



## Prenatal Class Information Sheet

### Welcome to Complete Children's Health

Thank you for choosing Complete Children's Health. We look forward to caring for your child!

You will find many helpful handouts to prepare you for parenthood in this packet.

If you have any questions or comments, please contact us at (402) 465-5600.

This sheet is for physician use. If you would like to register your baby at Complete Children's Health, please complete the attached Registration Sheet.

Today's date \_\_\_\_\_

Newborn's Last Name \_\_\_\_\_

Due Date \_\_\_\_\_

Mom's Name (First and Last) \_\_\_\_\_

Dad's Name (First and Last) \_\_\_\_\_

Address \_\_\_\_\_

City, State and Zip Code \_\_\_\_\_

Home Phone Number \_\_\_\_\_ Cell Phone Number \_\_\_\_\_

Insurance Company \_\_\_\_\_

Obstetrician \_\_\_\_\_

Delivering Hospital \_\_\_\_\_

Pediatrician \_\_\_\_\_

Where did you hear about our practice? \_\_\_\_\_



Billing Address: \_\_\_\_\_  
Street City State Zip

Primary Insurance Company: \_\_\_\_\_

Name on Policy: \_\_\_\_\_

Insurance ID #: \_\_\_\_\_

**Please be prepared to provide us with your current insurance card at each appointment.**

Secondary Insurance Company (If Any): \_\_\_\_\_

Name on Policy: \_\_\_\_\_

Insurance ID #: \_\_\_\_\_

**Please be prepared to provide us with your current insurance card at each appointment.**

E-mail Address: \_\_\_\_\_

Providing your e-mail address gives Complete Children's Health permission to provide periodic educational information, newsletters and communication about appointment scheduling and medical information.

### **Financial Responsibility Statement**

I certify that the information provided above is true and correct to the best of my knowledge and belief. **I agree to pay for any and all charges not paid by the above listed insurance carrier(s).** I authorize the release of all or any part of my child's medical record to entities responsible for payment of my child's medical care including but not limited to insurance companies, employers, workers' compensation carriers and other entities providing billing, credit, payment or collection services on my child's account. I assign to Complete Children's Health all insurance benefits to which my child may be entitled for services provided by Complete Children's Health. I understand and agree that any phone number, including cellular phone numbers, and e-mail addresses provided by myself may be used by CCH and any of their service providers for communication with me.

**Parent/Guardian Signature:**

\_\_\_\_\_

**Date:** \_\_\_\_\_



To our New Patients,

We welcome you and your family to Lincoln's most innovative pediatric practice. Established in August, 1995, Complete Children's Health is dedicated to the care of well and sick children in family-friendly, cost-effective way. We believe the care of children is best accomplished as a partnership between parents and care providers. Therefore, we believe you can have certain expectations of us, and we, in turn, can provide the service and quality care you deserve. We encourage you to read this information thoroughly and ask us any questions you may have.

**The Services We Provide**

|  |                             |
|--|-----------------------------|
| Prenatal Counseling                          | Casting of Simple Fractures |
| Newborn Care                                 | Minor Laceration Repair     |
| Lactation Consulting                         | ADD/ADHD Visits             |
| Well Child Checks                            | Asthma Clinic               |
| Car Seat Checks                              | Behavior Clinic             |
| CCH Psychology Services                      | Dry Nights Clinic           |
| School, Sports and Camp Physicals            | Fussy Baby Clinic           |
| Growth, Development and Nutrition Counseling | Pediatric Hospitalist       |
| Parenting Resources                          |                             |

**With your help, we can better serve your needs**

**If Your Child is Sick or Injured ...**

If your child's illness is life threatening or the injury is major, call 911. Ask the Emergency Room to contact your child's doctor to discuss their illness or injury.

If your child is sick or has a minor (non-life threatening) injury, call our office at (402) 465-5600 during normal business hours.

**Phone Hours**

8:00 am to 5:00 pm Monday - Friday

8:30 am to 3:30 pm Saturday

12:00 pm to 3:30 pm Sunday

When our office is closed, please call (402) 219-7777, "Telephone Line to Care," for our after-hours nurse advice and triage service.

If you have questions regarding billing or insurance, please call (402) 327-6010.

**Always call for an appointment.**

If you call ahead rather than walk in, we can minimize your wait. This also helps reduce waiting room congestion and the exposure of well children to sick children.

**Be on time for your appointment.**

We believe your time is valuable, and we strive to see you and your child at the scheduled time. If you are late for a well-child appointment, we will ask you to reschedule your appointment. There may be times when we are running behind schedule due to minor emergencies.

**Call us if you must cancel your appointment.**

Please call our office in advance if you are unable to keep a scheduled appointment. Your cooperation allows us to use this time to see a sick child.

**Make note of where your appointment is scheduled.**

Some of our providers rotate between offices, so our schedulers will give you not only the date and time for your appointment, but the location as well. It is important for you to make note of the correct location.

**Direct your telephone questions to our nurses.**

Our nursing staff is trained to handle routine questions. If your physician's involvement is necessary, the nurse will discuss your questions with the physician between patient examinations and call you back with their instructions. This allows a quick response to your questions. All calls to our nurse line will be returned the same day. If the nurse determines your provider needs to speak to you, he/she will return your call over the lunch hour or at the end of the day. Calls are processed in this way to keep our providers on time for scheduled appointments.

**Telephone Visits**

Complete Children's Health is committed to providing our patients access to quality care. In addition to usual weekday and weekend clinic hours, we also offer 24 hour telephone visits for your urgent medical problems. This service is provided by specially trained registered nurses working in cooperation with your child's physician. Since physician and/or nurse time for these services is significant, we charge a small fee for telephone care provided **in place of** an office visit. Please do not hesitate to make necessary phone calls for medical advice. Brief calls of this nature may not result in a charge. You may also rely on educational materials we provide in our office or on our website.

**For After-Hours Nurse Advice**

If your child is sick or injured after hours, call Telephone Line to Care at (402) 219-7777. Please hold calls that do not involve an immediate concern until regular business hours.

**Prescription Refills**

Please give us 24 hour notice if you need a prescription filled. We expect parents to monitor their children's medication use and to know when refills are needed. Please notify our office 24 hours in advance before you need the refill. Important Note: prescriptions will not be refilled after the office is closed or on weekends.

**Complete Children's Health, P.C.**

**Notice Of Privacy, Credit and Collection Practices**

As Required by the Privacy Regulations Created as a Result of the Health Insurance Portability and Accountability Act of 1996 (HIPAA)

THIS NOTICE DESCRIBES HOW MEDICAL INFORMATION ABOUT YOU MAY BE USED AND DISCLOSED, AND HOW YOU CAN GET ACCESS TO THIS INFORMATION. PLEASE REVIEW IT CAREFULLY.

**A. OUR COMMITMENT TO YOUR PRIVACY**

Our office is dedicated to maintaining the privacy of your protected health information (PHI). PHI is information about you, including demographic information, that may identify you and that relates to your past, present or future physical or mental health or condition and related health care services. In conducting our business, we will create records regarding you and the treatment and services we provide to you. Our privacy policies and procedures have long been in practice to maintain our patients' confidentiality. These policies and procedures have evolved as the needs of technology and medical practices change. These policies and procedures as outlined in this Notice will continue to be monitored and may change when appropriate.

The United States Congress has passed the Health Insurance Portability and Accountability Act. We are required by law to provide you with this Notice of our legal duties and the privacy practices that we maintain in our office concerning your PHI. We are required by law to maintain the confidentiality of health information that identifies you. By law, we must follow the terms of the Notice that we have in effect at the time.

We realize that these laws are complicated, but we must provide you with the following important information:

How we may use and disclose your PHI  
Your privacy rights in regard to your PHI  
Our obligations concerning the use and disclosure of your PHI

We may change the terms of our Notice, at any time. The new Notice will be effective for all PHI that we maintain at that time. You may request a copy of our most current Notice at any time. We will post a copy of our current Notice in our offices in a visible location at all times and on our website at [www.completechildrenshealth.com](http://www.completechildrenshealth.com).

**B. IF YOU HAVE QUESTIONS ABOUT THIS NOTICE, PLEASE CONTACT:**

Privacy Officer  
8201 Northwoods Drive  
Lincoln, NE 68505  
(402)465-5600

**C. WE MAY USE AND DISCLOSE YOUR PHI IN THE FOLLOWING WAYS**

The following are examples of the types of uses and disclosures of your PHI that our office may make under this Notice. These examples are not meant to be exhaustive, but to describe the types of uses and disclosures that may be made by our office.

1. Treatment. Our office will use and disclose your PHI to treat you. For example, we may ask you to have laboratory tests (such as blood or urine tests), and we may use the results to help us reach a diagnosis. We might use your PHI in order to write a prescription for you, or we might disclose your PHI to a pharmacy when we order a prescription for you. Many of the people who work for our office – including, but not limited to, our doctors and nurses – may use or

disclose your PHI in order to treat you or to assist others such as hospitals, specialists, home health agencies or your primary care physician in your treatment. Additionally, we may disclose your PHI to others who may assist in your care, such as your spouse, children or parents.

Appointment Reminders/Returning Your Phone Call/Treatment Options/Health Related Benefits. Our office will try to disclose only the minimum necessary PHI for our patients while completing these tasks and may leave messages in Voice Mail.

Release of Information to Family/Friends. Our office may release your PHI to your spouse, friends and/or family members that are involved in your/the patient's care unless you request in writing, as described below, that such disclosures not be made.

2. Payment. Your PHI will be used, as needed, to obtain payment for your health care services. This may include certain activities that your health insurance plan may undertake before it approves or pays for the health care services we recommend for you such as: making a determination of eligibility or coverage for insurance benefits, reviewing services provided to you for medical necessity, and undertaking utilization review activities. For example, obtaining approval for a hospital stay may require that your relevant PHI be disclosed to your health plan to obtain approval for the hospital admission. We also may use and disclose your PHI to obtain payment from third parties that may be responsible for such costs, such as family members. Also, we may use your PHI to bill you directly for services and items.

3. Health Care Operations. Our office may use and disclose your PHI to operate our business. As examples of the ways in which we may use and disclose your information for our operations, our office may use your PHI to evaluate the quality of care you received from us, or to conduct cost-management and business planning activities for our office.

a. Disclosures Required By Law. Our office will use and disclose your PHI when we are required to do so by federal, state or local law.

b. Mailings. Our office may use your name and address for mailings regarding services offered by our office. If you do not want to receive these materials, please contact our Privacy Officer and request that these mailings not be sent to you.

c. Business Associates. We will share your PHI with third party "business associates" that perform various activities (e.g., billing, transcription services) for the office. Whenever an arrangement between our office and a business association involves the use or disclosure of your PHI, we will have a written contract that contains terms that will protect the privacy of your PHI.

#### D. USE AND DISCLOSURE OF YOUR PHI IN CERTAIN SPECIAL CIRCUMSTANCES

The following categories describe unique scenarios in which we may use or disclose your identifiable health information without your consent, authorization or opportunity to object:

1. Public Health Risks/Serious Threats to Health or Safety. Our office may disclose your PHI to public health authorities that are authorized by law to collect such information. We may use and disclose your PHI when necessary to reduce or prevent a serious threat to your health and safety or the health and safety of another individual or the public. Under these circumstances, we will only make disclosures to a person or organization able to help prevent the threat. Examples: Centers for Disease Control, Food and Drug Administration, Social Service Organizations.

2. Health Oversight Activities. Our office may disclose your PHI to health oversight agencies for quality accreditation or other activities authorized by law. Examples: Tumor Registries, licensure, investigations, inspections, audits, surveys, or disciplinary actions (such as civil, administrative, and criminal procedures or actions), or other activities necessary for the government to monitor government programs, compliance with civil rights laws and the health care system in general.

3. Legal Proceedings. Our office may disclose your PHI in the course of any judicial or administrative proceeding, in response to an order of a court or administrative tribunal (to the extent such disclosure is expressly authorized), in certain conditions in response to a subpoena, discovery request or other lawful process.

4. Law Enforcement. Our office may also disclose your PHI, so long as applicable legal requirements are met, for law enforcement purposes. These law enforcement purposes include, but are not limited to, (1) legal processes and other proceedings required by law, (2) limited information requests for identification and location purposes, (3) requests

pertaining to victims of a crime, (4) suspicion that death has occurred as a result of criminal conduct, (5) in the event that a crime occurs on our premises, and (6) medical emergency (not on our premises) and it is likely that a crime has occurred.

5. Abuse or Neglect. Our office may disclose your PHI to a public health authority that is authorized by law to receive reports of child abuse or neglect. In addition, we may disclose your PHI if we believe that you have been a victim of abuse, neglect or domestic violence to the governmental entity or agency authorized to receive such information. In this case, the disclosure will be made consistent with the requirements of applicable federal and state laws.

6. Deceased Patients. Our office may release PHI to a medical examiner or coroner to identify a deceased individual or to identify the cause of death. We may also disclose PHI to a funeral director, as authorized by law, in order to permit the funeral director to carry out his/her duties.

7. Research. Our office may use and disclose your PHI for research purposes in certain limited circumstances. We will obtain your written authorization to use your PHI for research purposes except when: (a) our use or disclosure was approved by an Institutional Review Board or a Privacy Board; (b) we obtain the oral or written agreement of a researcher that (i) the information being sought is necessary for the research study; (ii) the use or disclosure of your PHI is being used only for the research and (iii) the researcher will not remove any of your PHI from our office; or (c) the PHI sought by the researcher only relates to decedents and the researcher agrees either orally or in writing that the use or disclosure is necessary for the research and, if we request it, to provide us with proof of death prior to access to the PHI of the decedents.

8. Military. Our office may disclose your PHI if you are a member of U.S. or foreign military forces (including veterans) and if required by the appropriate authorities.

9. National Security. Our office may disclose your PHI to federal officials for intelligence and national security activities authorized by law. We also may disclose your PHI to federal officials in order to protect the President, other officials or foreign heads of state, or to conduct investigations.

10. Inmates. Our office may disclose your PHI to correctional institutions or law enforcement officials if you are an inmate or under the custody of a law enforcement official. Disclosure for these purposes would be necessary: (a) for the institution to provide health care services to you, (b) for the safety and security of the institution, and/or (c) to protect your health and safety or the health and safety of other individuals.

11. Workers' Compensation. Our office may release your PHI for workers' compensation and similar programs.

#### E. YOUR RIGHTS REGARDING YOUR PHI

You have the following rights regarding the PHI that we maintain about you:

1. Confidential Communications. You have the right to request that our office communicate with you about your health and related issues in a particular manner or at a certain location. For instance, you may ask that we contact you at home, rather than work. In order to request a type of confidential communication, you must make a written request to the Privacy Officer specifying the requested method of contact, or the location where you wish to be contacted. Our office will accommodate reasonable requests, however our office is not required to agree to every or any restriction that you may request. You do not need to give a reason for your request.

2. Requesting Restrictions. You have the right to request a restriction in our use and/or disclosure of your PHI for treatment, payment and/or health care operations. Additionally, you have the right to request that we restrict our disclosure of your PHI to only certain individuals involved in your care or the payment for your care, such as family members and friends. We are not required to agree to your request; however, if we do agree, we are bound by our agreement except when otherwise required by law, in emergencies, or when the information is necessary to treat you. In order to request such a restriction in our use or disclosure of your PHI, you must make your request in writing to the Privacy Officer. Your request must describe in a clear and concise fashion: (a) the information you wish restricted; (b) whether you are requesting to limit our office's use, disclosure or both; and (c) to whom you want the limits to apply.

3. **Inspection and Copies.** You have the right to inspect and obtain a copy of the PHI that may be used to make decisions about you, including patient medical records and billing records, but not including psychotherapy notes. You must submit your request in writing to the Privacy Officer in order to inspect and/or obtain a copy of your PHI. Our office may charge a fee for the costs of copying, mailing, labor and supplies associated with your request. Our office may deny your request to inspect and/or copy in certain limited circumstances; however, you may request a review of our denial.

4. **Amendment.** You may ask us to amend your health information if you believe it is incorrect or incomplete, and you may request an amendment for as long as the information is kept by or for our office. To request an amendment, your request must be made in writing and submitted to the Privacy Officer. You must provide us with a reason that supports your request for amendment. Our office will deny your request if you fail to submit your request (and the reason supporting your request) in writing. Also, we may deny your request if you ask us to amend information that is in our opinion: (a) accurate and complete; (b) not part of the PHI kept by or for our office; (c) not part of the PHI which you would be permitted to inspect and copy; or (d) not created by our office, unless the individual or entity that created the information is not available to amend the information.

5. **Accounting of Disclosures.** All of our patients have the right to request an "accounting of disclosures." An "accounting of disclosures" is a list of certain non-routine disclosures our office has made of your PHI for non-treatment or operations purposes. Use of your PHI as part of the routine patient care in our office is not required to be documented. Examples: the doctor sharing information with the nurse; or the billing department using your information to file your insurance claim. In order to obtain an accounting of disclosures, you must submit your request in writing to the Privacy Officer. All requests for an "accounting of disclosures" must state a time period, which may not be longer than six (6) years from the date of disclosure and may not include dates before April 14, 2003. The first list you request within a 12-month period is free of charge, but our office may charge you for additional lists within the same 12-month period. Our office will notify you of the costs involved with additional requests, and you may withdraw your request before you incur any costs.

6. **Right to a Paper Copy of This Notice.** You are entitled to receive a paper copy of our Notice. You may ask us to give you a copy of this Notice at any time. To obtain a paper copy of this Notice, contact the Privacy Officer.

7. **Right to File a Complaint.** If you believe your privacy rights have been violated, you may file a complaint with our office or with the Secretary of the Department of Health and Human Services. To file a complaint with our office, contact the Privacy Officer. All complaints must be submitted in writing. You will not be penalized for filing a complaint.

8. **Right to Provide an Authorization for Other Uses and Disclosures.** Our office will obtain your written authorization for uses and disclosures that are not identified by this Notice or permitted by applicable law. In addition, an authorization may be requested for uses and disclosures that are identified in this Notice. Any authorization you provide to us regarding the use and disclosure of your PHI may be revoked at any time in writing. After you revoke your authorization, we will no longer use or disclose your PHI for the reasons described in the authorization. Please note, we are required to retain records of your care.

Again, if you have any questions regarding this Notice or our health information privacy policies, please contact the Privacy Officer.

## **CREDIT AND COLLECTION POLICY**

### **Notify our Billing Department in case of errors or questions about your bill (402) 327-6010**

We must hear from you no later than 60 days after your first bill is sent on which the error or problem appeared. You can telephone us, but doing so will not preserve your rights.

In writing, give us the following information; your name, account number, dollar amount of the suspected error, posting date of the transaction an explanation of why you believe there is an error. Please be sure the person responsible for the account signs all correspondence.

**Responsible Party:** The parent/legal guardian bringing the child(ren) into the office will be considered the responsible party for billing purposes. If the parents are divorced or custody has been transferred to a legal guardian, the custodial parent/legal guardian who brings the child(ren) in will be responsible for the bill. It is then the obligation of that parent, not our office, to collect medical bills from the other parent. Emancipated minors are responsible for their own bills.

We do not get involved in billing disputes in cases involving divorce or separation, and will not split bills among family members.

**Courtesy Claim Filing:** We file your insurance claim with your primary insurance company as a courtesy to you. We will ask for your current insurance plan information at the time of each appointment. Please bring your insurance card with you for every visit, and promptly inform us of any changes in your insurance coverage.

**Co-Pays:** Your co-pay is due at the time of your office visit. If we have a contract with your insurance carrier, we are responsible for collecting the co-pay and you are responsible for paying it. If you do not pay the co-pay at the time of visit, we can call your insurance company and state that you are not making your co-payments. If your insurance does not have a co-pay, but instead has a deductible or coinsurance, payment in full will be expected.

**Insurance:** After filing your insurance, we will wait 60 days for a response. If we have no response from your insurance company, you will be personally responsible for the unpaid balance. You will then have 30 days after the receipt of your first statement to make the minimum monthly payment. If you do not have insurance, you are expected to make payment in full at the time of your visit.

**Payment Plan:** *If you are unable to pay your account in full, you may contact our Billing Department to discuss a payment plan. A payment plan means you will make your payment each month. If you are unable to do so, **you will need to contact the Billing Department.** Any new patient balances incurred after setting*

**Minimum Payment:** A minimum payment of \$50.00 or 20% of the outstanding balance (whichever is greater) is required on any outstanding balance or charge incurred.

**Payment Plan:** *If you are unable to pay your account in full, you may contact our Billing Department to discuss a payment plan. A payment plan means you will make your payment each month. If you are unable to do so, **you will need to contact the Billing Department.***

*Any new patient balances incurred after setting up your payment plan will not automatically be added to the payment plan. You will need to contact the Billing Department regarding payment of these balances or to revise your payment plan.*

**Past Due Balance:** If your balance is over 60 days, you will receive an initial letter regarding your past due balances. We ask that you call our Billing Department within 15 days of the date of the letter to set up a payment schedule.

**If you do not contact our Billing Department. within ten days after the final notice, your account will then be turned over to a collection agency.**

**Collection Agency:** Once your account is turned over to our collection agency, it is in their hands and we will not take the account out of collections. All questions or payments should be sent to them.

After your account is turned over to our collection agency, you must make payment in full by cash. We also reserve the right to terminate you from our practice.

**We accept VISA, MasterCard, Discover, American Express and Debit Cards payments.**

**I have received a copy of Complete Children's Heath's Privacy, Credit and Collection Policies.**

**I authorize the release of all or any part of my child's medical record to persons, corporations, or other entities responsible for payment of all or part of my child's medical care including but not limited to insurance companies, employers, workers' compensation carriers, or other entities providing billing, credit, payment or collection services on my child's account. I agree to pay Complete Children's Health for services rendered. I assign to Complete Children's Health all insurance benefits to which my child may be entitled for the charges owed to Complete Children's Health. I agree to pay for any and all charges not paid by my child's insurance carrier.**

Parent/Guardian Name:

\_\_\_\_\_

Child(ren)'s Name(s) and Date of Birth:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Parent/Guardian Signature:

\_\_\_\_\_ Date: \_\_\_\_\_



# COMPLETE CHILDREN'S HEALTH

## **Complete Children's Health is committed to encouraging and promoting breastfeeding in our community.**

We offer a wide variety of services to help new mothers and their babies get every benefit from nursing.

### **Personalized Breastfeeding Consultations**

Our team includes:

- **Michelle Lingenfelter**, Pediatric Nurse Practitioner and International Board Certified Lactation Consultant
- **Jamie Draper**, Pediatric Nurse Practitioner and International Board Certified Lactation Consultant
- **Jen Genthe**, Pediatric Nurse Practitioner and International Board Certified Lactation Consultant.

As a part of your new baby's first visit, you and your baby can meet one on one with a lactation consultant for help with any breastfeeding concerns or questions, or to make sure breastfeeding is going well.

### **The American Academy of Pediatrics, *Caring For Your Baby and Young Child***

This book is given to all of our new parents. Families are able to find additional support and information, specific to the topic of breastfeeding in "Feeding Your Baby: Breastfeeding" chapter of the book.

### **Amy Spangler's, *Breastfeeding, A parent's Guide***

Our lactation consultants also recommend this breastfeeding book as an additional resource for families. It addresses the advantages of breastfeeding as well as possible complications and answers the questions most often asked about breastfeeding. Clear instructions and helpful advice make this the breastfeeding book parents will refer to over and over again.

**For additional information, please call us at (402) 465-5600**

**or visit our website [www.completechildrenshealth.com](http://www.completechildrenshealth.com)**

# Breastfeeding Your Baby: Getting Started



Getting ready for the birth of your baby is an exciting and busy time. One of the most important decisions you will make is how to feed your baby.

Deciding to breastfeed can give your baby the best possible start in life. Breastfeeding benefits you and your baby in many ways. It also is a proud tradition of many cultures.

The following are excerpts from the American Academy of Pediatrics' (AAP) booklet *Breastfeeding Your Baby: Answers to Common Questions*.

## Benefits of Breastfeeding

In general, the longer you breastfeed, the greater the benefits you and your baby will get, and the longer these benefits will last.

### Why is breastfeeding so good for my baby?

Breastfeeding is good for your baby because

1. **Breastfeeding provides warmth and closeness.** The physical contact helps create a special bond between you and your baby.
2. **Human milk has many benefits.**
  - It's easier for your baby to digest.
  - It doesn't need to be prepared.
  - It's always available.
  - It has all the nutrients, calories, and fluids your baby needs to be healthy.
  - It has growth factors that ensure the best development of your baby's organs.
  - It has many substances that formulas don't have that help protect your baby from many diseases and infections. In fact, breastfed babies are less likely to have
    - Ear infections
    - Diarrhea
    - Pneumonia, wheezing, and bronchiolitis
    - Other bacterial and viral infections, such as meningitis
  - Research also suggests that breastfeeding may help protect against obesity, diabetes, sudden infant death syndrome (SIDS), asthma, eczema, colitis, and some cancers.

### Why is breastfeeding good for me?

Breastfeeding is good for your health because it helps

- Release hormones in your body that promote mothering behavior.
- Return your uterus to the size it was before pregnancy more quickly.
- Burn more calories, which may help you lose the weight you gained during pregnancy.
- Delay the return of your menstrual period to help keep iron in your body.
- Provide contraception, but only if these 3 conditions are met: (1) you are exclusively breastfeeding at daytime and nighttime and not giving your baby any other supplements, (2) it is within the first 6 months after birth, (3) your period has not returned.
- Reduce the risk of ovarian cancer and breast cancer.
- Keep bones strong, which helps protect against bone fractures in older age.

## How Breastfeeding Works

When you become pregnant, your body begins to prepare for breastfeeding. Your breasts become larger and after your fourth or fifth month of pregnancy, your body is able to produce milk.

### What is colostrum?

Colostrum is the first milk your body makes. It's thick with a yellow or orange tint. Colostrum is filled with all the nutrients your newborn needs. It also contains many substances to protect your baby against diseases and infections. It's very important for your baby's health to get this early milk, though it may seem like a small amount. Your baby only needs less than 1 tablespoon per feeding on the first day and about 2 tablespoons per feeding on the second day.

### What's the difference between milk coming in (increase in milk production) and let-down?

**Milk coming in** and **let-down** mean different things, but both are important.

- **Milk comes in** 2 to 5 days after your baby is born. This is when colostrum increases quickly in volume and becomes milky-white transitional milk. Signs that your milk is coming in include
  - Full and tender breasts
  - Leaking of milk
  - Seeing milk around your baby's mouth
  - Hearing your baby swallow when fedBreast milk changes daily and will adjust to your baby's needs for the rest of the time you breastfeed. Because the color or creaminess of the milk can change daily, don't worry about how your milk looks.
- **Let-down** is the reflex that creates the flow of milk from the back of the breast to the nipple. Let-down occurs each time the baby suckles. It is triggered when you are relaxed and your baby is latched on to your breast properly. Let-down may also happen between feedings, such as when the breasts are somewhat full or when you hear a baby's cry. The first few times you breastfeed, the let-down reflex may take a few minutes. Afterward, let-down occurs faster, usually within a few seconds. Let-down occurs in both breasts at the same time. It may occur several times during each feeding.

The signs of let-down are different for each woman. Some women feel nothing, even though breastfeeding is going fine. Other women feel

- Cramping in the uterus. This can be strong for the first few days after delivery but often goes away after breastfeeding is well-established.
- A brief prickle, tingle, or even slight pain in the breast.
- A sudden feeling that breasts are heavier.
- Milk dripping from the breast that's not being used.
- Their baby swallowing or gulping when fed.

## What is demand and supply?

The more milk your baby takes from your breast, the more milk you make. This is called *demand and supply* because the more milk your baby demands the more you will supply. Many women with small breasts worry that they won't be able to make enough milk. However, because of demand and supply, there's no relationship between breast size and how much milk is produced.

## Getting Started

Babies are very alert after they are born and ready to find the breast! The more relaxed and confident you feel, the faster your milk will flow to your baby. Getting comfortable will help you and your baby get started toward a better latch-on.

## How soon can I breastfeed?

You can and should breastfeed within the first hour after birth if you and your baby are physically able to do so. After delivery, your baby should be placed on your chest or stomach, skin to skin. The early smell and taste of your milk helps your baby learn to nurse. Your breast milk is all your baby needs if your baby is healthy. Other liquids, including water, sugar water and formula, will only lessen the benefits your baby receives from the early breast milk. Try to stay with your baby as much as you can. Rooming in with your baby day and night during your hospital stay has been shown to help start breastfeeding and keep it going longer.

## What are different breastfeeding positions?

Always take time to get comfortable. Don't be shy about asking for help during the first feedings. It may take a few tries but with a little patience, you and your baby will succeed. The following are 3 breastfeeding positions:

**Cradle hold**—the traditional breastfeeding position. Firmly support your baby's back and bottom. When feeding this way, make sure your baby's entire body is facing your body, not the ceiling.



**Clutch hold or football hold**—may be more comfortable if you've had a cesarean delivery because it keeps the baby's weight off of the stitches.

**Reclining**—feeding your baby while lying down lets you relax and can be helpful if you've had a cesarean delivery or are tired.



## How can I get comfortable while breastfeeding?

A few simple things can help you feel comfortable and relaxed.

- Sit on a comfortable chair with good back and arm support.
- Lie on your side in bed with your baby facing you. Place pillows to support your back and neck.
- Take deep breaths and picture yourself in a peaceful place.
- Listen to soothing music while sipping a healthy drink.
- Apply moist heat (such as warm, wet washcloths) to your breast several minutes before each feeding.
- If your home is very busy, find a quiet place where you won't be disturbed during feedings.
- If you had a cesarean delivery, use extra pillows to help position your baby.
- Try different breastfeeding positions.
- Make sure the baby is latched on correctly. (See next question.)

## Early Signs of Hunger

Your baby starts to let you know when she's hungry by the following early signs or cues:

- Small movements as she starts to awaken
- Whimpering or lip-smacking
- Pulling up arms or legs toward her middle
- Stretching or yawning
- Waking and looking alert
- Putting hands toward her mouth
- Making sucking motions
- Moving fists to her mouth
- Becoming more active
- Nuzzling against your breast

## Why is latch-on so important, and how is it done?

A good latch-on means that your baby has opened his mouth wide and is well back on the breast, taking both the areola and nipple far back into his mouth. Correct latch-on is very important because it

- Makes milk flow better
- Prevents sore nipples
- Keeps your baby satisfied
- Stimulates a good milk supply for baby's weight gain
- Helps to prevent engorged (overly full) breasts

You can help your baby latch on by holding your breast with your free hand. Place your fingers under your breast and with your thumb on top. Move your fingers well back from the areola so they don't get in the way. Position your baby with his entire body facing you.

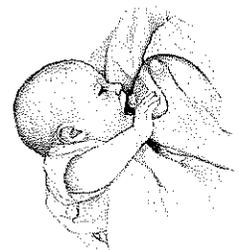
Touch your nipple to the center of your baby's lower lip. This will cause your baby to open his mouth widely. This is called the *rooting reflex*. As this occurs, pull your baby onto the nipple and areola. Keep in mind that when your baby is correctly positioned, or latched on, your nipple and much of the areola are pulled well into his mouth. Your baby's lips and gums should be around the areola and not just on the nipple. Your baby's chin should be touching your breast and his nose should be close to the breast.

At first you will feel a tugging sensation. You also may feel a brief period of pain. If breastfeeding continues to hurt, pinch, or burn, your baby may not be latched on properly. Break the latch by slipping your finger into the corner of your baby's mouth, reposition, and try again. It can take several tries.

Hospital staff should watch a feeding and make suggestions. If breastfeeding continues to hurt, you may need the help of a lactation specialist. Let your pediatrician know if there's a problem.



Support your breast and tickle your baby's lower lip with your nipple to stimulate his rooting reflex.



When your baby's mouth is wide open, bring him quickly, but gently, toward your breast.

## Beyond the First Feedings

### How often should I nurse?

Newborns feed often and will give cues or signs when they are ready to feed. The length of each feeding varies and your baby will show signs when she is finished. Newborns are hungry at different times, with a long cluster of feedings in the late afternoon or night. Most breastfed newborns feed 8 to 12 or more times per 24 hours (once the milk has come in). If your baby isn't waking on her own during the first few weeks, wake her if more than 4 hours have passed since the last feeding. If you are having a hard time waking up your baby for feedings, let your pediatrician know.

### What's the best feeding schedule for a breastfed baby?

Feeding schedules are different for every baby, but it's best to start nursing your baby before crying starts. Crying is a late sign of hunger. Whenever possible, use your baby's cues instead of the clock to decide when to nurse. It can be less frustrating for you and your baby if you learn your baby's early hunger cues. Frequent feedings help stimulate the breasts to produce milk more efficiently.

During a growth spurt (rapid growth), babies will want to nurse all the time. Remember, this is normal and temporary, usually lasting about 4 to 5 days. Keep on breastfeeding, and don't give any other liquids or foods.

### How long does breastfeeding take?

Each baby feeds differently: some slower, some faster. Some feedings may be longer than others depending on your baby's appetite and the time of day. Some babies may be nursing even though they appear to be sleeping. While some infants nurse for only 10 minutes on one breast, it's quite common for others to stay on one side for much longer. It's generally good to allow your baby to decide when the feeding is over—he will let go and pull back when he is done.

If your baby has fallen asleep at your breast, or if you need to stop a feeding before your baby is done, gently break the suction with your finger. Do this by slipping a finger into the corner of your baby's mouth and cheek while he is still latched on. Never pull the baby off the breast without releasing the suction.

To stimulate both breasts, alternate which breast you offer first. Some women like to keep a safety pin on their bra strap to help remember. While you should try to breastfeed evenly on both sides, many babies seem to prefer one side over the other and nurse longer on that side. When this happens, the breast adapts its milk production to your baby's feedings.

### How can I tell if my baby is hungry?

You will soon get to know your baby's feeding patterns. In addition, babies may want to breastfeed for reasons other than hunger. It's OK for you to offer these "comfort feedings" as another way of meeting your baby's needs.

Nearly all newborns are alert for about 2 hours after delivery and show interest in feeding right away. Let the hospital staff know that you plan to take advantage of this opportunity—it's very important to the breastfeeding process. After 2 hours, many newborns are sleepy and hard to wake for the next day or so.

While in the hospital keeping your baby with you skin to skin will make it easier for you to recognize hunger cues and also will make it easier for your baby to be alert and feed often. Watch for the early signs of hunger. This is the

time to pick your baby up, gently awaken her, check her diaper, and try to feed her. (See "Early Signs of Hunger".)

### How can I tell if my baby is getting enough milk?

There are several ways you can tell whether your baby is getting enough milk. They include the following:

- Your baby has frequent wet and dirty diapers.
- Your baby appears satisfied after feeding.
- Milk is visible during feedings (leaking or dripping).
- Your baby is gaining weight after the first 4 to 5 days of life.

Your baby should have several wet or dirty diapers each day for the first few days after delivery. Beginning around the time that your milk comes in, the wet diapers should increase to 6 or more per day. At the same time, stools should start turning green, then yellow. There should be 3 or more stools per 24 hours. Typically, once breastfeeding is going well, breastfed babies have a yellow stool during or after each feeding. As your baby gets older, stools may occur less often, and after a month, may even skip a number of days. If stools are soft, and your baby is feeding and acting well, this is quite normal.

Your baby's feeding patterns are an important sign that he is feeding enough. If you add up all the feedings over the course of the day, your baby should feed at least 8 to 12 times a day. Remember, newborns feed often and will give cues or signs when they are ready to feed. The length of each feeding varies and your baby will show signs when she is finished.

When feeding well with good latch-on, the infant will suckle deeply, you will hear some swallowing, and the feeding won't be painful. The baby should appear satisfied and/or sleep until time for the next feeding. If your baby sleeps for stretches of longer than 4 hours in the first 2 weeks, wake him for a feeding. If your baby will not waken enough to eat at least 8 times per day, call your pediatrician.

Your child will be weighed at each doctor's visit. This is one of the best ways to tell how much milk your baby is getting. The AAP recommends that babies be seen for an office visit (or home visit) between 3 to 5 days of age to check on breastfeeding and baby's weight. During the first week, most infants lose several ounces of weight, but they should be back up to their birth weight by the end of the second week. Once your milk supply is established, your baby should gain between ½ and 1 ounce per day during the first 3 months.

## Breastfeeding: A Natural Gift

Breast milk gives your baby more than just good nutrition. It also provides important substances to fight infection. Breastfeeding has medical and psychological benefits for both of you. For many mothers and babies, breastfeeding goes smoothly from the start. For others, it takes a little time and several attempts to get the process going effectively. Like anything new, breastfeeding takes some practice. This is perfectly normal. If you need help, ask the doctors and nurses while you are still in the hospital, your pediatrician, a lactation specialist, or a breastfeeding support group.

For more information about breastfeeding, read the AAP book *New Mother's Guide to Breastfeeding*.

The information contained in this publication should not be used as a substitute for the medical care and advice of your pediatrician. There may be variations in treatment that your pediatrician may recommend based on individual facts and circumstances.

Illustrations by Anthony Alex LeTourneau.

American Academy  
of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN™

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American Academy of Pediatrics  
Web site—www.HealthyChildren.org

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# COMPLETE CHILDREN'S HEALTH

## GUIDELINES FOR FEEDING YOUR INFANT/TODDLER

| AGE        | FOOD GROUP                                      | FOODS   | DAILY SERVINGS                                 | SUGGESTED SERVING SIZE   | FEEDING TIPS  |
|------------|---|---|--|--|---|
| 0-4 MONTHS | Milk  | Breast milk<br>OR<br>Formula* 0-1 month<br>1-2 months<br>2-4 months   | On demand<br>(about 8-12)<br>6-8<br>5-7<br>4-7 | 2-5 oz.<br>3-6 oz.<br>4-8 oz.  | <ul style="list-style-type: none"> <li>▪ Nurse baby at least 5-10 minutes on each breast.</li> <li>▪ Six wet diapers a day is a good sign.</li> <li>▪ There's no need to force baby to finish a bottle.</li> <li>▪ Putting baby to bed with a bottle could cause choking!</li> <li>▪ Use of the microwave is not recommended.</li> <li>▪ Do not prop the bottle while feeding.</li> <li>▪ No juice unless recommended by your physician's office.</li> <li>▪ No baby cereal unless recommended by your doctor.</li> </ul>   |
| 4-6 MONTHS | Milk<br><br>Grain                               | Breast milk OR<br>Formula*<br>Baby cereal (iron-fortified)<br>Rice<br>Oatmeal<br>Barley   | 4-7<br>4-7<br>2                                | 4-8 oz.<br>1-2 tbsp.   | <ul style="list-style-type: none"> <li>▪ May need to start baby cereal (iron-fortified).</li> <li>▪ Feed only one new cereal each week.</li> <li>▪ There's no need to add salt or sugar to cereal.</li> <li>▪ Baby should be sitting up when eating solid foods</li> <li>▪ Do not force solids. If baby refuses, go back to formula or breast milk and try again later.</li> <li>▪ Do not feed baby raw honey before 1 year.</li> </ul>   |
| 6-8 MONTHS | Milk<br><br>Grain<br><br>Fruit<br><br>Vegetable | Breast milk OR<br>Formula*<br>Baby cereal (iron-fortified)<br>Bread<br>Crackers<br>Fruit<br>Fruit juice (optional)<br>Vegetable | 3-5<br>3-5<br>2<br>Offer<br><br>2<br>1<br>2    | 6-8 oz.<br>2-4 tbsp<br>½ slice<br>2 crackers<br>2-3 tbsp.<br>3 oz. (from cup)<br>2-3 tbsp. | <ul style="list-style-type: none"> <li>▪ Pureed vegetables first, then the fruits, one new food every 3-5 days. Monitor for adverse effects.</li> <li>▪ Add mashed or finely chopped fruits and vegetables later on.</li> <li>▪ Take out of the jar the amount of food for one feeding. Refrigerate the remaining food.</li> <li>▪ Make sure all foods are soft and easy to swallow. Cut items into small pieces.</li> <li>▪ Juice is not necessary, but no more than 4 oz of juice per day.</li> <li>▪ Any fresh foods or vegetables should be cooked with no added salt or seasonings.</li> <li>▪ If stools are loose or with mucus, reduce amounts of solids and add foods more slowly.</li> </ul> |

Don't worry if your baby eats a little more or less than this guide suggests.

The suggested serving sizes are only guidelines to help you get started.

(Adapted from A Feeding Guide for the First Two Years, National Dairy Council, 2002 and the American Academy of Pediatrics)



# COMPLETE CHILDREN'S HEALTH

## GUIDELINES FOR FEEDING YOUR INFANT/TODDLER

| AGE                                 | FOOD GROUP | FOODS                        | DAILY SERVINGS | SUGGESTED SERVING SIZE | FEEDING TIPS   |
|-------------------------------------|------------|------------------------------|----------------|------------------------|--|
| 8-12 MONTHS                         | Milk       | Breast milk OR               | 3-4            |                        | <ul style="list-style-type: none"> <li>▪ Introduce new textures, avoiding hard foods that can be a choking hazard.</li> <li>▪ Add strained or finely chopped meats now.</li> <li>▪ Feed only one new meat every 3-5 days.</li> <li>▪ Offering a variety of healthy, tasty, and nutrient-rich foods is the best way to supply the nutrition that a growing child needs. A wide variety of foods is found in the 5 food groups.</li> <li>▪ Be patient. Babies make a mess when they feed themselves.</li> <li>▪ Always taste heated foods before feeding them to baby.</li> <li>▪ Do not feed baby raw honey before 1 year.</li> </ul> |
|                                     |            | Formula*                     | 3-4            | 6-8 oz.                |  |
|                                     |            | Cheese                       |                | ½ oz.                  |  |
|                                     |            | Plain yogurt                 | Offer          | ½ cup                  |  |
|                                     | Grain      | Cottage cheese               |                | ¼ cup                  |  |
|                                     |            | Baby cereal (iron-fortified) | 2-3            | 2-4 tbsp.              |  |
|                                     |            | Bread OR                     | 2-3            | ½ slice                |  |
|                                     | Fruit      | Crackers                     |                | 2 crackers             |  |
|                                     |            | Fruit                        | 2              | 3-4 tbsp.              |  |
|                                     | Vegetable  | Fruit juice                  | 1              | 3 oz. (from cup)       |  |
|                                     |            | Vegetables                   | 2-3            | 3-4 tbsp.              |  |
|                                     | Meat       | Chicken, beef, pork          | 2              | 3-4 tbsp.              |  |
| Cooked, dried beans OR<br>Egg yolks |            |                              |                |                        |  |

Make sure no one food group is completely left out. If this happens for a few days, don't worry. Prolonged neglect of a food group could keep your child from getting enough nutrients. Snacks make up an important part of childhood nutrition. Children must eat frequently. With their small stomachs, they cannot eat enough at meals alone for their high-energy needs. Three meals and 2 or 3 healthy snacks a day help children to meet their daily nutrition needs.

| AGE          | FOOD GROUP | FOODS                             | DAILY SERVINGS | SUGGESTED SERVING SIZE | FEEDING TIPS  |
|--------------|------------|-----------------------------------|----------------|------------------------|---|
| 12-24 MONTHS | Milk       | Whole milk, yogurt                | 4              | ½ cup                  | <ul style="list-style-type: none"> <li>▪ Add whole milk now.</li> <li>▪ Offer small portions and never force your toddler to eat.</li> <li>▪ A very irregular appetite is normal. Just offer foods from all food groups.</li> <li>▪ Respect your toddler's likes and dislikes.</li> <li>▪ Offer rejected foods again.</li> <li>▪ Make meals fun and interesting. Serve colorful foods that are crunchy, smooth, or warm.</li> <li>▪ Toddlers need meals <i>and</i> snacks. Feed your toddler at least 2 snacks every day.</li> </ul> <p>*If you are bottle feeding, use iron-fortified formula.</p> |
|              |            | Cheese                            |                | ½ oz.                  |   |
|              |            | Cottage cheese                    |                | ¼ cup                  |   |
|              | Grain      | Cereal, pasta or rice             | 6              | ¼ cup                  |   |
|              |            | Bread, muffins, rolls             |                | ½ slice                |   |
|              |            | Crackers                          |                | 2 crackers             |   |
|              | Fruit      | Cooked or juice                   | 2              | 3 oz.                  |   |
|              |            | Whole                             |                | ½ medium               |   |
|              | Vegetable  | Cooked or juice                   | 3              | 3 oz.                  |   |
|              |            | Whole                             |                | ½ medium               |   |
|              | Meat       | Fish, chicken, turkey, beef, pork | 2              | 1 oz.                  |   |
|              |            | Cooked, dried beans or peas       |                | ¼ cup                  |   |
| Egg          |            | 1                                 |                |                        |   |

Don't worry if your baby eats a little more or less than this guide suggests.

The suggested serving sizes are only guidelines to help you get started.

(Adapted from A Feeding Guide for the First Two Years, National Dairy Council, 2002 and the American Academy of Pediatrics)

# Putting Baby Safely to Sleep:

## How Parents Can Reduce the Risk of SIDS and Suffocation

Many infants die during sleep from unsafe sleep environments. Some of these deaths are from entrapment, suffocation, and strangulation. Some infants die from sudden infant death syndrome (SIDS). However, there are ways for parents to keep their sleeping baby safe.

Read on for more information from the American Academy of Pediatrics on how parents can create a safe sleep environment for their babies. This information should also be shared with anyone who cares for babies, including grandparents, family, friends, babysitters, and child care centers.

*Note: These recommendations are for healthy babies up to 1 year of age. A very small number of babies with certain medical conditions may need to be placed to sleep on their stomachs. Your baby's doctor can tell you what is best for your baby.*

### What you can do

- **Place your baby to sleep on his back for every sleep.** Babies up to 1 year of age should always be placed on their backs to sleep during naps and at night. However, if your baby has rolled from his back to his side or stomach on his own, he can be left in that position if he is already able to roll from tummy to back and back to tummy. If your baby falls asleep in a car safety seat, stroller, swing, infant carrier, or infant sling he should be moved to a firm sleep surface as soon as possible.
- **Place your baby to sleep on a firm sleep surface.** The crib, bassinet, portable crib, or play yard should meet current safety standards. Check to make sure the product has not been recalled. Do not use a crib that is broken or missing parts, or has drop-side rails. Cover the mattress that comes with the product with a fitted sheet. Do not put blankets or pillows between the mattress and the fitted sheet. Never put your baby to sleep on a chair, sofa, water bed, cushion, or sheepskin. For more information about crib safety standards, visit the Consumer Product Safety Commission Web site at [www.cpsc.gov](http://www.cpsc.gov).
- **Keep soft objects, loose bedding, or any objects that could increase the risk of entrapment, suffocation, or strangulation out of the crib.** Pillows, quilts, comforters, sheepskins, bumper pads, and stuffed toys can cause your baby to suffocate. Note: Research has not shown us when it's 100% safe to have these objects in the crib; however, most experts agree that after 12 months of age these objects pose little risk to healthy babies.
- **Place your baby to sleep in the same room where you sleep but not the same bed.** Keep the crib or bassinet within an arm's reach of your bed. You can easily watch or breastfeed your baby by having your baby nearby. Babies who sleep in the same bed as their parents are at risk of SIDS, suffocation, or strangulation. Parents can roll onto babies during sleep or babies can get tangled in the sheets or blankets.
- **Breastfeed as much and for as long as you can.** Studies show that breastfeeding your baby can help reduce the risk of SIDS.

- **Schedule and go to all well-child visits.** Your baby will receive important immunizations. Recent evidence suggests that immunizations may have a protective effect against SIDS.
- **Keep your baby away from smokers and places where people smoke.** If you smoke, try to quit. However, until you can quit, keep your car and home smoke-free. Don't smoke inside your home or car and don't smoke anywhere near your baby, even if you are outside.
- **Do not let your baby get too hot.** Keep the room where your baby sleeps at a comfortable temperature. In general, dress your baby in no more than one extra layer than you would wear. Your baby may be too hot if she is sweating or if her chest feels hot. If you are worried that your baby is cold, infant sleep clothing designed to keep babies warm without the risk of covering their heads can be used.
- **Offer a pacifier at nap time and bedtime.** This helps to reduce the risk of SIDS. If you are breastfeeding, wait until breastfeeding is going well before offering a pacifier. This usually takes 3 to 4 weeks. It's OK if your baby doesn't want to use a pacifier. You can try offering a pacifier again, but some babies don't like to use pacifiers. If your baby takes the pacifier and it falls out after he falls asleep, you don't have to put it back in.
- **Do not use home cardiorespiratory monitors to help reduce the risk of SIDS.** Home cardiorespiratory monitors can be helpful for babies with breathing or heart problems but they have not been found to reduce the risk of SIDS.
- **Do not use products that claim to reduce the risk of SIDS.** Products such as wedges, positioners, special mattresses, and specialized sleep surfaces have not been shown to reduce the risk of SIDS. In addition, some infants have suffocated while using these products.

### What expectant moms can do

- Schedule and go to all prenatal doctor visits.
- Do not smoke, drink alcohol, or use drugs while pregnant and after birth. Stay away from smokers and places where people smoke.

### Remember Tummy Time

Give your baby plenty of "tummy time" when she is awake. This will help strengthen neck muscles and avoid flat spots on the head. Always stay with your baby during tummy time and make sure she is awake.

Listing of resources does not imply an endorsement by the American Academy of Pediatrics (AAP). The AAP is not responsible for the content of the resources mentioned in this publication. Web site addresses are as current as possible, but may change at any time.

The information contained in this publication should not be used as a substitute for the medical care and advice of your pediatrician. There may be variations in treatment that your pediatrician may recommend based on individual facts and circumstances.

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American Academy of Pediatrics  
Web site—[www.HealthyChildren.org](http://www.HealthyChildren.org)

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# Safe Sleep Tips for your Baby:

**1.** Put baby on his/her back to sleep and be sure to tell other caregivers about a safe sleep place.



- Childcare providers
- Grandparents and other family members
- Babysitters

**2.** Use a firm mattress covered with a fitted sheet in a safety-approved crib.



**3.** There shouldn't be more than a soda can's width between bars.



**4.** Remove pillows, blankets, stuffed toys and other soft objects from the crib. Don't use devices to prop baby on side.



**5.** Consider using a "blanket sleeper" instead of blankets, which can get wrapped around baby's head.

**6.** Avoid overheating; baby shouldn't be sweating or hot to the touch. The ideal room temperature is one that's comfortable to a lightly clothed adult.

**7.** Consider offering a pacifier once breastfeeding is established.

**8.** Create a smoke-free zone around baby, particularly when sleeping.



**NO SMOKING**

**9.** Baby should have a separate sleeping space in the parent's room. Don't let baby sleep on an adult bed, waterbed, armchair, couch or other soft surface. Baby shouldn't share any sleep surface with another child or adult.

**10.** Remember to have supervised tummy time when baby's awake.



## What should you do?

- Make sure your birth facility has your correct address and phone number.
- Make sure they know who your baby's doctor will be after discharge.
- Ask about the results at your baby's first well-baby check-up.

To see a VIDEO on Newborn Screening, go to the web-site [BabysFirstTest.org](http://BabysFirstTest.org) and watch: <https://www.youtube.com/watch?v=Zwb1tQPHmxs> or check out the "One Foot at a Time" video at <http://www.savebabies.org>

### To order more PARENT INFORMATION booklet/brochures:

Call 402-471-9731 or fax order to "NNSP" : fax 402-471-1863 or e-mail [dhhs.newbornscreening@nebraska.gov](mailto:dhhs.newbornscreening@nebraska.gov). Specify: Parent's Guide booklet, or Hearing Screening brochures ("Can Your Baby Hear?" or "Your Baby Needs Another Hearing Screening"). Also available in several other languages.

Printing and distribution of this parent information booklet was made possible by funding from Title V, Maternal and Child Health Block Grant support to the Nebraska Newborn Screening & Genetics Program



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# PARENT'S GUIDE TO YOUR BABY'S NEWBORN SCREENING



## NEBRASKA NEWBORN SCREENING PROGRAM

October, 2014



## WHAT IS NEWBORN SCREENING?

Newborn screening is done for every baby born in Nebraska. It is a set of tests done to find certain conditions that can cause problems for your baby. You and your baby's doctor can't tell by looking at your baby if they have any of these conditions. The tests (blood tests, hearing tests and heart tests) are needed to find them so that problems can be prevented or reduced. This brochure will explain these three kinds of testing.

**Who needs to be screened?** All babies born in Nebraska must have the Blood-spot and Heart Disease testing. The tests are so important to protecting the health and safety of babies who are affected with the diseases, that the law is mandatory. The hospital is also required by law to offer hearing screening for your baby.



### How is my baby screened for the blood-spot screen?

Five drops of blood are taken from your baby's heel. The blood sample is sent to a newborn screening laboratory and tested for the conditions described on the next pages.

### Why are the screening tests important?

The law requires screening to help prevent intellectual disability, brain and organ damage, seizures, stroke, other chronic problems and even infant death. The conditions screened for can usually be controlled by early and proper treatment. *(There are other causes of these health problems, illness and death which will not be found by these tests).*



**When should my baby be screened?** Your doctor will have the blood collected for the tests before your baby leaves the hospital. If you and your baby go home before your baby is 24 hours old, your baby will need to have some tests repeated. The hospital may schedule this appointment before you leave. If not, you should contact your doctor to have the tests repeated after your baby is 24 hours old. Some of the tests can give reliable results before 24 hours of age but not all of them.



**Babies born at home:** Babies who are born at home must also be screened for these diseases. The parent(s) or the person registering the birth must arrange with a doctor to have the tests completed. The blood should be collected between 24 and 48 hours of birth, so that

any needed treatment can be started as soon as possible. If a baby is older they must still get the screening. Even though it is less ideal in terms of timing, older babies can still benefit from treatment for certain conditions.

## WHAT CONDITIONS ARE INCLUDED IN NEBRASKA'S ROUTINE Blood-Spot SCREENING PANEL?

### Amino Acid Disorders

Phenylketonuria, (FEE-nil-KEE-tone-u-ree-ah), or PKU, is an amino acid disorder. Babies with PKU can't break down phenylalanine or phe. Phe is an amino acid found in protein foods like milk, meats, eggs and cheese. The high levels of phe may cause nerve and brain cell damage and can result in mental retardation. If detected early and the baby is started on a special diet, intellectual disability is prevented. Other Amino Acid Disorders screened for include: • Argininosuccinic Acidemia (ASA Lyase deficiency) • Citrullinemia (CIT) • Homocystinuria (HCY) • Maple Syrup Urine Disease (MSUD) • Tyrosinemia (TYR)



### Biotinidase Deficiency (BIO)

(BYE-o-TIN-I-days) is a disorder found in babies who are missing the enzyme biotinidase. This can lead to seizures, developmental delay, eczema, and hearing loss. Problems

can be prevented with biotin (a vitamin) treatment started in the first few weeks of life.

### Congenital Adrenal Hyperplasia (CAH)

(Congenital A-DREE-nal Hyper-PLAY-zia) is a disorder caused by an enzyme deficiency that results in the adrenal gland producing too little of one hormone and too much of another. Some babies with this disorder are at risk of sudden death. Problems can be prevented with hormone treatment started early.

### Congenital Primary Hypothyroidism (CPH)

(HIGH-po-THIGH-roid-ism), or CPH is a disorder caused by not having enough thyroid hormone. The most common effects of CPH are intellectual disability and poor growth. If treatment with thyroid medication starts in the first few weeks of life, these children usually develop normally.

### Cystic Fibrosis (CF)

(SIS-tic FY-bro-sis) is a genetic disorder that affects people in a variety of ways. They may have persistent coughing, wheezing or shortness of breath. They may have an excessive appetite, but have poor growth and greasy, bulky stools. With early treatment those who would have had problems gaining weight, can have improved growth and development. With early diagnosis from newborn screening, some may have fewer hospitalizations. Regular monitoring may prevent or reduce lung infections.

## **Fatty Acid Oxidation Defects (FAO's)**

Medium Chain Acyl-CoA Dehydrogenase Deficiency (Medium Chain A-seal Co-A Dee-HIGH-dra-gen-AZE Deficiency - MCAD) is a disorder of fatty acid metabolism. When babies and children with MCAD become ill or have long periods of fasting, blood sugars become dangerously low and they are at risk of having a "metabolic crisis." A metabolic crisis can lead to seizures, failure to breathe and cardiac arrest. These can result in serious brain damage or death. However, screening can provide diagnosis before symptoms occur. Parents can then prevent the fasting periods, and know when to seek early medical care, to prevent the crisis. A special diet supplement may be added to the baby's diet to help prevent problems. Other Fatty Acid Defects screened for include: • Carnitine Uptake Defect (CUD) • Long Chain Hydroxyacyl-CoA Dehydrogenase Deficiency (LCHAD) • Trifunctional Protein Deficiency (TFP) • Very Long-Chain Acyl-CoA Dehydrogenase Deficiency (VLCAD)

## **Galactosemia (GAL)**

(Guh-LAK-toe-SEE-me-ah) is a disorder in which a simple sugar called "galactose" can't be broken down in the body. Galactose is found in breast milk, many formulas and milk products. If it remains at high levels in the body, it can harm the baby's eyes, liver, and brain and could be life threatening. When started early, a special diet can prevent these problems.

## **Hemoglobinopathies (HGb's)**

(He-ma-glow-bin-OP-ah-thees) are a group of disorders of the red blood cells, including sickle cell anemia. Babies with this are more likely to have anemia, episodes of pain, strokes, and life-threatening infections. Early treatment with antibiotics, immunizations and parent education can help. These measures can prevent serious infections in childhood, and reduce health problems.

## **Organic Acid Disorders (OA's)**

These conditions can have a variety of effects on babies from mild to severe including metabolic crisis and problems with the heart, muscles, and some organs. Babies with these disorders may become rapidly sick, have seizures, go into a coma and could die without treatment. The Organic Acid Disorders screened for include: • Beta Ketothiolase Deficiency (BKT) • Glutaric Acidemia type I (GA-I) • Isovaleric Acidemia (IVA) • Methylmalonic Acidemia (mutase) & (Cbl B&C) • Multiple Carboxylase Deficiency (MCD) • Propionic Acidemia (PA) • 3-Methylcrotonyl-CoA Carboxylase Deficiency (3-MCC) • 3-Hydroxy-3 Methylglutaric Aciduria (HMG)

## **Severe Combined Immune Deficiency (SCID)**

Sometimes referred to as the "bubble-boy" disease SCID is a serious life-threatening condition. Babies with SCID lack a functioning immune system and suffer from repeated infections. With no treatment these babies usually die within the first two years of life. However early

intervention and bone marrow stem cell transplant can cure these babies. The screening test may also pick up other T-cell immune deficiencies for which other treatments can help.

### How will I find out the results?

Your baby's doctor should receive the results from the hospital where the blood was collected. Usually by the time of your first "well-baby" check-up. Make sure to ask your baby's doctor about the newborn screening results.

### What if any of the screening results are abnormal?

A "positive," abnormal or inconclusive screening test result only means that your baby might have one of the conditions mentioned above. Sometimes positive screening results are found in babies that do not have the condition. A diagnosis of a condition is not made with the first lab test. Further testing will be necessary to determine if your baby actually has it.



If you are asked to have your child re-tested, please act quickly so tests can be repeated and final results obtained. If needed, treatment must be started as soon as possible to prevent the onset of problems for your baby's health and development, or in some cases to prevent death.

### Why else might I be asked to have my baby "re-tested?"

Some things can cause problems with the tests. When these things happen, we can't be very sure of some of the results. Some of the reasons parents are asked to bring their babies back for re-testing are:



- The specimen was collected too early for some conditions to be tested (less than 24 hours of age).
- The specimen wasn't collected before a blood transfusion or too soon after a blood transfusion; or
- A problem occurred with the quality of the specimen (e.g. problem with collection and/or handling of the dried blood spots).

### PROTECTIONS FOR YOUR BABY'S BLOOD SPECIMEN

It is important that you feel confident your baby's blood specimen is used only for its intended purpose. That is, to find information that can help your baby. Nebraska law and regulations require the following: The laboratory must keep the newborn screening specimens at least 90 days. Within 30 days after this 90 day period, the laboratory must dispose of

the sample. The blood spots are disposed of in a way that they cannot be linked to identifying information (they are incinerated/burned). This is an important protection of genetic information.

Your baby's blood specimen can only be used for public health research if all of these things have been obtained:

- your written consent
- written assurances that your baby's confidentiality is preserved
- Institutional Review Board approval following protections of human subjects from research risks under subpart A of part 46 of 45 Code of Federal Regulations, as they existed on September 1, 2001
- approval of the State Newborn Screening Advisory Committee
- approval of the Chief Medical Officer of the Nebraska Department of Health and Human Services

### Retrieving Your Baby's Blood Spot

As you will read on the next page, your baby's hearing will also be tested. For babies who are "confirmed" with a hearing loss, additional testing on the blood spot might be helpful. Cytomegalovirus (CMV) infection present at birth can be one cause of hearing loss. Testing for congenital CMV is best accomplished on specimens obtained shortly after birth (for example the dried blood spot). Tests on later specimens can't tell the difference between "congenital" or

"acquired" CMV. Therefore, if your baby does not pass the hearing screening, it is important get repeat hearing screening and audiologic diagnostic testing done as soon as possible. That way, if your baby does have hearing loss, you can ask your baby's doctor to request the dried blood spot to be returned for more tests before the blood spots are destroyed.

\*\*\*\*\*

### A Special Note:

The newborn screening tests alone **cannot be used to make a final diagnosis**. They are a "screen", designed to detect newborns who need further testing to determine if they have certain disorders. The screening tests are very efficient and provide newborns with the best opportunity to identify the disorders early and obtain treatment.

However, like most laboratory tests, the tests used for newborn screening cannot guarantee that every affected newborn will be identified, or that only infants at higher risk of being affected will have positive tests. Therefore, it is important to recognize that there will be some "false positives" (newborns with a positive, abnormal or inconclusive screen result who are later found to not have the suspected disorder), and the possibility of "false negatives" (newborns with normal screening results who are later found to have one of the conditions).

## NEWBORN HEARING SCREENING

All hospitals offer newborn hearing screening during the



birth admission or by arrangement with another facility after the birth admission.

Significant hearing loss is one of the most common major birth defects. If not found early, hearing loss will affect language development, social-emotional growth, and

educational performance in children. Early detection of hearing loss, along with early intervention and treatment before six (6) months of age, is highly effective in helping a child's language, communication and educational development.

The hearing screening is a safe procedure that can be done in a very short time. There are two methods that might be used: auditory brainstem response (ABR) and/or otoacoustic emissions (OAE). Both are done when the baby is asleep or quiet. Responses to sounds sent through tiny earphones are counted and averaged by a computer. It is important to remember that while many newborns may not pass the hearing screening test, only further audiologic testing and evaluation can determine which ones really

have hearing loss. Therefore it is important that you work with your baby's doctor to get further testing if the screening results indicate "refer" (or did not pass).

If your baby passes the hearing screening but has risk factors for hearing loss, you and your baby's physician will want to monitor your child closely. Some risk factors include a family history of hearing problems, low birth weight or certain other medical conditions. The newborn hearing screening will not pick up hearing loss that develops later, for example, as a result of serious infection or illness.



If your child is suspected of or found to have a hearing loss, Nebraska's Early Intervention Program called the "Early Development Network" can help you coordinate services with local school systems and providers for evaluations, early intervention services and assistive technology.

Call 402 471-2471 or Call Toll-Free 1-888-806-6287 The Early Development Network (EDN) provides services and supports that are designed based on the needs of children birth to age three and their families with the belief that parents know what is best for their families.

## NEWBORN SCREENING FOR CRITICAL CONGENITAL HEART DISEASE (CCHD)

Congenital heart disease is the most common birth defect affecting about 8 in every 1000 babies born. Some forms of congenital heart disease can be found when examined by the baby's health care provider. However, sometimes the baby won't show signs of a problem until they are more affected. The screening is done to find these before symptoms develop. Not all forms of heart disease can be detected by the newborn screening test for CCHD, but the screen increases the chance of early detection for 7 of the most serious forms of congenital heart disease. The screening test for CCHD involves placing a pulse oximeter on your baby's foot and hand.



Photo Courtesy Massimo

Simple and painless, the pulse oximeter measures the amount of oxygen in the blood and the heart rate. Babies with low levels of oxygen in their blood should get further evaluation. The screening test should be done at 24 hours of age or shortly thereafter. Babies who are sent home without the screening who have undetected CCHD, can suffer serious brain and other organ damage or even die when deprived of oxygen. Catching

CCHD early means you can help prevent these problems and get treatment for your baby to correct the heart defect.

**For More Information on NEWBORN (BLOOD-SPOT) SCREENING** Call 402-471-6733 or 402-471-0374 or e-mail [dhhs.newborn.screening@nebraska.gov](mailto:dhhs.newborn.screening@nebraska.gov). Also, check out our web site at: [www.dhhs.ne.gov/nsp/](http://www.dhhs.ne.gov/nsp/). When in the hospital, ask your nurse about watching a short video on newborn screening.

### For More Information on HEARING SCREENING:

**Refer to the brochure: "Can Your Baby Hear?"** included with your newborn packet. If you did not receive this brochure or have questions about the Nebraska Early Hearing Detection and Intervention (NE-EHDI) Program, contact the Nebraska Department of Health and Human Services at: 402-471-6770.

For questions about Nebraska's **Early Intervention** Program contact "Nebraska CHILDFIND" at 1-888-806-6287. Or go to [www.nde.state.ne.us/ECH/EARLY/echp.htm](http://www.nde.state.ne.us/ECH/EARLY/echp.htm).

### For More Information on CRITICAL CONGENITAL HEART DISEASE SCREENING:

Talk to your baby's doctor or other health care provider. The Centers for Disease Control and Prevention have a good web-site at: <http://www.cdc.gov/ncbddd/pediatricgenetics/cchdscreening.html>



Explore the research opportunities with Midwest Children's Health Research Institute, the research department of Complete Children's Health, P.C.

Midwest Children's Health Research Institute is dedicated to improving the health of children by helping improve the quality and safety of infant formula, pediatric vaccines and medications that contribute to a healthier child through clinical research.

You may be approached regarding a clinical trial that is currently enrolling at Complete Children's Health during one of your office visits, if your child meets the entrance criteria. It is always up to you as the parent to ask your provider any questions you may have about the study and decide if you wish to participate.

Below are answers to a few questions that may come to mind as a parent. Please feel free to call our research department with any further questions you may have or to inquire about clinical trials we are currently enrolling.

**What is a clinical trial?**

A clinical trial is a study using healthy human volunteers to answer specific question about a new drug, vaccine or medical device. Carefully conducted clinical trials are the safest and most efficient way to find treatments and new ways to improve health.

**Are clinical trials safe?**

Safety is the top priority of a clinical trial.

Parents and volunteers are fully informed of the study requirements, including risks and benefits prior to study participation.

Parents and volunteers must freely consent to participate and are free to withdraw from a clinical trial at any time.

**Why participate in a clinical trial?**

Parents have the opportunity to have their child gain access to new treatments and vaccines before they are widely available to the general public.

Your child will receive one on one medical care and education while participating in a clinical trial.

No matter what the reason may be for participation, it can be very rewarding and essential to medical advancement.

**Will I have restrictions to follow while participating in a clinical trial?**

Each trial will have restrictions that need to be followed. Prior to enrollment detailed information will be provided regarding any restrictions.

**Will there be a charge to participate in a clinical trial?**

There will be no charge to participate in a clinical trial.

**How can my child participate?**

For most trials your child needs to be generally healthy, however some studies involve volunteers that have a specific health condition, such as asthma or behavior issues.

You may receive more information by contacting the research department (MCHRI) at 402-327-6065



To our valued patients and families,

Vaccinations are a very important part of your child's health and well being. Many diseases can be controlled or prevented by enhancing your child's immunity through vaccines. These vaccine preventable diseases are known to cause serious illnesses that can even be life threatening.

We, as pediatricians and parents ourselves, are aware that "shots" can be an intimidating and anxiety provoking issue for families. Our goal is to assist you in making an informed decision based on the facts about vaccines. Therefore, we have developed a **Vaccine Education Program** to address concerns you may have regarding vaccines.

**The program includes:**

- 1) An easy to read informational sheet addressing several related topics of controversy that you may have heard about through the media or Internet.
- 2) A listing of legitimate website addresses and related items for those of you seeking more information based on current medical knowledge.
- 3) Vaccine Information Statements (VIS) available in each of our exam rooms for you to review at the time of vaccine administration. Copies are available upon request.

**Helpful Websites:**

[www.vaccine.org](http://www.vaccine.org)                      [www.vaccinesafety.edu](http://www.vaccinesafety.edu)  
[www.cdc.gov/nip/vacsafe](http://www.cdc.gov/nip/vacsafe)           [www.immunize.org](http://www.immunize.org)  
[www.vaccine.chop.edu](http://www.vaccine.chop.edu)

**Books and Booklets:**

*Vaccinating Your Child: Questions and Answers for the Concerned Parent*, Humiston & Good

*Vaccines: What Every Parent Should Know*, Offit & Bell

*The Parent's Guide to Immunizations*

Can be ordered from the Center for Disease Control (CDC) National Immunization Program on their website ([www.cdc.gov/nip](http://www.cdc.gov/nip)).

**Vaccine Information Statements:**

Available in each of our exam rooms for you to review at the time of vaccine administration. Copies are available upon request.

We hope this information will help you better understand vaccines and your child's health. Please feel free to discuss any other questions with us regarding this very important topic.

Sincerely,

Complete Children's Health  
Physicians & Staff

# Protect Babies from Whooping Cough

If you're pregnant get a Tdap shot!



Whooping cough (pertussis) is a respiratory infection that can cause severe coughing or trouble breathing.

About half of infants who get whooping cough are hospitalized!

1 out of 2

HOSPITAL HOSPITAL

Whooping cough cases across the U.S. have been on the rise since the 1980s.

Whooping cough is deadly for babies

I got my whooping cough vaccine and will encourage everyone caring for my baby to get a shot, too!

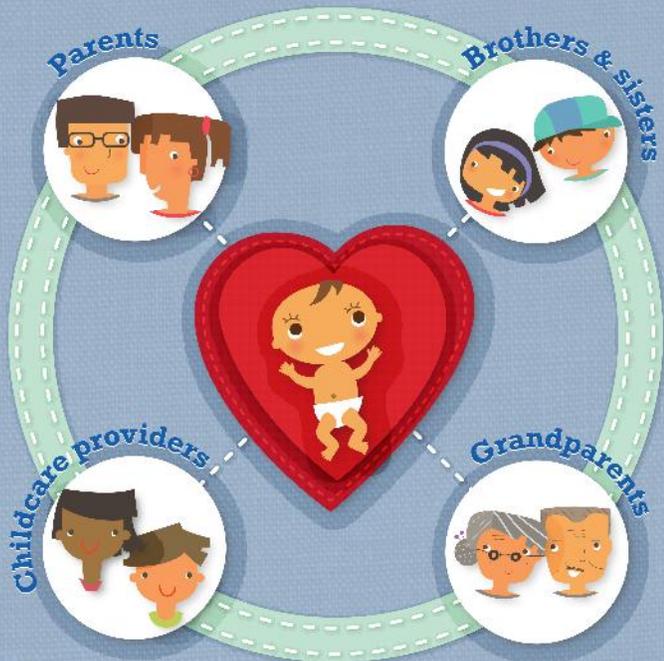
This vaccine helps protect you from whooping cough and passes some protection to your baby.

4 out of 5 babies who get whooping cough catch it from someone at home\*

\*When source was identified

## Create a circle of protection around your baby

Everyone needs whooping cough vaccine:



Your baby needs whooping cough vaccine at:



Make sure your baby gets all 5 doses of whooping cough vaccine on time

You can get whooping cough vaccines at a doctor's office, local health department, or pharmacy

Like it? Tell a friend! It's important!



[www.cdc.gov/whoopingcough](http://www.cdc.gov/whoopingcough)



# Protect Yourself and Help Protect Your Baby: Information for New Moms on the Tdap Vaccine

Congratulations on your new baby! Your baby is the greatest gift you will ever receive. One of your biggest jobs as a parent is to keep your child safe and healthy. One way to do this is to make sure your children get all the immunizations they need to protect them from different diseases. But did you know that there is an immunization that *you as a parent should get* to keep your children safe?

The following is information written by the American Academy of Pediatrics about the importance of Tdap immunization for new moms (and anyone else who will be in close contact with their newborns, including dads).

## What is Tdap?

Tdap stands for 3 serious diseases.

- Tetanus—also called *lockjaw*, a painful tightening of the muscles, including the jaw, which gets “locked” shut, making it impossible to open the mouth or swallow and can lead to death.
- Diphtheria—a severe throat infection caused by a germ makes it difficult to breathe and can affect the heart and nervous system and can lead to death.
- Pertussis—also called *whooping cough*, which causes severe coughing, vomiting, and trouble sleeping for months in adults. In infants this infection can cause sleep problems, severe cough, and pneumonia that last for months and can even lead to brain damage or death.

Bacteria cause all of these diseases. Diphtheria and pertussis are spread from person to person. Tetanus enters the body through cuts, scratches, or wounds.

## Why should new moms get vaccinated?

In their first 4 to 6 months, babies are more prone to infections because their immune systems are immature. Also, they haven't received their first few doses of the vaccine that protects them from diphtheria, tetanus, and pertussis yet. During this time, moms who haven't been immunized or may have lost their immunity from earlier immunizations could pick up these diseases and pass them on to their babies. This is why it's important for new moms to make sure they are protected. Check with your doctor to see if you need the Tdap vaccine.

## Others who should get vaccinated

It is also recommended that anyone who will be in close contact with your baby be vaccinated as well. This includes dads, grandparents, other relatives, and child care providers younger than 64 years. They should ask their doctor if Tdap vaccine is needed. Other children in the family should be sure their tetanus, diphtheria, and pertussis immunizations are up to date also.

## When is Tdap recommended?

Before Tdap is recommended, your doctor will review your immunization history to decide if and when you should get the Tdap vaccine. For instance, if you have not received a pertussis vaccine since age 9 years, the timing for administration of Tdap is determined by your last tetanus vaccine booster dose. Tdap can be administered as early as 2 years since the last tetanus dose if needed, but a 5-year wait is usually recommended between the last tetanus vaccine and Tdap vaccine for all persons older than 10 years. For anyone older than 10 or 11 years, only a single dose of pertussis vaccine (Tdap) administered after age 10 years is needed.

## Are there any dangers to getting the Tdap vaccine?

Like medicines, vaccines can cause allergic reactions in some people. However, this is very rare. Most side effects are mild and temporary and include

- Pain at the injection site
- Redness or swelling at the injection site
- Mild fever, headache, nausea, and vomiting

Tell your doctor if you have had problems with vaccines in the past.

## Just one shot

Getting the Tdap vaccine now will give you 10 years or more of protection from these diseases and help you prevent passing them on to your new baby. Isn't it great to know that just one shot can help keep you and your new baby safe and healthy? For more information about this vaccine, talk with your doctor.

The information contained in this publication should not be used as a substitute for the medical care and advice of your pediatrician. There may be variations in treatment that your pediatrician may recommend based on individual facts and circumstances.

American Academy  
of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN™

The American Academy of Pediatrics is an organization of 60,000 primary care pediatricians, pediatric medical subspecialists, and pediatric surgical specialists dedicated to the health, safety, and well-being of infants, children, adolescents, and young adults.

American Academy of Pediatrics  
Web site—[www.aap.org](http://www.aap.org)

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## Facts for Parents About Vaccine Safety

### Why are vaccines important?

Immunizations protect children. Vaccine-preventable diseases can have dangerous consequences, including seizures, brain damage, blindness and even death. Because of the success of the national immunization program, many young parents today have never seen a case of one of these illnesses, but measles, meningitis, chickenpox, pertussis and other diseases exist in the world and would re-emerge here if immunization rates fell. For example, recent outbreaks of measles in the U.S. were traced to unvaccinated children who became infected while traveling in Europe. Likewise, it would only take one case of polio from another country to bring the disease back to the U.S. if children are not protected by vaccination.

### Are vaccines safe?

Yes. Today's vaccines are safer than any in history. Vaccines contain antigens, which are either live but very weakened viruses, inactivated viruses, or small parts of bacteria or viruses that prompt the body to produce protective antibodies without causing the disease. Even though children receive more vaccines now, the total number of antigens is less because today's vaccines are more refined than older versions. At a very young age, children's immune systems are equipped to respond to many antigens at the same time, including those in vaccines as well as the ones they encounter in their daily activities such as eating, breathing and playing.

In addition to antigens, vaccines contain ingredients to prevent contamination and improve effectiveness. These ingredients have been found to be safe in humans in the quantities given in vaccines, which is much less than children are exposed to in their environment, food and water. Valid scientific studies have shown there is no link between autism and thimerosal, a mercury-based preservative once used in several vaccines (and still used in some flu vaccine). However, since thimerosal was removed from childhood vaccines in 2001, autism rates have actually increased, supplying further evidence that thimerosal does not cause autism.

Before a vaccine is licensed, it is studied in thousands of children and in combination with other vaccines. After licensure, the federal government continues to monitor a vaccine's safety. This continuous monitoring ensures researchers will uncover any rare side effects, even if they affect only a small number of children. For example, a rotavirus vaccine was withdrawn in 1999 after it was linked to intestinal blockages in about 100 children. This vaccine was replaced by a new and safer product. Today's recommended vaccines have been shown to be safe and effective for millions of children.

### Can I delay or skip vaccines?

It is not a good idea to skip or delay vaccines, as this will leave your child vulnerable to diseases for a longer time. Children are most vulnerable to complications from disease in their early years of life, when vaccines provide protection, and some vaccines produce a better immune response at particular ages. Parents should follow the schedule provided by the U.S. Centers for Disease Control and Prevention, the American Academy of Pediatrics and the American Academy of Family Physicians, which is designed by experts to ensure maximum protection and safety for children at various ages. This schedule allows for some flexibility to delay certain shots when advised by a child's pediatrician due to illness, certain chronic conditions or other medical reasons. Parents should discuss any concerns with their child's pediatrician.

More information is available at [www.aap.org/immunization](http://www.aap.org/immunization) and [www.cdc.gov/vaccines](http://www.cdc.gov/vaccines).



## Vaccine Safety: The Facts

**Why vaccinate?** Vaccines save lives and protect against the spread of disease. If you decide not to immunize your child, you put your child at risk. Your child could catch a disease that is dangerous or deadly. Getting vaccinated is much better than getting the disease.

Your pediatrician knows that you care about your child's health and safety. That's why you need to get all the scientific facts from a medical professional you can trust before making any decisions based on stories you may have seen or heard on TV, the Internet, or from other parents. Your pediatrician cares about your child too and wants you to know that...

- **Vaccines work.** They have kept children healthy and have saved millions of lives for more than 50 years. Most childhood vaccines are 90% to 99% effective in preventing disease. And if a vaccinated child does get the disease, the symptoms are usually less serious than in a child who hasn't been vaccinated. There may be mild side effects, like swelling where the shot was given, but they do not last long. And it is rare for side effects to be serious.
- **Vaccines are safe.** All vaccines must be tested by the Food and Drug Administration (FDA). The FDA will not let a vaccine be given unless it has been proven to be safe and to work well in children. The data get reviewed again by the Centers for Disease Control and Prevention (CDC), the American Academy of Pediatrics, and the American Academy of Family Physicians before a vaccine is officially recommended to be given to children. Also, the FDA monitors where and how vaccines are made. The places where vaccines are made must be licensed. They are regularly inspected and each vaccine lot is safety-tested.
- **Vaccines are necessary.** Your pediatrician believes that your children should receive all recommended childhood vaccines. In the United States vaccines have protected children and continue to protect children from many diseases. However, in many parts of the world many vaccine-preventable diseases are still common. Since diseases may be brought into the United States by Americans who travel abroad or from people visiting areas with current disease outbreaks it's important that your children are vaccinated.

Also, children with certain health problems may not be able to get some vaccines or may need to get them later. Since each child is different, your child's doctor will know what is best for your child. You should get information about each vaccine at the doctor's office. Ask your child's doctor if you don't understand what you've read.



## Vaccine Safety: The Facts

- **Vaccines are studied.** To make sure the vaccine continues to be safe, the FDA and the CDC created the Vaccine Adverse Event Reporting System (VAERS). All doctors must report serious side effects of vaccines to VAERS so they can be studied. Parents can also file reports with VAERS. For more information about VAERS, visit [www.vaers.hhs.gov](http://www.vaers.hhs.gov) or call the toll-free VAERS information line at 800/822-7967.

Based on VAERS reports, vaccine safety professionals continuously look for any problem with a vaccine, study the problem, and decide what to do. And if there is a problem, changes are made as soon as possible.

For example,

- If a vaccine is no longer safe, it is no longer given.
- If there are new side effects, safety alerts are sent out to your health care providers.

Another way the CDC checks vaccine safety is by studying information about side effects collected from 8 large insurance companies. The Vaccine Safety Datalink (VSD) helps identify if there are any serious problems or safety issues from the records of thousands of children.

In the rare case that a child has serious side effects to a vaccine, parents can contact the National Vaccine Injury Compensation Program (VICP) at 800/338-2382 or [www.hrsa.gov/vaccinecompensation](http://www.hrsa.gov/vaccinecompensation). This federal program was created to help pay for the care of people who have been harmed.

### Resources

#### American Academy of Pediatrics

[www.aap.org](http://www.aap.org)  
[www.cispimmunize.org](http://www.cispimmunize.org)

#### Centers for Disease Control and Prevention

[www.cdc.gov/vaccines](http://www.cdc.gov/vaccines)

#### Food and Drug Administration

[www.fda.gov](http://www.fda.gov)

#### National Network for Immunization Information

[www.immunizationinfo.org](http://www.immunizationinfo.org)

### From your doctor

If you have any questions or concerns, feel free to ask your pediatrician.

Please note: Listing of resources does not imply an endorsement by the American Academy of Pediatrics (AAP). The AAP is not responsible for the content of the resources mentioned in this publication. Phone numbers and Web site addresses are as current as possible, but may change at any time.

The information contained in this publication should not be used as a substitute for the medical care and advice of your pediatrician. There may be variations in treatment that your pediatrician may recommend based on individual facts and circumstances.

**Q. How can parents sort out conflicting information about vaccines?**

**A. Decisions about vaccine safety must be based on well-controlled scientific studies.**

Parents are often confronted with “scientific” information found on television, on the Internet, in magazines and in books that conflicts with information provided by healthcare professionals. But few parents have the background in microbiology, immunology, epidemiology and statistics to separate good scientific studies from poor studies. Parents and physicians benefit from the expert guidance of specialists with experience and training in these disciplines.

Committees of these experts are composed of scientists, clinicians and other caregivers who are as passionately devoted to our children’s health as they are to their own children’s health. They serve the Centers for Disease Control and Prevention ([www.cdc.gov/vaccines](http://www.cdc.gov/vaccines)), the American Academy of Pediatrics ([www.aap.org](http://www.aap.org)) and the Infectious Diseases Society of America ([www.nni.org](http://www.nni.org)), among other groups. These organizations provide excellent information to parents and healthcare professionals through their websites. Their task is to determine whether scientific studies are carefully performed, published in reputable journals and, most importantly, reproducible. Information that fails to meet these standards is viewed as unreliable.

When it comes to issues of vaccine safety, these groups have served us well. They were the first to figure out that intestinal blockage was a rare consequence of the first rotavirus vaccine, and the vaccine was quickly discontinued. And they recommended a change from the oral polio vaccine, which was a rare cause of paralysis, to the polio shot when it was clear that the risks of the oral polio vaccine outweighed its benefits.

These groups have also investigated possible relationships between vaccines and asthma, diabetes, multiple sclerosis, SIDS and autism. No studies have reliably established a causal link between vaccines and these diseases — if they did, the questioned vaccines would be withdrawn from use.

**Q. Are vaccines still necessary?**

**A. Although several of the diseases that vaccines prevent have been dramatically reduced or eliminated, vaccines are still necessary:**

- to prevent common infections

Some diseases are so common in this country that a choice not to get a vaccine is a choice to get infected. For example, choosing not to get the pertussis (whooping cough) vaccine is a choice to risk a serious and occasionally fatal infection.

- to prevent infections that could easily re-emerge

Some diseases in this country continue to occur at very low levels (for example, measles, mumps and *Haemophilus influenzae* type b, or Hib). If immunization rates in our schools or communities are low, outbreaks of these diseases are likely to occur. This is exactly what happened in the late 1980s and early 1990s when thousands of children were hospitalized with measles and more than 120 died. Children were much more likely to catch measles if they weren’t vaccinated. Recent measles and mumps outbreaks in the United States also provide evidence of how quickly a disease can re-emerge.

- to prevent infections that are common in other parts of the world

Although some diseases have been completely eliminated (polio) or virtually eliminated (diphtheria) from this country, they still occur commonly in other parts of the world. Children are paralyzed by polio in Pakistan, Afghanistan and Nigeria and sickened by diphtheria in India and other countries in the southeastern region of Asia. Because there is a high rate of international travel, outbreaks of these diseases are only a plane ride away.

Centers for Disease Control and Prevention. *Epidemiology and Prevention of Vaccine-Preventable Diseases*. 12th Edition. Atkinson W, Wolfe S, Hamborsky J, eds. Washington, DC: Public Health Foundation; 2011.

**Q. Do vaccines contain additives?**

**A. Many vaccines contain trace quantities of antibiotics or stabilizers.**

Antibiotics are used during the manufacture of vaccines to prevent inadvertent contamination with bacteria or fungi. Trace quantities of antibiotics are present in some vaccines. However, the antibiotics contained in vaccines (neomycin, streptomycin or polymyxin B) are not those commonly given to children. Therefore, children with allergies to antibiotics such as penicillin, amoxicillin, sulfa or cephalosporins can still get vaccines.

Gelatin is used to stabilize live viral vaccines and is also contained in many food products. People with known allergies to gelatin contained in foods may have severe allergic reactions to the gelatin contained in vaccines. However, this reaction is extremely rare.

Offit PA, Jew RK. Addressing parents’ concerns: Do vaccines contain harmful preservatives, adjuvants, additives, or residuals? *Pediatrics* 2003;112:1394-1401.

American Academy of Pediatrics. In Pickering LK, ed. *Red Book: 2012 Report of the Committee on Infectious Diseases*. 29th Edition. Elk Grove Village, IL.

**Q. Are vaccines safe?**

**A. Because vaccines are given to people who are not sick, they are held to the highest standards of safety.** As a result, they are among the safest things we put into our bodies.

How does one define the word safe? If safe is defined as “free from any negative effects,” then vaccines aren’t 100 percent safe. All vaccines have possible side effects. Most side effects are mild, such as fever, or tenderness and swelling where the shot is given. But some side effects from vaccines can be severe. For example, the pertussis vaccine is a very rare cause of persistent inconsolable crying, high fever or seizures with fever. Although these reactions do not cause permanent harm to the child, they can be quite frightening.

If vaccines cause side effects, wouldn’t it be “safer” to just avoid them? Unfortunately, choosing to avoid vaccines is not a risk-free choice — it is a choice to take a different and much more serious risk. Discontinuing the pertussis vaccine in countries like Japan and England led to a tenfold increase in hospitalizations and deaths from pertussis. Recently, a decline in the number of children receiving measles vaccine in the United Kingdom and the United States led to an increase in cases of measles.

When you consider the risk of vaccines and the risk of diseases, vaccines are the safer choice.

Plotkin S, et al. *Vaccines*. 6th Edition. Philadelphia, PA: W.B. Saunders and Co., 2012.

**Q. Do children get too many shots?**

**A. Newborns commonly manage many challenges to their immune systems at the same time.**

Because some children could receive as many as 25 shots by the time they are 2 years old and as many as five shots in a single visit to the doctor, many parents wonder whether it is safe to give children so many vaccines.

Although the mother’s womb is free from bacteria and viruses, newborns immediately face a host of different challenges to their immune systems. From the moment of birth, thousands of different bacteria start to live on the surface of the skin and intestines. By quickly making immune responses to these bacteria, babies keep them from invading the bloodstream and causing serious diseases.

In fact, babies are capable of responding to millions of different viruses and bacteria because they have billions of immunologic cells circulating in the bodies. Therefore, vaccines given in the first two years of life are a raindrop in the ocean of what an infant’s immune system successfully encounters and manages every day.

Offit PA, et al. Addressing parents’ concerns: Do vaccines weaken or overwhelm the infant’s immune system? *Pediatrics*. 2002;109:124-129.

### Q. Is the amount of aluminum in vaccines safe?

**A. Yes.** All of us have aluminum in our bodies and most of us are able to process it effectively. The two main groups of people who cannot process aluminum effectively are severely premature infants who receive large quantities of aluminum in intravenous fluids and people who have long-term kidney failure and receive large quantities of aluminum, primarily in antacids. In both cases, the kidneys are not working properly or at all and the people are exposed to large quantities of aluminum over a long period of time.

The amount of aluminum in vaccines given during the first six months of life is about 4 milligrams, or four-thousandths of a gram. A gram is about one-fifth of a teaspoon of water. In comparison, breast milk ingested during this period will contain about 10 milligrams of aluminum and infant formulas will contain about 40 milligrams. Soy-based formulas contain about 120 milligrams of aluminum.

When studies were performed to look at the amount of aluminum injected in vaccines, the levels of aluminum in blood did not detectably change. This indicates that the quantity of aluminum in vaccines is minimal as compared with the quantities already found in the blood.

Baylor NW, Egan W, Richman P. Aluminum salts in vaccines – U.S. perspective. *Vaccine*. 2002;20:S18-S23.

Bishop NJ, Morley R, Day JP, Lucas A. Aluminum neurotoxicity in preterm infants receiving intravenous-feeding solutions. *New Engl J Med*. 1997;336:1557-1561.

Committee on Nutrition: Aluminum toxicity in infants and children. *Pediatrics*. 1996;97:413-416.

Ganrot PO. Metabolism and possible health effects of aluminum. *Env. Health Perspective*. 1986;65:363-441.

Keith LS, Jones DE, Chou C. Aluminum toxicokinetics regarding infant diet and vaccinations. *Vaccine*. 2002;20:S13-S17.

Pennington JA. Aluminum content of food and diets. *Food Additives and Contam*. 1987;5:164-232.

Simmer K, Fudge A, Teubner J, James SL. Aluminum concentrations in infant formula. *J Peds and Child Health*. 1990;26:9-11.

### Q. Do vaccines cause autism?

**A. Carefully performed studies clearly disprove the notion that vaccines cause autism.**

Because the signs of autism may appear in the second year of life, at around the same time children receive certain vaccines, and because the cause of autism is unknown, some parents wondered whether vaccines might be at fault. These concerns focused on three hypotheses — autism was caused by the measles-mumps-rubella (MMR) vaccine, thimerosal, an ethylmercury-containing preservative used in vaccines, or receipt of too many vaccines too soon.

A large body of medical and scientific evidence now strongly refutes these notions. Multiple studies have found that vaccines do not cause autism. These studies included hundreds of thousands of children, occurred in multiple countries, were conducted by multiple investigators and were well controlled.

Andrews N, et al. Thimerosal exposure in infants and developmental disorders: a retrospective cohort study in the United Kingdom does not show a casual association. *Pediatrics*. 2004;114:584-591.

Dales L, et al. Time trends in autism and in MMR immunization coverage in California. *JAMA*. 2001;285:1183-1185.

Fombonne E, et al. Pervasive developmental disorders in Montreal, Quebec, Canada: prevalence and links with immunizations. *Pediatrics*. 2006;118:139-150.

Herron J, Golding J, and ALSPAC Study Team. Thimerosal exposure in infants and developmental disorders: a prospective cohort study in the United Kingdom does not show a casual association. *Pediatrics*. 2004;114:577-583.

Hviid A, et al. Association between thimerosal-containing vaccine and autism. *JAMA*. 2003;290:1763-1766.

Kaye JA, et al. Measles, mumps, and rubella vaccine and incidence of autism recorded by general practitioners: a time-trend analysis. *Brit Med J*. 2001;322:460-463.

Madsen K. Thimerosal and occurrence of autism: Negative ecological evidence from Danish population-based data. *Pediatrics*. 2003;112:604-606.

Madsen, KM, et al. A population-based study of measles, mumps, rubella vaccination and autism. *N Engl J Med*. 2002;347:1477-1482.

Taylor, B, et al. Autism and measles, mumps, and rubella vaccine: no epidemiologic evidence for a causal association. *Lancet*. 1999;351:2026-2029.

Smith MJ and Woods CR. On-time vaccine receipt in the first year does not adversely affect neuropsychological outcomes. *Pediatrics*. 2010;125(6):1134-1141.

Verstraeten T, et al. Safety of thimerosal-containing vaccines: a two-phased study of computerized health maintenance organization databases. *Pediatrics*. 2003;112:1039-1048.

This information is provided by the Vaccine Education Center at The Children's Hospital of Philadelphia. The Center is an educational resource for parents and healthcare professionals and is composed of scientists, physicians, mothers and fathers who are devoted to the study and prevention of infectious diseases. The Vaccine Education Center is funded by endowed chairs from The Children's Hospital of Philadelphia. The Center does not receive support from pharmaceutical companies.

### Q. Does my child need to still get vaccines if I am breastfeeding?

**A. Yes.** The types of immunity conferred by breastfeeding and immunization are different. Specifically, the antibodies that develop after immunization are made by the baby's own immune system and, therefore, will remain in the form of immunologic memory; this is known as active immunity. In contrast, antibodies in breast milk were made by the maternal immune system, so they will provide short-term protection, but will not last more than a few weeks. These antibodies are usually not as diverse either, so the baby may be protected against some infections but remain susceptible to others. Immunity generated from breast milk is called passive immunity. Passive immunity was practiced historically when patients exposed to diphtheria were given antitoxin produced in horses; antitoxins to snake venoms are also an example of passive immunity.

### Q. How can a "one-size-fits-all" approach to vaccines be OK for all children?

**A. The recommended immunization schedule is not the same for all children.**

In fact, recommendations for individual vaccines often vary based upon individual differences in current and long-term health status, allergies and age. Each vaccine recommendation, often characterized by a single line on the immunization schedule, is supported by about 25 to 40 additional pages of specific instructions for healthcare providers who administer vaccines. In addition, an approximately 60-page document titled "General Recommendations on Immunization" serves as the basis for all vaccine administration. The recommendations are updated as needed by the CDC and a comprehensive update is published every few years.

### Q. What is the harm of separating, spacing out or withholding some vaccines?

**A. Although the vaccine schedule can look intimidating, it is based upon the best scientific information available and is better tested for safety than any alternative schedules.**

Experts review studies designed to determine whether the changes are safe in the context of the existing schedule. These are called concomitant-use studies.

Separating, spacing out or withholding vaccines causes concern because infants will be susceptible to diseases for longer periods of time. When a child should receive a vaccine is determined by balancing when the recipient is at highest risk of contracting the disease and when the vaccine will generate the best immune response.

Finally, changing the vaccine schedule requires additional doctor's visits. Research measuring cortisol, a hormone associated with stress, has determined that children do not experience more stress when receiving two shots as compared with one shot. Therefore, an increased number of visits for individual shots will mean an increase in the number of stressful situations for the child without benefit. In addition, there is an increased potential for administration errors, more time and travel needed for appointments, potentially increased costs and the possibility that the child will never get some vaccines

Cohn M, Langman RE. The protection: the unit of humoral immunity selected by evolution. *Immunol Rev*. 1990;115:9-147.

Offit PA, Quarels J, Gerber MA, et al. Addressing parents' concerns: Do multiple vaccines overwhelm or weaken the infant's immune system? *Pediatrics*. 2002;109:124-129.

Ramsay DS, Lewis M. Developmental changes in infant cortisol and behavioral response to inoculation. *Child Dev*. 1994;65:1491-1502.

Tonegawa S, Steinberg C, Dube S, Bernardini A. Evidence for somatic generation of antibody diversity. *Proc Natl Acad Sci USA*. 1974;71:4027-4031.



**COMPLETE CHILDREN'S HEALTH**  
**Well Child and Adolescent Care Schedule**

| <b>AGE</b>  | <b>ACTIVITY</b>                                | <b>IMMUNIZATIONS/TEST</b>  |
|-------------|--|--|
| 2 weeks     | Exam, Education                                | None   |
| 2 months    | Exam, Education                                | DTaP-Polio-Hib, Hepatitis B<br>Pneumococcal, Rotavirus                                   |
| 4 months    | Exam, Education                                | DTaP-Polio-Hib, Hepatitis B<br>(if birthdose not given)<br>Pneumococcal, Rotavirus       |
| 6 months    | Exam, Education                                | DTaP-Polio-Hib, Pneumococcal,<br>Hepatitis B, Rotavirus                                  |
| 9 months    | Exam, Education                                | None   |
| 12 months   | Exam, Education                                | MMR, VZV, Hepatitis A, Anemia test,<br>Lead test, TB test as needed                      |
| 15 months   | Exam, Education                                | DTaP-Polio-Hib, Pneumococcal   |
| 18 months   | Exam, Education                                | Hepatitis A  |
| 24 months   | Exam, Education                                | Lead test, TB test as needed   |
| 30 months   | Exam, Education                                | None   |
| 3 years     | Exam, Education                                | Blood Pressure (at each<br>exam 3 yrs & older)   |
| 4 years     | Exam, Education                                | MMR, VZV, DTaP, Polio  |
| 5 years     | Exam, School Readiness                         | Vision and Hearing Screens<br>(MMR, VZV, DTaP, Polio if<br>not given at 4 year)          |
| 6 -10 years | Exam, Health Education<br>Physical Exam Yearly | Catch-up Immunizations   |
| 11-18 years | Annual Sports/Adolescent Exam<br>Yearly        | Tdap, Meningococcal, HPV<br>Catch-up Immunizations<br>Anemia Test (menstruating females) |

Your Pediatrician will review immunizations on each visit for the needs of your child.  
 Schedule may vary due to vaccine availability



### **VACCINES FOR CHILDREN (VFC)**

Complete Children's Health participates in the Vaccines for Children (VFC) program. VFC provides low cost vaccines to children who are uninsured (no form of family health insurance) or those covered by Medicaid. Under the program, your child can receive his or her vaccines at our clinic for a small administration fee, to be paid at the time of the visit. This is separate from any other charges that may be associated with the visit. Children who are covered by insurance are not eligible for this program. If your family has health insurance that does not cover vaccines/immunizations, and you prefer not to pay out of pocket for vaccines, we encourage you to go to the Lancaster County Health Department for low cost vaccines. (402) 441-8065.

To prevent misunderstandings about the charges for vaccines, please let our staff know if your insurance situation changes. If you have questions about your child's vaccines please feel free to ask your child's pediatrician.

### **CAR SEAT SAFETY**

Complete Children's Health offers a Car Seat Safety Check Clinic to help you make sure that you are using your child's car seat properly for a nominal fee. Call to inquire about cost and to schedule your appointment in this clinic. The seat checks are performed by our own nationally certified Child Passenger Safety Technicians.

### **INFANT CPR**

The Infant CPR Anytime kit is a simple, practice-while-watching format that an entire family can use to learn to respond during the first few minutes of an infant emergency. Train the whole family and increase the chances of survival for an infant.

Using this kit, skills can be learned anywhere. And, for around \$35, Infant CPR Anytime kit is a cost-effective way to prepare an entire family to save the life of an infant. For information on ordering Infant CPR Anytime, call 1-877-AHA-4CPR or visit [www.healthychildren.org/English/bookstore](http://www.healthychildren.org/English/bookstore).

### **MIDWEST CHILDRENS HEALTH RESEARCH INSTITUTE (MCHRI)**

Complete Children's Health, in association with Midwest Children's Health Research Institute, would like to extend an invitation to you to participate in a pediatric research study investigating infant formula.

Midwest Children's Health Research Institute in cooperation with Complete Children's Health has conducted several formula studies to help further our efforts to provide a better formula product for all infants and we feel very comfortable with the care and supervision with throughout these trials.

If you are interested in learning more about our research studies, please contact the Study Coordinator at (402) 327-6065.