have complications like itching or bleeding, or it may become infected by bacteria and become hot, red, and tender.

Description:

Warts are tiny skin infections usually caused by viruses of the human papillomavirus (HPV)

family. Scientists estimate that about 25% of us have had a wart somewhere on our bodies at some time. Children are more commonly affected than older people. Warts also can involve the genital area, but the discussion here is limited to the wart types associated with the typical skin lesions on fingers.
The viruses that cause warts are passed from person to person by close physical contact. Even a tiny cut or scratch can make any area of skin more vulnerable to warts.

Options for treatment:

1. Cryo-therapy (freezing) the wart. We can do this in our office, or alternatively, cryo therapy is available over the counter.
2. Immune therapy consisting of injecting the wart with skin test material causing an immune reaction. This immune reaction can cause the body to reject the virus that causes warts.
3. Doing nothing. Most warts will resolve without treatment within 2 years.
4. Salicylic acid compound (Duofilm, Compound W). Use as directed on the bottle.
5. Duct tape treatment. Background information: In a study reported by Drs. Focht, Spicer and Fairchok in Archives of Pediatric Adolescent Medicine 2002;156(10): 971-974, the common "fix-it" duct tape was shown to be very effective in eradicating warts in children. Overall, 85% of duct tape treated patients were wart-free at 2 months after beginning treatment. Usually the wart was gone by 28 days.

Duct Tape Treatment Protocol:

1. Place a small piece of duct tape on the wart and leave the tape in place for six days.
2. After 6 days, remove the tape, soak the area in water and then rub the area with an emery board or pumice stone until the dead skin is removed.
3. After 12 hours without the duct tape, place a new piece of duct tape on the wart.
4. Continue this cycle (steps 1, 2 and 3) for 2 months or until the wart is gone. In most cases the wart will be gone by 28 days.

RECOMMENDED BOOKS ON CHILD CARE AND CHILD HEALTH

1. **The Holy Bible**
2. Baby and Child Care by Focus on the Family, Dr. Paul Reisser
3. The First Three Years of Life by Dr. Burton White.
4. The First 12 Months of Life by Frank Kaplan.
5. How to Parent by Dr. Fitzhugh Dodson.
6. The Magic Years by Selma Frailburg.
7. Your Child's Self-Esteem by Dr. Dorothy Briggs.
8. Your Child's Health by Dr. Barton Smith.

9. Caring For Your Baby and Young Child, Dr. Steven P. Shelov, editor.

RECOMMENDED BOOKS ON BREASTFEEDING

1. The Nursing Mother's Companion by Kathleen Huggins. (Best)
2. The Womanly Art of Breastfeeding, 4th edition. La Leche League Int., 1987.
3. Breastfeeding: Getting Breastfeeding Right for You by Mary Renfro, Chloe Fisher, Suzanne Arms.

RECOMMENDED BOOKS ON CHILD REARING AND TRAINING

1. Dare to Discipline by Dr. James Dobson. **(A must read book for all parents)**
2. Shepherding a Child's Heart by Tedd Trip
3. The Strong-Willed Child by Dr. James Dobson.
4. The Key To Your Child's Heart by Gary Smalley
5. The Little Book of Christian Character and Manners by William and Colleen Dedrido
6. How to Really Love Your Child by Dr. Ross Campbell
7. The Five Love Languages of Children by Dr. Ross Campbell and Dr. Gary Chapman
8. The Wounded Heart by Dan Allender (a book about surviving abuse)

RECOMMENDED BOOK ON ASTHMA

1. Children with Asthma by Dr. Thomas Plaut.

RECOMMENDED BOOKS FOR AND ABOUT TEENAGERS

1. Almost 13 by Claridia Arp
2. Choices by Stacy and Paula Rinehart (about dating)
3. Raising Worldly Wise But Innocent Kids by David Wyrtzen
4. Preparing for Adolescence by James Dobson
5. The Book of Proverbs by Solomon

RECOMMENDED BOOKS REGARDING READING

1. Honey For a Child's Heart by Gladys Hunt
2. Books Children Love by Elizabeth Wilson
3. Read for Your Life by Gladys Hunt (for teens)

HOME MEDICATIONS

It is important to have your medicine cabinet well supplied to be able to effectively deal with illnesses and accidents when they occur. The following is a list of commonly used medications and supplies which you may find useful to keep on hand.

1. Acetaminophen (Tylenol) -This comes in several forms from drops to chewable tablets. In dosing, make sure you know which strength you are using. It is used for pain and fever control.
2. Ibuprofen (Children's Motrin, Children's Advil Suspension) -This over the counter medicine is very effective at relieving fever. For accuracy in our dosing guide, buy the 100 mg. per teaspoon liquid. For older children and adults ibuprofen tablets (Nuprin, Advil) are available.
3. Neosporin Ointment -This is used for treating cuts, scrapes and superficial skin infections.
4. Benadryl (diphenhydramine) -This antihistamine medication is used for allergic reactions and itching.
5. A cold and cough medication.
6. Infalyte or Pedialyte -These carbohydrate and salt solutions are used to treat vomiting and diarrhea in children.
7. Hydrogen Peroxide -This topical antiseptic solution is used to cleanse wounds and skin infections. It can also be applied to bad smelling umbilical cords in infants.
8. The following health aids are useful: Bandaids, gauze 4 x 4's, thermometer, tweezers, scissors, white tape.

If your child has a history of chronic ear infection, you should keep the following medications on hand (both of these medications are by prescription only):

1. Auralgan Otic drops, Americaine Otic drops (or equivalent) -These deaden ear pain when placed in the ear. If your child has ear tubes (pressure equalizing tubes) or has an ear infection with pus or blood draining from the ear, you should not use Auralgan.
2. Codeine containing pain reliever (Phenergan with Codeine, Tylenol with Codeine, several others) -Codeine is a powerful pain reliever which can be used for painful ear infections. This can be prescribed at an office visit for an ear infection.

DOSING GUIDE

Our Dosing Guide give dosages for common over-the-counter medications used in children. These medications are dosed according to weight. To calculate your child's dose therefore, look up his or her weight in the Dosing Guide and read across to the proper dose for each medicine listed. If you do not know your child's weight and if your child is too young to stand on bathroom scales, a simple way to determine his or her weight is to first weigh both you and your child as you hold him. Then weigh yourself alone. Subtracting these two numbers will give you a fairly accurate weight for your child. The doses listed in this Dosing Guide are standard doses which are safe for your child. In some situations we recommend doses of these medicines which may be slightly higher or lower than these doses. This should not concern you. If our advice calls for doses which are dramatically different please ask us the reason for this.

Because pharmaceutical companies change the ingredients of their medications from time to time, it is important to check the labeling information of the products that we have listed here in our handbook to ensure dosing information is correct and has not changed. If a product listed in our handbook comes out in a new formulation, please call our office to check on the proper dosing information. At the time of this printing all dosing information listed is correct.

abbreviations:

tsp = teaspoon
ml = milliliter
cc = cubic centimeter
dppr = dropperful
1 cc = l ml
1 tsp = 5 cc

ACETAMINOPHEN
(Tylenol)

Dosage: every four hours. Please be aware that there are two liquid dosage strengths of acetaminophen. The Infant's drops have 80 mg. per 0.8 ml and the Children's syrup or elixir has 160 mg. per 1 teaspoon or 5 ml. Make sure that you know which strength you are using and that you properly look up the dose.

When to use: Acetaminophen should be used to reduce fever and relieve pain. Acetaminophen has no antiinflammatory actions. Prior to using acetaminophen for fever you should consult the fever section of this handbook on pages 56-59.

Side effects: Unlike ibuprofen and aspirin which can have rare but potentially serious side effects at normal dosages, acetaminophen taken at proper doses is very safe. Only if an overdose of the medication occurs is there a likelihood of any side effect. Beware, large overdoses of acetaminophen can be deadly. This medicine should be kept out of reach of your children. If your child takes an overdose of acetaminophen call the office or poison control right away.

Note: For Infants' Tylenol Drops, a dropper is supplied with the medication.

Weight	Infant's Acetaminophen Drops (80 mg per dropperfull, 0.8 ml)	Acetaminophen Elixir (160 mg per 1 teaspoon)
6 - 11 lbs	1/2 dropperful (0.4 ml)	-
12 - 17 lbs	1 dropperful (0.8 ml)	1/2 teaspoon (2.5 ml)
18 - 23 lbs	1 1/2 dropperful (1.2 ml)	3/4 teaspoon (3.75 ml)
24 - 35 lbs	2 dropperful (1.6 ml)	1 teaspoon (5 ml)
36 - 47 lbs	-	1 1/2 teaspoons (7.5 ml)
48 - 59 lbs	-	2 teaspoon (10 ml)
60 - 71 lbs	-	2 1/2 teaspoon (12.5 ml)
72+ lbs	-	3 teaspoon (15 ml)

ACETAMINOPHEN, continued
(Tylenol)

Weight	Acetaminophen Chewable Tablets 80 mg	Acetaminophen Chewable Tablets 160 mg	Acetaminophen Suppositories 120 mg
12 - 17 lbs	-	-	2/3
18 - 23 lbs	-	-	1
24 - 35 lbs	2	1	1 1/2
36 - 47 lbs	3	1 1/2	2
48 - 59 lbs	4	2	2 1/2
60 - 71 lbs	5	2 1/2	3
72+ lbs	6	3	4

Children over the age of 12 years and adults may take two (2) 325 mg. acetaminophen tablets or two (2) 325 mg. acetaminophen suppositories every 4 hours. If a child has a particularly high fever sometimes we increase the dose of acetaminophen above these dosages. You should only increase your child's dose on our direct recommendation because of the risk of overdosage and liver damage.

BENADRYL 12.5 mg. per 5 ml (Antihistamine)
(Diphenhydramine)

Dosage: every 4 hours. Please know that there are two strengths of Benadryl. These are 12.5 mg. per 5 ml and 6.25 mg. per 5 ml (clear). Our doses are based on the 12.5 mg. per 5 ml strength.

When to use: Benadryl is an antihistamine medication which is particularly good at relieving allergic symptoms. Use Benadryl for nasal congestion, sneezing, runny nose, itching of the nose and throat, itchy watery eyes or other respiratory allergies due to hay fever (allergic rhinitis). It is also useful to treat itching due to any cause, especially with rashes due to allergy or viruses (example Chicken pox). Use Benadryl to treat insect bites and stings.

Side Effects: Benadryl may cause drowsiness or less commonly agitation or insomnia. Other side effects are rare. Several years ago it was thought that antihistamines such as Benadryl should not be given to children with asthma. This has now been disproved. Actually it may help a given child's asthma to better control nasal allergies.

Children over the age of 12 years and adults may take Benadryl tablets or Kapseals 25 mg., 2 (two) capsules every 4 hours.

Weight	Benadryl (12.5 mg per 1 tsp)
12 - 17 lbs	1/2 teaspoon (2.5 ml)
18 - 23 lbs	3/4 teaspoon (3.75 ml)
24 - 35 lbs	1 teaspoon (5 ml)
36 - 47 lbs	1 1/2 teaspoon (7.5 ml)
48 - 59 lbs	2 teaspoons (10 ml)
60 - 71 lbs	2 1/2 teaspoons (12.5 ml)
72+ lbs	3 teaspoons (15 ml)

COUGH AND COLD PREPARATIONS

Dosage: every 4 to 6 hours, not to exceed 6 doses in 24 hours

When to use: Cough and cold preparations are used to suppress coughs when associated with nasal congestion and runny nose especially with viral upper respiratory infections (colds).

These over the counter cough and cold medications can be safely given to normal healthy children over the age of two years. Do not give over the counter cough and cold medications to children **less than two years of age** without the advice of a physician. The FDA has determined that a small risk of death is present in the use of these medications in children two years of age and less. In response to this finding, the makers of children's cold and cough medications have voluntarily re-labeled their products to take this into consideration. In fact, Dimetapp's labeling states to not give the medication to children less than six years. Triaminic's labeling is not to give the medication to children less than four years of age. Our position is that in normal healthy children, OTC cold and cough medications may be safely given to children age two years and greater. If your child has a heart condition, especially an arrythmia, do not give cough and cold preparations without our approval. Likewise children with chronic medical problems should not recieve these medications without our advice.

Side Effects: Please see the section on decongestants. The active ingredient in the medications below used to suppress coughs is dextromethorphan. It is quite safe. Rarely it has been known to cause slight drowsiness, nausea and dizziness.

Weight	Dimetapp Cold and cough	Triaminic Daytime or Nighttime Cold and Cough
24 - 35 lbs	1 teaspoon (5 ml)	1 teaspoon (5 ml)
36 - 47 lbs	1 1/2 teaspoon (7.5 ml)	1 1/2 teaspoon (7.5 ml)
48 - 59 lbs	2 teaspoon (10 ml)	2 teaspoon (10 ml)
60 - 71 lbs	2 1/2 teaspoon (12.5 ml)	2 1/2 teaspoon (12.5 ml)
72 - 95 lbs	3 teaspoon (15 ml)	3 teaspoon (15 ml)
96+ lbs	4 teaspoon (20 ml)	4 teaspoon (20 ml)

DECONGESTANTS

Dosage: every 4 to 6 hours, not to exceed 6 doses in 24 hours

When to use: Decongestants should be used for nasal congestion due to colds and/or allergies.

These over the counter cold and allergy medications can be safely given to normal healthy children over the age of two years. Do not give over the counter cold medications to children **less than two years of age** without the advice of a physician. The FDA has determined that a small risk of death is present in the use of these medications in children two years of age and less. In response to this finding, the makers of children's cold medications have voluntarily re-labeled their products to take this into consideration. In fact, Dimetapp's labeling states to not give the medication to children less than six years. Triaminic's labeling is not to give the medication to children less than four years of age. Our position is that in normal healthy children, OTC cold and cough medications may be safely given to children age two years and greater. If your child has a heart condition, especially an arrythmia, do not give cough and cold preparations without our approval. Likewise children with chronic medical problems should not recieve these medications without our advice.

Side Effects: Medicine containing antihistamines may cause drowsiness or less commonly hyperactivity and/or insomnia. Decongestants may cause hyperactivity and/or insomnia. Discontinuing these medications will resolve the side effects if they occur.

Weight	Dimetapp Cold and Allergy	Triaminic Cold and Allergy
24 - 35 lbs	1 teaspoon (5 ml)	1 teaspoon (5 ml)
36 - 47 lbs	1 1/2 teaspoon (7.5 ml)	1 1/2 teaspoon (7.5 ml)
48 - 59 lbs	2 teaspoon (10 ml)	2 teaspoon (10 ml)
60 - 71 lbs	2 1/2 teaspoon (12.5 ml)	2 1/2 teaspoon (12.5 ml)
72 - 95 lbs	3 teaspoon (15 ml)	3 teaspoon (15 ml)
96+ lbs	4 teaspoon (20 ml)	4 teaspoon (20 ml)

IBUPROFEN

ONLY for 6 months of age and older

(Children's Motrin Suspension, 100 mg. per 5 ml
Children's Advil Suspension, 100 mg. per 5 ml)

Dosage: every 6-8 hours. Please be aware that there are two liquid dosage strengths of ibuprofen and several strengths of chewable tablets, junior strength tablets and adult tablets. Because of this dosing errors are possible if you choose the wrong dosage strength. For simplicity, this chart shows the dose for Children's Motrin Suspension 100 mg. per 5 ml, and Children's Advil Suspension 100 per 5 ml in our dosing guide. Other dosage strengths are safe, but with so many choices dosages are confusing. Therefore, make sure that you buy the dosage strength that we recommend and that you properly look up the dose.

When to use: Ibuprofen should be used to control high fevers which are unresponsive to acetaminophen (Tylenol). It can also be used to control pain and reduce inflammation.

Side Effects: May cause stomach upset, other side effects are rare.
Children over the age of 10 years and adults may take ibuprofen tablets (200 mg.), two of these every 6 to 8 hours. Two trade names of ibuprofen tablets are Motrin and Advil.

Weight	If fever is less than 102.5 degrees F	If fever is above 102.5 degrees F
13 - 17 lbs	1/4 teaspoon (1.25 ml)	1/2 teaspoon (2.5 ml)
18 - 23 lbs	1/2 teaspoon (2.5 ml)	1 teaspoon (5 ml)
24 - 35 lbs	3/4 teaspoon (3.75 ml)	1 1/2 teaspoon (7.5 ml)
36 - 47 lbs	1 teaspoon (5 ml)	2 teaspoon (10 ml)
48 - 59 lbs	1 1/4 teaspoon (6.25 ml)	2 1/2 teaspoon (12.5 ml)
60 - 71 lbs	1 1/2 teaspoon (7.5 ml)	3 teaspoon (15 ml)
72 -95 lbs	2 teaspoons (10 ml)	4 teaspoon (20 ml)
96+ lbs	2 teaspoons (10 ml)	4 teaspoon (20 ml)

IBUPROFEN

(Infant's Motrin Drops, 50 mg per 1.25 ml
Infant's Advil Drops, 50 mg per 1/25 ml)

Dosage: every 6-8 hours. For infants over 6 months, you may use Infant's Motrin Drops 50 mg per 1.25ml or Infant's Advil Drops 50 mg per 1.25.

When to use: Ibuprofen should be used to control high fevers which are unresponsive to Acetaminophen (Tylenol). It can also be used to control pain and reduce inflammation.

Side Effects: May cause stomach upset, other side effects are rare.

Weight	Dosage
12 - 17 lbs	1 dropperful (1.25 ml)
18 - 23 lbs	1 1/2 dropperful (1.875 ml)

Index

Recommended Check Ups and Preventative Care

Age	Office Visit	Immunizations	Laboratory
Birth	Hospital visit	Hep B	Health dept. screen
3-5 days	Check up		
1 month	Check up	Hep B	
2 months	Check up	DTaP-IPV-HIB, Prevnar, Rotateq	
4 months	Check up	DTaP-IPV-HIB, Prevnar, Rotateq	
6 months	Check up	DTaP-IPV-HIB, Prevnar, Hep B, Rotateq	
9 months	Check up		Hemoglobin
12 months	Check up	Varivax, Prevnar, Hep A	TB skin test, Lead test
15 months	Check up	MMR, HIB, DTaP	
18 - 24 mo.		Hep A	
2 years	Check up		lipid profile if needed
3 years	Check up		
4 years	Check up		
5 years	Check up	DTaP, IPV, MMR	Vision and hearing test
6-10 years	Check up yearly		
11 to 12 yr.	Check up yearly	Tdap, Menactra, HPV (3 doses, girls only)	
12 to 18 yr.	Check up yearly	any vaccines not given above	
every 10 yrs.		Tdap	

A flu shot is recommended each year in the fall for all children 6 months of age and older.

Abbreviations:
DTaP - Diphtheria, Tetanus, accellular Pertussis Vaccine
DTaP-IPV-HIB (Pentacel) combination vaccine of DTaP, IPV, and HIB
IPV - Inactivated Polio Vaccine
Prevnar - Pneumococcal Conjugate Vaccine
HIB - Haemophilus Influenza type B Vaccine
Hep A - Hepatitis A Vaccine
Hep B - Hepatitis B Vaccine
Lead test - Blood level of lead test if needed
Lipid profile - cholesterol, triglycerides, HDL, LDL if family history of early heart dis.
MMR - Measles, Mumps, Rubella Vaccine
Menactra - Meningococcal congugate vaccine
TB skin test - Tuberculosis skin test if risk factors are present
Tdap - Adult Tetanus, Diphtheria acellular Pertussis Booster Vaccine
HPV -Human Papilloma Vaccine (Gardasil)
-Please see the section on immunizations in this handbook for further information.